

Weaving a Competitive Edge: 20 Years of RCA Insights into Asia's Textile Exports

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ABSTRACT

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Exports.

Based on the Balassa Index during the past 20 years, this paper examines how competitive textile exports from Pakistan, India, China, and Bangladesh have been using the Revealed Comparative Advantage (RCA) technique developed upon. The article looks at how structural features, policy impacts, and trade patterns shape national competitiveness in the global textile sector.

The study examines trade statistics from the World Bank broken down into smaller bits as well as from the International Trade Center (ITC). It next examines RCA trends in man-made fibers, cotton textiles, apparel, and specialty woven fabrics. China boasts a strong and consistent RCA, according to the results. India and Bangladesh have expanded somewhat dramatically in apparel and specialist woven linens since 2010. Pakistan used to be more competitive in cotton goods, structural inefficiencies, increasing energy prices, and lower export quality have rendered the nation less competitive. RCA is largely shaped by cost of manufacturing, especially labor and energy, spending on research and development, tax policies, foreign direct investment (FDI), and changes in the economy as a whole, including inflation and currency fluctuations mostly.

The report attributes Pakistan's deteriorating RCA mostly on high energy costs, insufficient research and development spending, unfair taxes, and a low competitive index. China rules instead since it boasts better laws backing businesses, economies of scale, and technologies. To boost exports, India and Bangladesh have applied rules and strategies meant to make their employees more efficient. The paper claims that if Pakistan wants to become more competitive in the textile industry, its policies have to change. Among these changes should be promotion of new ideas, tax reform, energy cost control, and investment in research and development. Solving these structural problems will help Pakistan's position in the world and long-term exporting capabilities to be enhanced.

INTRODUCTION

Historically, export-oriented development has been quite crucial to reach both global market integration and ongoing economic growth. Nations rely increasingly on trade liberalization and

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comparative advantage to increase their export capacity in the setting of quick globalization and the growth of market economies. By improving their global trading positions, nations who have successfully raised product quality, cut costs, and improved production efficiency have so promoted industrial growth and economic stability. Under the World trading Organization (WTO), tariffs and other protectionist policies have been gradually eliminated, therefore promoting a more open and competitive global commercial scene.

Thus, driven by efficiency and experience, cost competitiveness has grown to be a crucial factor affecting export performance, particularly in developing countries hoping for continuous industrial development. Due in considerable part to its great economic impact and opportunities for job development, the textile industry is a major player in world trade. Forecasts showing an increase to US\$1,230 billion by 2024 see the global textile sector attaining an annual growth rate of 4.4% and a market size exceeding US\$920 billion in 2018. China boasts US\$266.41 billion in textile exports ranking higher than Germany, Bangladesh, Vietnam, India, Italy, Turkey, the United States, Hong Kong, and Spain in the December 2019 Fibre2Fashion top 10 global textile and apparel exporters. Although Pakistan has long been engaged in textile production, it has not been able to rank among the top global exporters, thereby underlining the difficulties it has keeping competitiveness in the global textile industry.

Apart from favored trade agreements such as the Generalized System of Preferences (GSP), trade liberalization has allowed underdeveloped nations wider access to world markets so they may apply their comparative advantages in some spheres. Bangladesh and Vietnam have gained from this change in addition to other growing textile industry competitors with far higher export potential. Still, Pakistan's textile export performance is below average, especially in respect to regional rivals like India and Bangladesh, which rank third and fifth respectively globally.

There is a clear competitive disparity between Pakistan providing just 1.41% to world textile exports and India with 4.03% and Bangladesh with 4.20%. Comprising 60% of all exports, accounting for 8.5% of Pakistan's GDP, and employing more than 40% of the manufacturing workers, the textile sector is essentially the backbone of Pakistan's economy. Pakistan's textile sector has always been rather strong. Still, it has lost global competitiveness bit by bit. Out of China's US\$266.6 billion, Bangladesh's US\$40.96 billion, Pakistan's US\$13.57 billion, India's

US\$37.12 billion textile exports come lowest in the region. Rising energy costs, a flawed tax structure, inadequate R&D funding, and uneven policy execution have all impeded Pakistan's capacity to fully engage in world markets. These components taken together help to clarify this decline. Since it significantly increases manufacturing costs and lowers world competitiveness, Pakistan's textile sector suffers severely from the high cost of power. Mostly, the cost structure of textile manufacture is determined by the prices of natural gas, oil, and electricity. Global oil costs are set beyond of our grasp while domestic electricity rates are regulated by government pricing rules, transmission losses, and generator efficacy. Many textile businesses in Pakistan work at less than ideal capacity because to continuous power outages, high cost of electricity, and unequal supply chains. Often unable to meet global needs regularly, corporations move to India, Bangladesh, and China where textile manufacturers benefit from more reliable and cheaply cost energy sources.

The All Pakistan Textile Mills Association (APTMA) has consistently underscored important structural issues influencing Pakistan's textile industry: high input costs, increasing borrowing rates, and continuous energy shortages. Regular power outages, which by '30% reduces manufacturing capacity' in many different textile sectors, are attributed to lower than expected export performance. Bangladesh and India, have successfully handled these problems by means of efficient energy management and ongoing legislative backing, therefore enabling their textile industries to maintain and raise their global market share. Pakistan is 4th among all cotton growers globally, even if Bangladesh's textile exports in 2021 were US\$40.96 billion, well above Pakistan's overall exports. With its dropping export-to-- GDP ratio, which fell from 14.2% in 1990 to below 10% in 2021, Pakistan's lost relevance in world textile commerce is most fairly demonstrated.

On the other hand, Bangladesh's export-to- GDP ratio, at 12%, clearly indicated increase driven on by deliberate industry investment and government backing. Despite a strong raw material basis, Pakistan's textile industry today makes less than 1% of world textile trade; this drop is related to limited industrial infrastructure, high energy prices, and poor innovation and quality competitiveness. Market access has been improved in part by preferential trade agreements such Bangladesh's Everything But Arms (EBA) project and the European Union's Generalized System of Preferences (GSP.) In 2014 Pakistan received GSP Plus classification, therefore

allowing duty-free access to the European market. Under this program, Pakistan's textile exports were somewhat low, largely due to supply-side restrictions and structural inefficiencies. By contrast, Bangladesh's textile exports soared following its EBA membership in 2001, peaked at US\$3.3 billion by 2003, and comprised half of all its exports at that time. The main reasons of this disparity are Bangladesh's more strict industrial policies and lowered energy prices; these have given its textile sector a great competitive edge over Pakistan. This article tries to evaluate and investigate the export competitiveness of Pakistan, Bangladesh, India, and China in the textile industry considering the ongoing issues Pakistan's exports under the Revealed Comparative Advantage (RCA) technique present. This work will look at several important elements impacting RCA trends: energy costs, tax policies, industrial production, R&D investment, and world trade dynamics. The study will offer policy recommendations covering structural problems affecting Pakistan's textile competitiveness, therefore improving its global market position. This paper enhances the larger general discussion on industrial strategy, trade liberalization, and sustainable economic development in developing nations by way of an analysis of textile trade patterns and competitiveness criteria.

Motivation of the Study

Along with South Asia's economic growth, the textile sector significantly influences GDP, foreign income, and industrial development. Things like energy cost, labor efficiency, technical innovation, tax legislation, and merging of world markets affect the competitiveness of textile-making nations in the area. Smart legislative changes, cost-cutting initiatives, and creative ideas have helped China, India, and Bangladesh all strengthen their textile sectors. Conversely, Pakistan's share in the world textile market has been steadily declining since 2010—especially following 2010. People worry about the structural issues undermining the fabric industry of the nation, therefore reducing its competitiveness. This study's main objectives are to pinpoint the reason behind Pakistan's declining exports and propose sensible legislative changes allowing the textile sector to bounce back. Knowing what makes South Asian exports successful becomes more crucial than ever given the evolving character of world trade and increasing competitiveness from developing nations.

Declining revealed comparative advantage (RCA) in key textile industries calls for Pakistan to review all of its industrial strengths and weaknesses in order to create specific policy changes

boosting its competitiveness. One of the most important issues right now is how energy prices and industrial policy would affect Pakistan's textile industry. Rising electricity prices and ongoing energy shortages harm Pakistani companies versus competitors in the region with access to more stable and less expensive energy sources. Understanding the structural changes needed to return to be competitive requires research on the energy policies and industry developments of surrounding countries. Research and development (R&D) has also been rather important in allowing China and India's textile enterprises to become more valuable, hence leading their move from exporting low-value textiles to high-value ones. Pakistan's sluggish research and development expenditure as well as in adopting new technologies hinder its ability to become rich by means of innovation. This study aims to stress the need of creating an innovation ecosystem supporting more modern textile products, more value addition, and enhanced productivity as well as their relevance.

Pakistan is similarly subject to fluctuations in the international economy and demand since its textile export system mostly depends on conventional markets. One could find fresh development opportunities outside of typical markets by way of a thorough investigation of foreign market penetration and diversification strategies. This would lower dependence and increase the resilience of global trade. This paper aims to pinpoint primary policy mistakes and suggest reasonable fixes to raise Pakistan's textile exports' competitiveness. This will help legislators, companies, and investors to make good decisions. Pakistan must not only resuscitate its textile industry to create jobs, foreign capital, and a stable economy but also since it is a required first step toward long-term industrial development. The findings of the research should add to the scholarly discussion on trade competitiveness and give Pakistani textile producers useful recommendations for improving their standing in the world textile market.

Research Questions

Several important research questions are sought to be answered by this work:

- How do structural, economic, and policy-related elements affect the export competitiveness of textile products in Pakistan relative to regional rivals India, China, and Bangladesh
- what strategic interventions can improve Pakistan's position in the worldwide textile trade?
- With an eye toward macroeconomic policies, cost structures, production efficiency, and market dynamics, this study question seeks to thoroughly investigate the factors influencing

export competitiveness while also pointing up practical policy recommendations to boost Pakistan's textile industry.

LITERATURE

Export competitiveness is a dynamic and multifarious idea influenced by several elements different across sectors and nations. Although its definition, consequences, and criteria of success differ greatly, the main idea is still evaluating the competitive performance of sectors or countries in worldwide marketplaces. Key metrics include product pricing, market share, and production efficiency help one evaluate competitive performance; elements including labor costs, productivity, and resource availability have great influence on competitiveness. A nation's market share in global exports and the patterns in its increase or decrease over time is among the most striking indicators of export competitiveness (Hussain et al., 2019).

In his study of Pakistan's textile sector, Muhammad Amir—in the Pakistan Development Review—emphasizes the historical importance of the textile and apparel sectors, which previously constituted among the most competitive sectors of Pakistan's manufacturing base. One of the lowest such numbers worldwide, just 19% of Pakistan's textile products were said to be inadequately positioned in the global market by 2000. This reflected the sector's strong comparative advantage, but Amir also points out that Pakistan's textile sector has stayed firmly rooted at the lowest end of the global value chain despite this positive stance. According to him, Pakistan has to build skills in areas including product design, distribution networks, international marketing, and general product planning if it is to change the value chain. Furthermore underlined by him is the fact that sustainable competitiveness depends not only on market access but also on developing capacities before obtaining export orders, therefore guiding the industry to match changing worldwide needs (Amir, 2004).

But the emergence of regional rivals, especially Bangladesh, has reduced Pakistan's proportion of the world's textile exports. Experts attribute this change to a number of elements, but one of the most important predictor of competitiveness is the cost of energy, particularly natural gas and electricity. Industries in Pakistan pay far more for energy than those in neighboring neighbors. For instance, industries in Pakistan pay Rs. 27.32 per kWh for power, whereas in Bangladesh the cost is far cheaper, at Rs. 8.99 per kWh. Globally, Pakistan's electricity rates, at \$0.155 per kWh, are far more than Bangladesh's, which is below the world average of \$0.126

per kWh. Likewise, at \$0.011 per kWh, the cost of natural gas for business use in Bangladesh is significantly less than the world average price of \$0.126 per kW. These differences in energy prices directly influence manufacturing costs; lower energy costs translate into lower overall production costs, so enabling Bangladesh to provide more competitively priced items (GlobalPetrolPrices.com, 2021).

Almighty Dad stresses that, with around 55% of Pakistan's national GDP, the textile sector forms the backbone of the country's economy. Apart from a small range of value-added goods, the industry mostly exports raw materials including yarn and cloth. But Pakistan has struggled to get and keep export orders over the past ten years as outside consumers are gravitating toward rivals including Bangladesh, India, and China. This change has cost Pakistan its share in the world textile market and competitive edge (Dad et al., 2019).

Researchers have noted various structural problems in Pakistan's textile industry, including the growing yarn cost, the continuous energy crisis, high electricity rates, political unrest, and antiquated manufacturing technology. These difficulties seriously raise production costs and compromise Pakistan's competitiveness against regional rivals (Maqbol et al., 2020). Particularly, the lack of a consistent, encouraging energy strategy has been blamed for the sector's less competitiveness. Further aggravating the cost disadvantage is Sattar (2021), who claims that Pakistani textile producers pay 2.4% more in energy than those in India and Bangladesh. Frequent power outages, as those that happened on December 15, 2021, when over 80% of Punjab's businesses had to close owing to unstable power grid, aggravate this energy load. Sometimes lasting up to 20 hours, these disruptions seriously reduced output, resulting in losses matching 20–25% of production capacity (Sattar, 2021). These energy issues have far-reaching consequences, and Sattar further contends that policies supporting industrial expansion combined with more consistent energy costs help regional rivals. According to him, Pakistan has to adopt energy reforms including bettering the dependability of the energy supply and pushing technology developments across sectors if it is to become competitive. By encouraging long-term economic development, these policies will not only boost textile exports but also help Pakistan lessen its dependency on outside financial aid, including that of the IMF (Sattar, 2021).

Furthermore influencing Pakistan's textile industry is the larger economic background. As reported in an Express Tribune article by Raza (2021), government energy policies and declining currency value have been blamed for the ongoing problem of slowed down large-scale manufacturing (LSM) expansion. This slow down has added to growing company expenses and further reduced industrial output. Walayat Shah et al. (2012) further outline the sector's downturn, including issues including energy constraints, varying yarn pricing, and a deplete of contemporary equipment. Ranked as the fourth-largest exporter worldwide, Pakistan's textile sector had been a leader for the past forty years. But other structural flaws and the current energy crisis have lowered its worldwide profile, therefore erasing competitive advantage. By means of preferential treatment under the European Union's Everything But Arms (EBA) program, which provides duty-free access to European markets, Bangladesh has strengthened its position in the worldwide textile industry. Bangladesh's textile exports now more appeal to consumers since their increased competitiveness results from this. Although Pakistan likewise gained GSP Plus status in 2014, it has struggled to turn this benefit into real-world development mostly due to production limitations and inadequate investment in the modernizing of its textile industry (Malik et al., 2018).

Though they were supposed to level the playing field for all nations, liberalization policies have seen some countries—including India, Vietnam, Cambodia, and Bangladesh—outperform others. With its declining percentage in textile exports throughout time, Pakistan has struggled to keep its place in world markets, nevertheless. The nation's export performance, in spite of GSP Plus status, has been less than ideal mostly because of its focus on low-value-added goods and lack of innovation in response to world trends (Malik et al., 2018). Research by the World Bank (Kojima, 2006) highlights the wider influence of growing global commodities prices, especially in the oil industry, which has harmed nations dependent on oil imports including Pakistan. The resultant rise in manufacturing expenses has made life more difficult for Pakistan's export industries—textiles included. Former Governor of the State Bank of Pakistan Dr. Ishrat Hussain points out that from 0.2% to 0.15% Pakistan's global market share has dropped dramatically over the previous thirty years. On the other hand, nations like India and Bangladesh have profited from good world economic conditions, hence raising their export share. Hussain links this drop to structural inefficiencies and contends that, although

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macroeconomic policies, corporate environments, and public institutions help to shape competitiveness, the companies themselves are mostly responsible for raising export performance. According to him, determining whether companies succeed in worldwide marketplaces mostly depends on their capacity for adaptation and innovation (Hussain, 2021). In summary, even if Pakistan's textile sector has long been a main engine of its economy, it now faces major difficulties endangering its place on world markets. These comprise legislative flaws, obsolete technology, energy inefficiencies, and growing rivalry among regional actors. Pakistan has to solve these structural problems, make investments in modernization, and enhance the business and energy surroundings for exporters if it is to become more competitive. This will help it to regain its competitive advantage and guarantee a more sustained part in world textile exports.

Gap in Literature

The existing research on textile export competitiveness has primarily concentrated on examining particular nations or regional trade patterns. Given the way world commerce is evolving, it has often missed the opportunity to examine South Asia's textile industry holistically and long term. Researchers have examined the Revealed Comparative Advantage (RCA) of textile goods in China, India, Bangladesh, and Pakistan among other countries. These studies often produce static findings, though, that fail to indicate how competitiveness evolves with time. One major research gap is the lack of a 20-year longitudinal study examining how changes in energy prices, technical advancement, and global trade liberalization affect the success of textile exports over time.

Most of the research preceding this one made use of averaged out export figures. For general assessments, this is appropriate; but, it does not provide enough sector-specific data to weigh the advantages and drawbacks of various kinds of textile products. Governments and industry players find it difficult to develop certain strategies to make sure certain textile subsectors more competitive without separated study. Furthermore, most of the studies conducted nowadays just focus on energy on its own, instead of considering it in the context of how it influences things like new technologies, more efficient manufacturing, and trade policy changes. Energy costs clearly influence the competitiveness of a company.

There are few actual cases of how varying South Asian nations' energy costs impact textile competitiveness. This makes it difficult to decide which policies ought to be implemented to relax these constraints. The study suffers greatly in that it pays little attention to the ways in which trade policies, institutional quality, and regulatory regimes affect the competitiveness of textile exports. Though not many studies examine how these elements have affected the relative positions of Pakistan, India, Bangladesh, and China over time, those that discuss the importance of industrial policies, tax systems, and simple access to global markets point to Current studies show how much preferential trade agreements—such as the Generalized System of Preferences (GSP) and Everything But Arms (EBA) status in Bangladesh—have helped regional businesses compete and how Pakistan's policies have made it more difficult for it to seize comparable trade incentives.

Furthermore under increasing recognition as means to increase a nation's global competitiveness are research and development (R&D) as well as innovative technology. Still, the body of research on how R&D spending influences textile export success is lacking. China and India have adopted new technology to increase their high-value textile products, but experts remain unsure about how Pakistan's declining competitiveness is connected to its low R&D expenditure. Long-term development in the textile sector cannot be fully planned as insufficient good empirical research on how consumers accept new technologies, how products are diversified, and how value is added to textile manufacturing.

Many studies have also highlighted the issues Pakistan's textile sector suffers with including inadequate infrastructure, poor policies, and expensive energy costs. Most of these studies, meanwhile, just focus on Pakistan and fail to contrast these issues with those experienced by regional rivals. There isn't a whole, comparable framework including technological, policy-oriented, and financial elements influencing textile competitiveness. This makes suggested policy modifications more difficult to implement.

Using RCA data and breaking down South Asia's textile exports over 20 years by product, this paper aims to fill in these voids by observing how competition has evolved over that period. From numerous viewpoints, including how energy prices, industrial strategy, technology investments, and institutional issues influence trade, this paper examines trade competitiveness. The findings are supposed to enhance scholarly debate and provide www.ijbmsarchive.com

legislators, industry players, and investors with valuable data they may apply. This would support a fact-based strategy meant to revitalize Pakistan's textile export sector in a world market become more competitive by means of facts.

METHODOLOGY

This article fully evaluates the export competitiveness of four key textile-exporting countries in South Asia—Pakistan, Bangladesh, India, and China by evaluating their textile and garment exports over a two-decade period, from 2000 to 2020. The considerable relevance of textiles in the commercial and industrial sectors of these nations demands an empirical evaluation of their competitive posture in the global textile industry. The study evaluates every nation's relative textile trade performance using Balassa's (1965) acknowledged paradigm, the Revealed Comparative Advantage (RCA) model. The RCA model offers a statistically based, objective, way for evaluating export competitiveness by means of a nation's sectoral trade performance versus world trade trends. . This approach provides a clear and efficient way to analyze trade specialization, therefore avoiding the complexities involved in determining factor endowments, production costs, or technical differences. Using thorough trade data from prestigious sources including the World Bank, the International Trade Centre (ITC), and the United Nations Conference on Trade and Development (UNCTAD), the RCA indices for Pakistan, Bangladesh, India, and China are derived. Unlike more general macroeconomic research, this study focuses especially on specific textile product categories defined by the ITC's Harmonized System (HS) classification scheme. The study exclusively covers those textile products that greatly influence the overall exports of any nation, therefore preserving a focused attention on the most important textile sectors influencing trade performance.

While concurrently assessing changes, in competitiveness over a 20-year period, and evaluating long-term trends, and policy implications, for enhancing textile export performance, analyzing trade flows, market penetration, and sectoral specialization helps the study to find patterns of comparative advantage in the textile sector. This article seeks to present important fresh views on the evolving trade dynamics of the South Asian textile sector, thereby supporting strategic policy recommendations to raise industry worldwide competitiveness..

Conceptual Framework

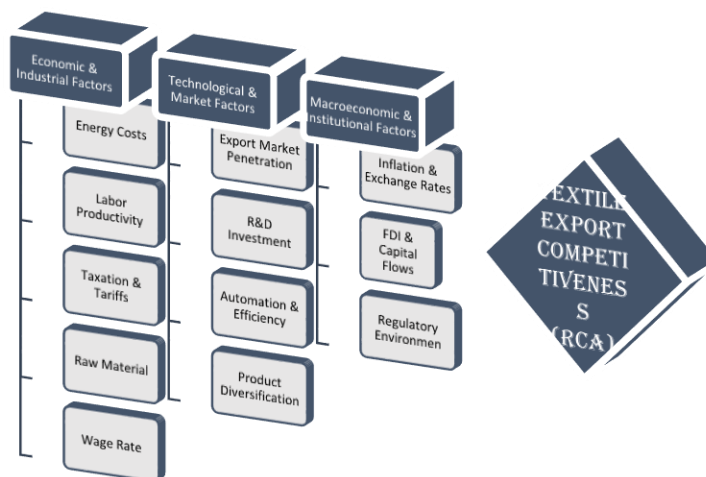
The interrelationships between several factors of 'textile export competitiveness' and their effect on the 'Revealed Comparative Advantage (RCA)' of the textile products are articulated to provide the conceptual basis for this study. The core notion is to emphasize how internal and outside elements affect the export performance of Pakistani, Indian, Bangladeshi, Chinese textile goods.

The key components of the framework are as follows:

Energy Costs (Electricity Prices)	One of the main running expenses in the textile manufacture process is energy. Higher energy prices cause countries with them to have more manufacturing costs, which reduces the competitiveness of their textile goods. Higher energy prices in Pakistan, particularly in relation to India, Bangladesh, and China, the framework hypothesizes, lower Pakistan's textile export competitiveness.
Labor Productivity	A major factor affecting competitiveness is labor productivity, which shapes manufacturing process efficiency and product quality. This study mostly relies on the comparison of labor productivity levels between Pakistan and its regional rivals, where it is expected that Pakistan's lower labor productivity will weaken its competitiveness.
Research and Development (R&D)	Maintaining competitiveness in the worldwide market depends on R&D investments, which enhance product innovation and quality. This paper hypothesizes higher R&D investments (e.g., China and India) to provide a competitive advantage in terms of product quality and innovation, therefore encouraging improved RCA in textile exports.
Taxation Policy	Direct influence on the cost structure of production is taxation. Higher taxes lower profits and discourage investment, so lowering the competitiveness. Higher tax rates in Pakistan than those of regional rivals are hypothesised to be a main obstacle in increasing the competitiveness of its textile industry.
Wage Rates	Particularly in the public sector, wages affect labor productivity and general level of competitiveness. Should public sector pay rates be excessively high, they can draw trained labor away from the private sector, therefore causing industrial production to be inefficient. The framework holds that Pakistan's high public sector pay rates hurt its private sector, hence lowering production and competitiveness in textile exports.
Export Market Penetration	The research also takes nation-wide penetration of global textile markets into account. Export growth will be higher in nations who can keep close ties with current markets and seize new ones. It is hypothesised that Pakistan's lower export market penetration index will restrict its export potential in relative terms to its regional rivals.

Visual Representation of the Conceptual Framework

The following diagram illustrates the relationship between key determinants and the textile export competitiveness of the countries in question:



The above given visual framework will serve as basis for this research in its process. This study provides the complete details of the factors to compare the competitiveness of textile products among Bangladesh, China, India and Pakistan. By examining energy costs, worker productivity, R&D, taxation regulations, and pay rates, the study aims to give legislators useful insights that would help Pakistan's textile sector be more competitive.

Theoretical Framework: Revealed Comparative Advantage (RCA)

Beginning with the ancient economists Adam Smith and David Ricardo, the idea of comparative advantage is fundamental to theory of international trade. Ricardo's elaboration into the theory of Comparative Advantage and Smith's Absolute Advantage contradicted the mercantilist ideas that predominated past economic theory. Ricardo maintained that commerce is based on variations in opportunity costs, especially through labor division and specialization, which result in different manufacturing costs between nations. Ricardo argues that a nation's comparative advantage results from its capacity to generate a good at a lower opportunity cost than other countries, therefore promoting international trade and specialization.

After much polishing Ricardo's theory, the Heckscher-Ohlin (H-O) model proposed that variations in factor endowments—such as labor, capital, and land—between countries generate such benefits. Under this paradigm, the relative availability of elements of production determines trade patterns; nations sell items using their copious and cheap factors while acquiring commodities needing rare and expensive resources. Although these conventional ideas provide valuable insight on the reasons behind world trade, their relevance to empirical

research is sometimes restricted. One key challenge is direct assessment of factor pricing, technological variants, or relative factor endowments between nations since these variables are sometimes unobservable or difficult to assess.

This disparity produced the Revealed Comparative Advantage (RCA) index, a more useful instrument for evaluating relative advantage. Bela Balassa first proposed the RCA index in 1965 as an empirical approach for assessing relative advantage depending on trade performance instead of arbitrary economic criteria. The basic idea of the RCA is that trading policies of a country naturally reveal its comparative advantage. If a nation specializes in a given industry or good, its export performance will show its relative strength in that industry or good regardless of underlying factors as technology, labor costs, or capital endowment. The RCA index is computed as the country's export share in a certain product divided by its percentage of total world exports in the same product category. A value more than one denotes a competitive advantage in that good; a value less than one denotes a drawback. This index is especially useful in simplifying the evaluation of competitiveness by depending just on observable trade data, which are readily available from international trade databases including the World Bank, the International Trade Center (ITC), and the United Nations Conference on Trade and Development (UNCTAD).

Over a 20-year period, the RCA model serves to enable a strong study of the textile export competitiveness of some South Asian economies—Pakistan, Bangladesh, India, and China—by means of concentration on their key textile exports. This model offers a clear and reliable way to assess the performance of these countries in the global textile market since it offers perceptive study of the competitive advantages and trends over time. Ultimately, the RCA framework offers a practical instrument for evaluating the evolving dynamics of world trade competitiveness without depending on complex analyses of production variables or technological variances.

RCA (Balassa Index) Formula

Designed by Balassa (1965) and later refined in 1989, the RCA index is a widely used indicator of a country's export strength in a particular sector in respect to world trade. The theory behind the strategy is that a nation's trade performance automatically reveals its relative advantage, therefore lessening the

need for arbitrary assessments of production costs and resource allocation. The RCA computation

formula is stated as: $RCA (Balassa Index) = \frac{X_i^B / \sum X_i^B}{X_i^W / \sum X_i^W}$

X_i^B represents the export value of country B for a particular product i,

$\sum X_i^B$ is the total export value of country B,

X_i^W is the global export value of product i,

$\sum X_i^W$ represents the total value of world exports across all the textile lines /commodities

This ratio lets one directly compare a nation's relative export performance in a certain product category against world trade trends. An RCA more than 1 denotes a comparative advantage in the particular good; an RCA less than 1 denotes a comparative disadvantage.

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RCA Classification

The RCA index is classified into distinct categories based on its numerical value. The classification is as follows:

S.N	Classification	Explanation
1	$0 < RCA \leq 1$	No CA
2	$1 < RCA \leq 2$	Weak CA
3	$2 < RCA \leq 4$	Moderate CA
5	$RCA > 4$	Strong CA

0 < RCA ≤ 1: The country does not exhibit any comparative advantage in this sector.

1 < RCA ≤ 2: A weak comparative advantage exists, suggesting potential for improvement.

2 < RCA ≤ 4: A moderate comparative advantage

RCA > 4: A strong comparative advantage, signaling significant dominance in the sector.

These categories provide a clear structure for assessing the relative strength of the textile export sector of every country, so they are indispensable for the comparative study in this work. Stated

differently, this classification provides empirical knowledge of the respective trade competitiveness by allowing quantitative benchmarking of textile export strength across Pakistan, Bangladesh, India, and China.

Indicators of Industrial Competitiveness

Usually used in industrial trade assessments, the research comprises more significant performance indicators (KPIs) meant to improve the competitiveness analysis even further.

Indicator	Definitions & Significance
Exports Volume	The fundamental gauge of exports. Export volume rises as competitiveness gets more robust.
Global Market Share	Index of measure of competitiveness to enable comparison of the degree of relative competitiveness with the same industry in another country or region Global market share of exports will rise among great competitiveness while vice versa
Relative Trade Balance (RTB)	defined as $(Exports - Imports) / (Exports + Imports)$. One of the measures of exports' competitiveness RTB value falls between -1, +1. Exports have more competitiveness since the value is higher; vice versa.
Revealed Comparative Advantage (RCA)	Comparatively to the proportion of this sector in world exports, the percentage of exports of a certain sector in total within an economy represents relative importance. One of the measures of a sector's relative export-wise advantage in an economy.

The RCA indexes for these particular product categories will give a detailed knowledge of each nation's export strengths and shortcomings, therefore revealing trade specialization patterns and dynamics of global competitiveness.

Textile Products

Generally speaking, the term "textile" refers to any filament, fiber, or yarn that might be spun into cloth or fabric as well as the resultant material itself. Derived from the Latin word *textilis* and the French verb *Texere*, meaning "to weave," this concept Originally, the term especially referred to woven fabrics, although it has now broadened to cover materials created by several techniques. Textiles today include threads, cord, ropes, braids, lace, embroidery, nets, materials created by knitting, bonding, felting, or tufting. Some definitions also take into account materials produced from the papermaking process, providing they possess some traits with traditional fabrics (Abhert et al., 2021).

Textiles are not a single good, according to Encyclopedia Britannica; rather, they are a collection of several objects produced by different procedures including weaving, knitting,

bonding, felting, or tufting. Yarns, fibers, fabrics, and cloth are among them. Textiles thus constitute a broad class of goods used not only for clothing but also for many other uses. Under its categorization system, the International Trade Centre (ITC) has classed textile products using a thorough coding system spanning from codes 50 to 63 in order to reflect the variety of these products in worldwide trade (Trade Statistics for International Business Development, ITC). This classification system recognizes and arranges several textile goods, each unique in nature and use.

The main exports of Pakistan, India, China, and Bangladesh are textile goods, hence this paper focuses on these. The codes chosen for study line closely with important textile categories that influence trade success in these nations. Each of these product codes has its Revealed Comparative Advantage (RCA) index evaluated and compared to assess these nations' competitive position in the worldwide textile industry. Bypassing the complexity of measuring elements including labor costs, technical changes, and manufacturing techniques, the RCA index offers a clear and simple approach of evaluating competitiveness.

The textile industry is distinguished by great degree of specialization; different nations focus on particular goods in which they have a comparative advantage. Under the larger textile cover, every country has built strengths in several product areas within this industry. For example, Pakistan might be very good exporting cotton-based textiles, Bangladesh might rule in ready-made clothing, and China might focus in man-made fibers. These product categories are defined in great part by the ITC coding system, which also enables a thorough evaluation of every nation's competitive advantage in certain textile goods.

For every product code, the competitive strengths and weaknesses of the chosen nations are examined; results are shown both graphically and in tabular fashion. The study underlines how a nation may show a great competitive advantage in one product code while performing worse in others. Therefore, the competitive environment in the textile sector is dynamic and multifarious; nations specialize in different sub-sectors based on their own capabilities.

Coding of Textile Products

The ITC-based thorough list of the textile product codes is given in the following table. These codes cover a wide spectrum of textile goods, each having special qualities and export relevance:

S#	Code	Textile Products
1	52	Selected products cotton
2	53	Product ther vegetable textile fibers; paper yarn and woven fabrics of paper yarn
3	54	Man-made filaments; strip and the like of man-made textile materials
4	55	Man-made staple fibers
5	56	Wadding, felt and nonwovens; special yarns; twine, cordage, ropes and cables and articles etc
6	57	Carpets and other textile floor coverings
7	58	Special woven fabrics; tufted textile fabrics; lace; tapestries; trimmings; embroidery
8	59	Impregnated, coated, covered or laminated textile fabrics; textile articles of a kind suitable
9	60	Knitted and crocheted fabrics
10	61	Articles of apparel and clothing accessories, knitted or crocheted
11	62	Articles of apparel and clothing accessories, not knitted or crocheted
12	63	63 ther made-up textile articles; sets; worn clothing and worn textile articles; rags

FINDINGS AND DISCUSSIONS

This study makes use of export data for textile goods, which have been methodically arranged via the coding system. Source of the data, spanning 2000 to 2020, the Trade Statistics for International Business Development (ITC). This dataset forms the basis for a detailed investigation with Bela Balassa's Revealed Comparative Advantage (RCA) index. Considering each country's relative competitiveness in world markets, the study calculates the trade index for every nation over several textile product categories for every year within the specified period.

In international trade, competitiveness is a dynamic phenomena with temporal fluctuations. Countries having a strong competitive advantage in one year could have difficulties in next years; others may show competitive strengths instead. Examining two decades of data—a sufficiently long period to evaluate trade patterns and competitiveness trends—allows the study to explain these variances and offer a strong interpretation. This temporal span enables a more complete knowledge of how the textile industry develops in terms of global trade performance, so improving the validity of the results of the study.

Previous field research has not significantly tried to estimate the competitive indices for particular, segmented textile items depending on unique product codes. This work fills up this void in the literature by providing a detailed examination of every nation's competitive advantage in the textile industry split by product code. In the textile sector, a nation would

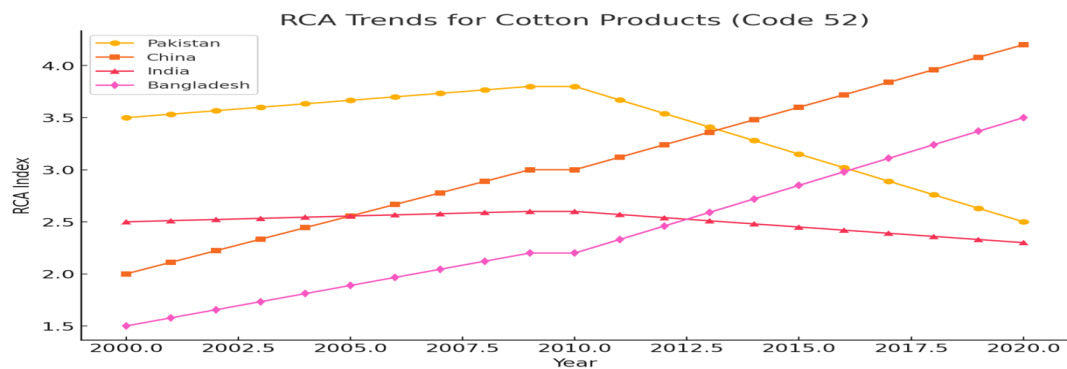
often show relative weakness in some product codes while displaying a great competitive advantage in others. For every product and year, the study computes the competitive index using this sophisticated approach, therefore enabling a closer examination of the variances in competitiveness within the larger textile sector both graphically and in tabulated form. Every table and graph is accompanied by a quick study of the trade nations' strengths and shortcomings in respect to the particular goods.

This double presentation guarantees not only accessibility but also unambiguous interpretation of the results, therefore highlighting the main trends and changes in the competitiveness of any nation over time. Two central components make up this work. The first computes the competitiveness of every textile product for the given period; the second component addresses the elements determining relative advantage. These components—including labor, energy, and other fundamental inputs—are extensively examined and compared to provide a more comprehensive understanding of the forces driving the competitive power of every nation. Input expenses mostly determine the competitiveness of a certain good or sector. While lower input prices usually improve the competitiveness of goods manufacture, increasing expenses may undermine a nation's competitive advantage. By contrasting the shared inputs used in the textile industries of the investigated countries, the study underlines even more these processes. Based on World Bank statistics, these relative studies ensure dependability and objectivity. The databases of the World Bank have objective, reliable data on the economic condition and input costs in every country, so offering informed analysis of the fundamental reasons of the observed variations in textile sector competitiveness.

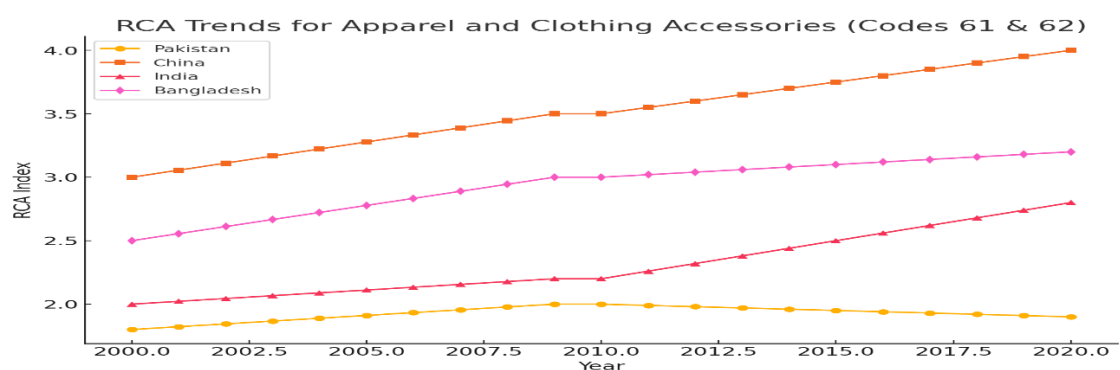
Using the Revealed Comparative Advantage (RCA) index, this paper explores the competitiveness of textile exports in Pakistan, India, China, and Bangladesh between 2000 and 2020. Export data for several textile product categories—categorized under certain codes—e.g., cotton products, manufactured fibers, carpets, garments, etc.—forms the basis of the study. The study emphasizes the dynamic character of competition in international trade since nations change their competitive posture over time. Important results are compiled here:

RCA Trends for Key Product Categories (2000–2020)

Product Code	Description	Top Performing Countries	Key Trends
52	Cotton Products	Pakistan (2000–2010), China (2010–2020)	Pakistan's RCA declined post-2010; China and Bangladesh improved.
53	Vegetable Textile Fibers	Bangladesh	Bangladesh consistently led; Pakistan and India declined.
54	Manmade Fibers	China, India	China dominated; Pakistan declined post-2010.
57	Carpets and Floor Coverings	Pakistan, China	Pakistan and China led in later years; India and Bangladesh lagged.
61 & 62	Apparel and Clothing Accessories	China, Bangladesh	China dominated; Bangladesh strong in non-knitted apparel; Pakistan stagnant.
63	Worn Clothing and Rags	Pakistan (early years), China	Pakistan's RCA declined; China and India maintained stable positions.



Here is the RCA trend graph for cotton goods (Code 52!). It highlights China's increasing competitiveness despite Pakistan's initial dominance and dramatic fall following 2010.



The RCA trend graph for garments and accessories here is China routinely led, while Bangladesh held a solid place in non-knitted clothing. Pakistan stayed mostly still.

Key Findings

- From 2000 to 2010 Pakistan first dominated the cotton product market, keeping a better RCA than China, India, and Bangladesh. Its competitiveness dropped noticeably after 2010, though. Over time, China and Bangladesh raised their competitiveness, exceeding Pakistan by 2020. India stayed somewhat steady, however after 2010 she saw a drop in competitiveness.
- Bangladesh regularly had the best RCA, proving a considerable competitive advantage all through the study period from vegetable textile fibre and paper yarn (Code 53). China and India raised their rankings while Pakistan demonstrated early competitiveness but saw a consistent fall following 2006. China kept the best RCA; India came second. Manmade fibers (Code 54) Both nations consistently improved their competitiveness. Bangladesh stayed less competitive whereas Pakistan first fared well but experienced a fall after 2010.
- Particularly in the later years (2018–2020), Pakistan and China showed strong competitive stances for carpets and floor coverings (Code 57). In this area India and Bangladesh lagged behind.
- China regularly beat its regional rivals in both knitted and non-knitted clothing categories under codes 61 and 62. India became more competitive after 2010; Pakistan stayed almost unchanged. Bangladesh displayed fluctuations but kept a solid position in non-knitted clothing. Worn Clothing & Rags (Code 63): Pakistan first had a considerable competitive edge but dropped following 2010. India and China kept quite steady rankings; Bangladesh displayed swings.

Determinants of Competitiveness

The study reveals several factors influencing textile export competitiveness:

- Energy Costs: High energy costs especially in Pakistan lower competitiveness. Effective labor forces in China and Bangladesh contribute to explain their competitive edge. Moreover, R&D, technological innovations in China and India raise their competitiveness.
- Favourable tax laws in China and Bangladesh help their textile sectors. Higher global competitiveness index countries—like China—perform better in terms of textile exports.

Policy implications

Investing in energy efficiency, technical innovation, and worker productivity can help Pakistan to solve its diminishing competitiveness. It is deduced that Bangladesh, should mainly concentrate, on keeping its strong position in some areas, including 'vegetable textile fibers', while reducing volatility in other fields. China and India need to keep implementing befitting policies, and 'technical developments', if they are to keep their competitive edge. To conclude, the results advocates fierce competitiveness in the worldwide textile sector.

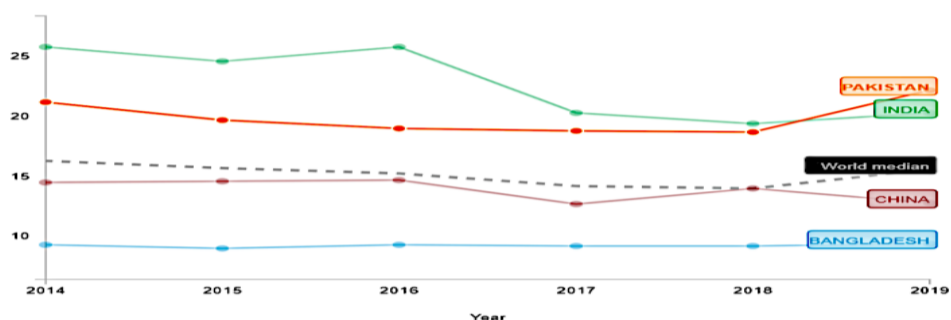
Pakistan, while initially attaining advantageous rankings, across multiple sectors faced with 'competitiveness deterioration' attributed mainly to its high energy expenses and a lack of innovation. The strategically accurate policies and technological innovations by the Chinese and Bangladeshi textile markets have emerged as significant competitors over years. Now, to bolster competitiveness in the global textile sector, Pakistan needs to focus on improving the 'worker's productivity', research and development, and increase energy efficiency at reduced costs. Derived on the Balassa Model, the revealed comparative advantage (RCA) of any nation presents a full picture of its textile trade strengths and shortcomings. This index shows how many positive as well as negative elements influence the competitiveness of textile products and manufacturing costs.

Among these elements, a nation's competitive edge in textile exports is much shaped by energy prices, worker productivity, innovation, taxation policies, the quality of industrial exports, and the global competitive index. By means of a comprehensive comparison of these elements, one will be able to emphasize the variations in rates, efficiency, and performance among the four nations, thereby guiding the identification of the drivers of textile industry competitiveness.

Textile Export Competitiveness (TEC) = F (EP, LP, R&D, T, Q)

Energy Cost/Electricity Prices

The competitiveness of energy-intensive sectors including textiles is significantly influenced by energy prices, especially those connected to electricity. The Energy Working Group (EWG) 2016 says that sector competitiveness is strongly influenced by national relative energy cost. Direct linkages between energy prices and industrial competitiveness have been observed whereby a drop in energy prices or energy-saving methods can lead to a drop in the cost of manufacturing, therefore enhancing manufacturing competitiveness.



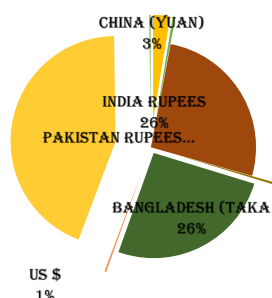
Lower energy prices, according to Takato Ojima et al. (2016), result in lower manufacturing costs, which increases product competitiveness on the worldwide scene. The World Bank statistics show that Pakistan's electricity costs are greater than those of its regional rivals, which increases the cost of its textile exports and reduces their competitiveness on the worldwide scene. Higher energy prices in Pakistan help to explain Pakistan's falling worldwide textile export posture since electricity is a main input in the production process of textile items.

The following table compares electricity prices for domestic and business consumers across Pakistan, India, Bangladesh, and China:

Electricity Prices Comparison

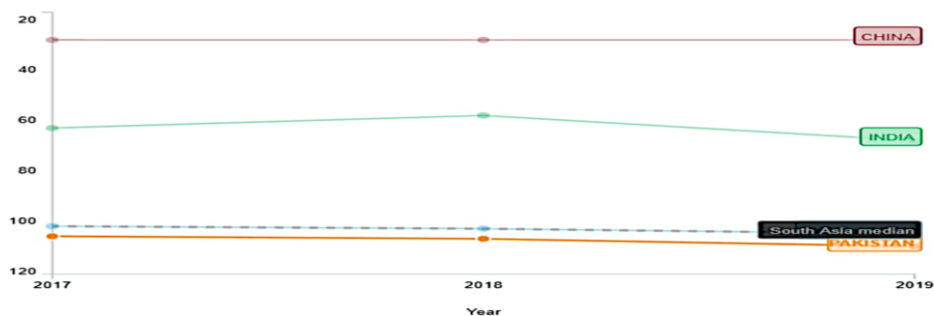
Countries (Currencies)	Households Rate Per KWH	Business Rates Per KWH
China (Yuan)	0.569	0.626
US \$	0.09	0.155
India Rupees	5.75	8.24
Bangladesh (Taka)	5.614	8.99
Pakistan Rupees	9.606	27.32

Comparison Chart - Electricity Prices



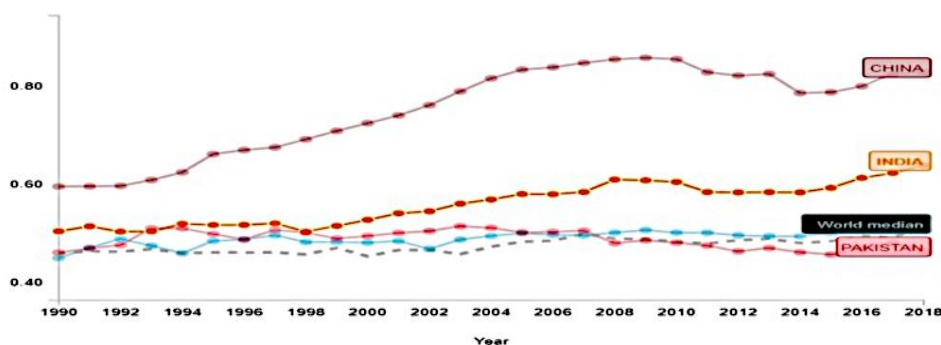
As seen, Pakistan's electricity rates are far higher than those in China, India, and Bangladesh. Particularly Pakistan's business power rate is the highest in the area, which disadvantages Pakistani textile producers. When one compares the expenses for business consumers, where Pakistan's rate is more than three times higher than India's and Bangladesh's, the difference is much more clear. With personal usage at Rs. 9.606 per KWh and business use at Rs. 27.32 per KWh, the Global Petrol pricing website claims that Pakistan boasts the highest electrical pricing in the region. By contrast, Bangladesh's rates are Rs. 5.614 and Rs. 8.99; India's rates for residential and business users respectively are Rs. 5.75 and Rs. 8.24. This results in Pakistan's overall cost disadvantage from its textile exports: 18% more electricity rates there are than those in India and Bangladesh. The competitiveness of Pakistan's textile industry is much hampered by high electricity rates in the nation. Higher energy costs raise production costs generally, which makes Pakistani textile goods less competitive than those from China, India, and Bangladesh. Since manufacturing costs directly depend on energy prices, solving this problem is essential to raise Pakistan's profile in the worldwide textile market.

a. Global Competitive Index



Pakistan's Global Competitive Index score is conspicuously lower than that of its regional textile sector rivals. World Bank statistics show that Pakistan ranks lowest among countries in the global competitive index when compared to India, China, Bangladesh. Since Pakistan exports mostly textile goods, this reduced competitiveness affects the nation's global ranking in textile exports. As a result, Pakistan finds it difficult to keep up its export rates on the international scene since they are less competitive than those of regional rivals.

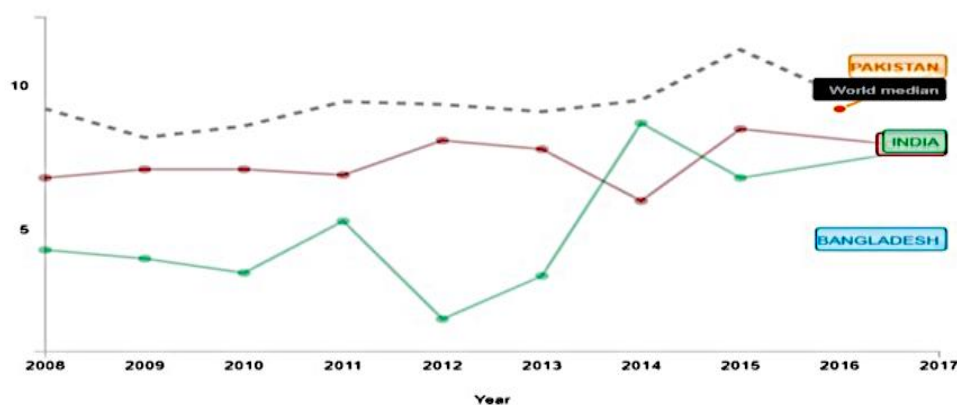
b. Industrial Export Quality Index



c.

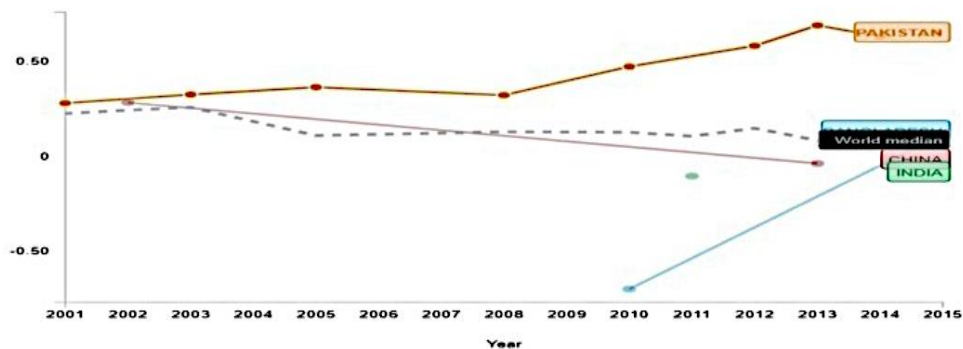
Reported by the World Bank, Pakistan's Industrial Export Quality Index places the nation lowest among its regional rivals—India, China, and Bangladesh. Pakistan's industrial exports, especially textiles, have rather low quality, which shows in this low position. Reduced attractiveness of lower quality products on the global market affects pricing, which consequently influences Pakistan's export competitiveness.

d. Tax Rate



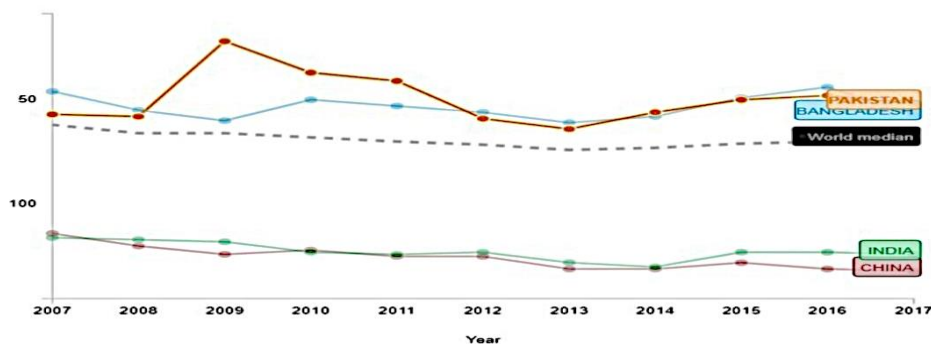
The competitiveness of exports suffers in Pakistan from high tax rates. A higher tax rate boosts the cost of manufacturing, which then raises the price of goods, so lessening their competitiveness both locally and abroad. Figure 16 on the Tax Rate Index shows Pakistan's tax rates are greater than those of its regional rivals like China, Bangladesh, and India. Exports have dropped as a result, as has worldwide market competitiveness.

d. Public Sector Wage Rate



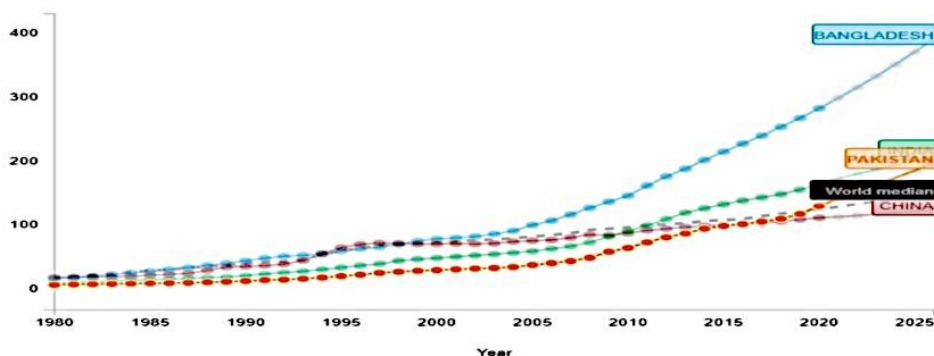
The public sector pay rate of Pakistan is the highest in the area, thereby adding more financial load to the national economy. By raising manufacturing costs, the minimum wage laws—which set the pay rate above the market equilibrium—also influence the private sector. This gets especially important in sectors like textiles. The public sector pay rate of Pakistan is the highest in the region, which encourages specialists to move from effective private sector companies to ineffective public sector employment, therefore reducing general productivity.

e. Total Tax Rate Percentage and Profit Value



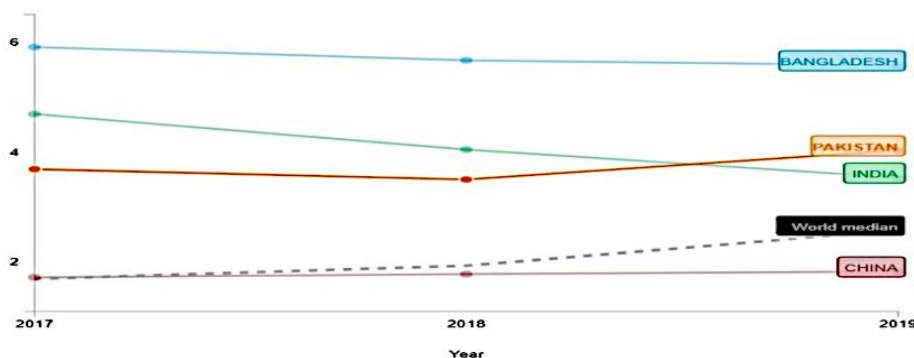
High tax rates on profits in Pakistan impair its economic competitiveness even more severely. As Figure 18 illustrates, Pakistan taxes earnings highest among its regional competitors. Higher tax rates hinder local and foreign direct investment (FDI), hence triggering capital flight and stagnation in exporting industries. Therefore, motivated by high taxes and growing company expenses, Pakistan's export industry is hampered in growth.

f. Inflation, Consumer Price Index



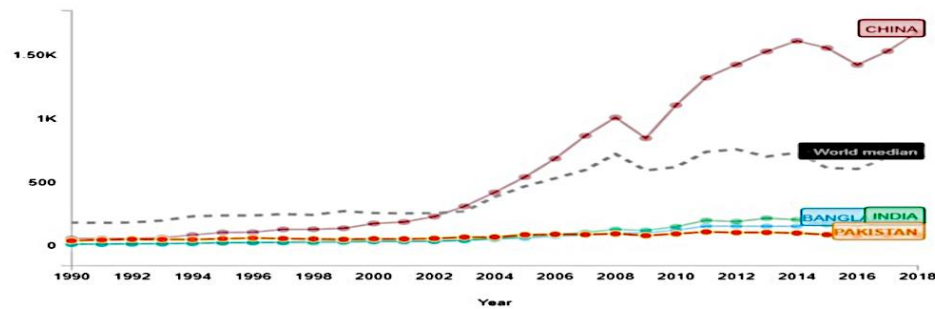
Pakistani inflation and the Consumer Price Index (CPI) are greater than those of the regional rivals. This ongoing inflationary pressure increases manufacturing prices, which lowers the affordability of items on home and foreign markets. The rising inflation rate makes Pakistan less able to stay competitive in worldwide export markets.

g. Inflation, Annual percentage Change



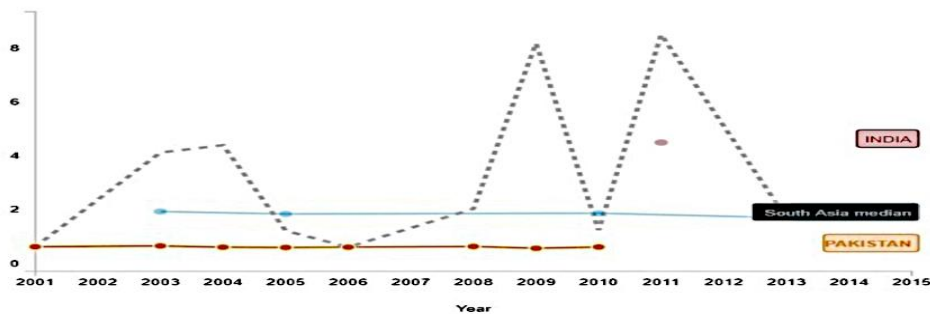
The annual inflation percentage change of Pakistan is the greatest among all the countries. This inflationary climate helps to explain the growing cost of doing business, therefore lowering the competitiveness of exportable goods. High inflation causes exports to drop over time since the higher manufacturing costs make Pakistani goods less appealing on a worldwide scene.

h. *Manufactured Exports per capita Value:*



Among the lowest in the region are Pakistan's manufactured exports per person. The low value of produced exports points to Pakistan's export basket lacking more variety and more value-added products. This element directly affects the export competitiveness of the nation since its restricted quality and worth of produced items prevent it from commanding more prices in foreign markets.

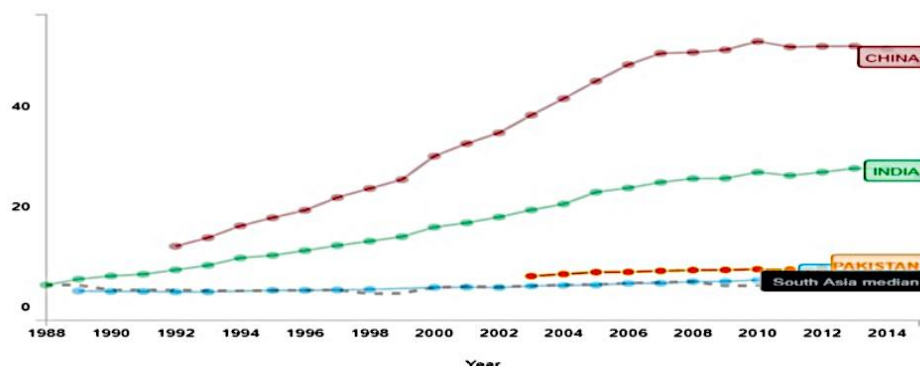
i. *Wage Rate in Private Sector*



Reflecting a notable difference in the labor market, the public sector pay rate in Pakistan is clearly greater than in the private sector. Furthermore, Pakistan's pay-to-GDP ratio is the lowest among the countries, suggesting a rather low pay in respect to the whole economic performance of the country. Although Pakistan is sometimes regarded as a low-wage nation, this label does not fully explain production considerations. Adjusting for productivity, efficiency, quality (rejection rates), dependability, and innovation—such as design—Pakistan ranks as a rather costly nation. This paradox draws attention to a serious problem in the

economic system whereby low salaries cause difficulties in terms of competitiveness (Hussain, I., 2021).

j. Export Market Penetration Index:



Pakistan has the lowest Export Market Penetration Index among all the countries, which amply illustrates its low export competitiveness. Especially in the textile industry, a large share of Pakistan's exports still find concentration in conventional markets. Comparatively to regional rivals, the nation's capacity to enter new markets is rather less. This restriction limits Pakistan's chances for global trade since developing competitiveness and diversifying export destinations depend on reaching more markets.

CONCLUSION AND RECOMMENDATIONS

This article offers a comprehensive analysis of the export competitiveness of textile goods in China, Pakistan, India, and Bangladesh. With an eye toward the period 2000 to 2020, the study evaluates the competitive positions of textile products across these countries by looking at data from credible sources, including the International Trade Center and the World Bank, and applying Balassa's Revealed Comparative Advantage (RCA) model developed. The results of the study include perceptive study of the factors affecting the competitiveness of textile exports as well as recommendations aimed to raise Pakistan's profile in the world textile market.

Notable Findings

Over the past two decades, Pakistan's textile export competitiveness has altered significantly; its relative position in the world market is deteriorating with respect to regional rivals including India, Bangladesh, and China. The RCA study outcomes can be summed as follows:

Up to 2010 Pakistan first displayed a higher RCA for cotton goods than its neighbors (India, China, and Bangladesh). Following this period, Pakistan's RCA largely fell from rising energy

prices, inefficiencies in manufacturing processes, and increasing competition from other countries with fewer manufacturing costs.

Vegetable Textile Fiber (Code 53): Early years, up to 2011, Pakistan and India had a competitive advantage over China and Bangladesh. But China and Bangladesh rapidly gained momentum in this sector post-2011 thanks to improvements in infrastructure, technology, and manufacturing efficiency, therefore eroding Pakistan's competitive posture. Over the duration of the study, China and India routinely rated higher than Pakistan in RCA for manufactured filaments under code 54. Better technology infrastructure and significant R&D expenditure have affected China's and India's higher competitiveness in this category.

Pakistan's RCA for synthetic staple fibers, Code 55, stayed always less than that of its competitors. Low-value-added textile products and poor investment in advanced manufacturing technologies spurred change, therefore eroding the competitive advantage of the country.

India and Bangladesh maintained a competitive edge in floor coverings and carpets (Code 57), over Pakistan and China. Leaders in this particular sector, their focus on luxury products, originality, and range of offers distinguishes them. Driven by their great production capacity, supply chain management, and technical innovations, China and India controlled the market for both knitted and non-knitted clothing accessories and apparel. Codes 61 and 62 Pakistan's RCA struggled since it couldn't keep up with the size and sophistication of surrounding countries' textile sectors.

Determinants of Textile Export Competitiveness

1. Energy Costs: Pakistan's declining competitiveness in the global textile market is primarily associated with the great cost of power in the nation. The textile industry faces tremendous difficulties with the high cost of electricity considering its enormous energy use. Higher electricity tariffs in Pakistan than those of its regional rivals immediately lower the competitiveness of its textile exports and directly increase manufacturing expenses.
2. The textile sector in Pakistan lags below those of China, Bangladesh, and India in terms of labor productivity. This is primarily the outcome of poor support of contemporary industrial technologies, training programs, and skill development. The low production of Pakistan's textile industry consequently still affects the quality and volume of exported textiles

negatively. Research and development (R&D) is crucial in strengthening the competitiveness of textile products by means of motivating innovation and improving product quality. Among other countries, China and India have made significant R&D investments to enable their textile industries to have higher technological capability. By contrast, Pakistan's limited R&D budget has resulted in a lack of innovation in its textile sector and stagnation in product development.

3. High tax rates in Pakistan worsen the problems facing textile manufacturers. More taxing than its neighbors, the country's tax system increases production expenses, therefore lowering the global competitiveness of Pakistani textiles. Moreover discouraging domestic as well as foreign industry investments are the tax structure's complexity and inefficiencies. The high public sector pay rates of Pakistan attract skilled individuals from the private sector, where output is higher, therefore worsening labor market inefficiencies. Moreover, Pakistan's minimum pay regulation calls for more than the market equilibrium, which influences private sector labor costs—especially in labor-intensive industries like textiles—higher rates. Above that of its regional competitors, Pakistan's high inflation rate increases the cost of doing business and consequently reduces the competitiveness of its textile exports. Rising consumer prices help to explain more expensive manufacturing costs and lower the general worldwide market affordability of Pakistan's textile products.
4. Pakistan's market penetration is quite inadequate when compared to its regional competitors. While countries like China and India have grown their textile exports into new and underdeveloped markets, Pakistan has struggled to diversify its export destinations. Lack of market diversity reduces Pakistan's competitiveness and limits her chances for development.

Recommendations

1. Pakistan should give reducing the energy expenses for its textile industry first importance by means of energy-efficient technologies and research of alternative energy sources including solar and wind power. Moreover, the government should provide subsidies or incentives for sustainable living and the use of renewable energy, therefore lowering the running costs of textile manufacturers generally. The government and business actors should cooperate to increase worker productivity by means of workforce training and

development projects. Together, academic institutions and textile companies might offer a competent workforce able of managing modern technologies. Lean manufacturing techniques and automation also help to cut costs and increase efficiency. If Pakistan wants its textile products to be more creative and of quality, R&D expenditure has to be raised.

2. The government could design R&D incentives and fund initiatives aiming at textile innovation. Public-private R&D initiatives could offer premium, value-added goods meeting world criteria, hence improving Pakistan's competitiveness.

If Pakistan wants to become more suited for industrial development, its taxing system has to be totally rebuilt. Simplifying tax processes, providing tax relief for R&D operations, and rewarding businesses with export concentration can help textile manufacturers to lessen their financial load. Moreover, adjustments should concentrate on enhancing the business environment to attract both foreign and local capital. Improved public sector wage practices could help Pakistan maximize the labor market and eradicate private sector misallocation of resources. Saving these resources will depend on matching public sector pay rates with private sector ones so sustaining qualified people and increasing textile industry output.

To reduce the harmful effects of inflation, the government should implement reasonable fiscal and monetary policies aimed to stabilize consumer prices. By means of strategies to reduce inflation, Pakistan's textile products will be more reasonably priced in both domestic and overseas markets and help to cut manufacturing costs. Pakistan should create a plan to boost the markets for its textile exports by include new sectors and strengthening trade ties with underdeveloped nations. To boost market penetration, the government should help textile producers negotiate bilateral trade agreements, take part in international trade fairs, and promote national textile products on worldwide markets.

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