COMPETING GLOBALLY: REGIONALLY COMPETITIVE ENERGY TARIFFS (RCET) FOR EXPORT-ORIENTED ENTERPRISES OF PAKISTAN

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Abstract

This research investigates the multifaceted challenges and intricacies surrounding the implementation of Regionally Competitive Energy Tariffs (RCET) within Pakistan's export sector. In an era marked by increased global competition and a growing need for energy sustainability, understanding the dynamics of energy pricing in export industries is paramount. The research identifies significant hurdles in implementing RCET in Pakistan, including problems with data availability, reliability, and confidentiality. These issues may affect the accuracy of the analysis. Furthermore, it recognizes the dynamic nature of the energy and export sectors, making it challenging to capture changes within a set timeframe. It also offers valuable guidance to policymakers, energy sector stakeholders, and export industry leaders aiming to enhance Pakistan's export competitiveness. It lays the groundwork for future studies, advocating for more profound insights through in-depth interviews and surveys with industry players. Long-term assessments of RCET's impact on Pakistan's export competitiveness are also encouraged.

Keywords: *Regionally Competitive Energy Tariffs (RCET), Export Industry, Energy Pricing, Policy Recommendations, Pakistan.*

1. Introduction

RCET is crucial for the survival and competitiveness of the export industry, especially in sectors that heavily rely on energy, such as manufacturing and heavy industries. Compared to its overseas equivalents, an RCET seeks to provide domestic industry competitive energy pricing (Enescu et al., 2023).

First, RCET importance for the export industry includes competitiveness in costs: For companies that produce goods for export, the energy cost significantly determines overall production costs. Energy access for these sectors is guaranteed by a regionally competitive energy tariff, enabling them to create goods with competitive costs on the global market (Shyam & Kanakasabapathy, 2022). Low energy prices directly translate into decreased production costs for companies focused on exports. As a result, they may sell their goods on the worldwide market at competitive rates, boosting their prospects of securing business deals and market share (Calamaro et al., 2022).

Local and international investors are drawn to export sectors by a stable and competitive energy tariff environment. Investors are more inclined to establish manufacturing facilities and export-focused enterprises in areas with competitive energy prices, fostering economic growth and job creation. Increased domestic output can lower import requirements if economic energy is available (Bashir, 2021). This can, therefore, enhance the economy and improve the trade balance. A competitive energy tariff encourages long-term economic growth by promoting export businesses, which spur innovation, boost productivity, and have a multiplier impact on other economic sectors (Lima & Feijão, 2022).

Regarding the advantages of a RCET for export businesses, competitive energy costs allow export businesses to grow their export volumes and enhance output, resulting in increased export income for the nation. Furthermore, a robust export sector with low energy prices can create jobs at all skill levels, raising the employment rate overall and lowering unemployment. In addition, higher export profits result in higher foreign exchange earnings, which help strengthen the nation's currency and enhance the stability of its economy (Lima & Feijão, 2022). Due to the increased likelihood of corporations locating production facilities with lower energy prices, nations can draw more foreign direct investments if their energy tariffs are competitive (Shyam & Kanakasabapathy, 2022).

When implementing regionally competitive energy pricing, energy suppliers may experience revenue losses if the rates are below cost-recovery thresholds. To keep energy prices competitive, governments may need to subsidize them, which might strain the country's budget. Sometimes, unnaturally low energy costs might result in wasteful energy use or an overreliance on energy-intensive businesses, which may cloud market dynamics (Calamaro et al., 2022).

Over the years, several nations have understood the value of regionally competitive energy tariffs. Many countries have established rules and procedures to ensure affordable energy for companies that rely on exports. Examples from the past may be seen in nations like China, where competitive energy tariffs greatly aided the fast expansion of its manufacturing and

export sectors (Khalilpour & Lusis, 2020). Historical energy crises, such as the oil crises of the 1970s, had significant effects on energy pricing and availability, impacting the export industry's competitiveness globally. Countries with abundant natural resources, such as oil or natural gas, often had a competitive advantage in providing low-cost energy to export industries, bolstering their international competitiveness (Rahim et al., 2021). Throughout history, some countries have engaged in energy trade agreements to secure access to competitively priced energy resources, supporting their export industries. Certain regional blocs, like the Gulf Cooperation Council (GCC) and the Association of Southeast Asian Nations (ASEAN), have explored energy cooperation initiatives to ensure competitive energy prices for their member states' export industries (Lima & Feijão, 2022).

As for the present, different nations use different approaches to regionally competitive energy rates. Several countries have managed to keep their energy costs competitive through market processes, the expansion of infrastructure, and the efficient use of resources. Others may have difficulties due to changes in energy pricing and geopolitical issues that impact energy supplies (Shyam & Kanakasabapathy, 2022).

The prospects for regionally competitive energy pricing are heavily influenced by many variables. It will be necessary to balance environmental objectives and economic competitiveness to provide competitive energy rates for the industry as the globe moves towards cleaner and renewable energy sources (Bashir, 2021). The viability and durability of regionally competitive rates will continue to be impacted by the erratic nature of the world's energy prices (Soares et al., 2022). The determination of governments to encourage export-oriented sectors through competitive energy prices will be crucial in determining the future environment. Energy technology advancements might lower production and supply costs, impacting energy rates' competitiveness (Calamaro et al., 2022).

The export business has many significant issues with RCET. First, RCET implementation can be challenging and requires careful consideration of many variables and stakeholders (Enescu et al., 2023). The second significant difficulty is securing cost recovery for energy providers while maintaining competitive rates. Thirdly, governments may be burdened with subsidy costs to maintain competitive energy rates, placing a strain on their budgets (Khalilpour & Lusis, 2020). Additionally, using RCET may result in market distortions and wasteful energy use.

Additionally, uncertainty is brought on by the export sector's reliance on world energy prices. Properly deploying RCET may be further hampered by infrastructural issues and regulatory difficulties (Calamaro et al., 2022). Complexity is further increased by trade conflicts and the requirement to balance environmental concerns. Last but not least, export companies may be unable to fully use RCET's advantages due to a lack of knowledge and information. A balanced and effective RCET strategy that promotes the expansion and global competitiveness of the export business must address these issues (Soares et al., 2022).

Insufficient empirical data and analysis exist to establish a causal relationship between regionally competitive energy tariffs and export industry success. Prior research has frequently

concentrated on broad energy pricing strategies without going into the specific effects of RCET on export-oriented companies (Bashir, 2021; Khalilpour & Lusis, 2020; Lima & Feijão, 2022). As a result, there is a knowledge vacuum about how much RCET affects the survival and competitiveness of the export business in global markets, considering both gas and electricity costs (Enescu et al., 2023).

Understanding the effects of RCET is essential for individuals who operate in the export sector. Strategic choices may be informed by understanding how competitive energy tariffs affect production costs and worldwide competitiveness. This knowledge enables export enterprises to optimize operations and pricing strategies to maintain competitiveness in foreign markets. Studying the consequences of RCET is beneficial for energy professionals, especially policymakers and regulators. Understanding how energy tariffs impact industrial demand and competitiveness aids in developing efficient energy pricing strategies that balance economic growth, energy security, and sustainability. Understanding the importance of RCET aids in developing efficient energy policies that encourage export-oriented sectors and draw in capital. It enables the development of an advantageous environment that strikes an appropriate balance between the export industry's demands, energy costs, and environmental sustainability.

2. Methodology

A critical review is a well- liked method of evaluating earlier and current findings. It may examine a specific concept, subject, theoretical viewpoint, or crucial topic that has been discussed in the body of previous research (Paré & Kitsiou, 2017). The study conducted a critical review of the literature from the years 2020 to 2023. A critical literature review is being conducted on the multifaceted challenges and complexities underlying the implementation of regionally competitive energy tariffs (RCET) within Pakistan's export sector in order to gain a thorough understanding the study topic. Understanding the dynamics of energy pricing in export industries is crucial in a time of increased global competition and rising demand for sustainable energy sources (Jiang et al., 2020). Critical reviews are useful for identifying key obstacles to RCET implementation in Pakistan, such as issues with data availability, reliability, and confidentiality. The accuracy of the analysis may be impacted by these problems (Sultana & Asrat, 2014). In addition, the current evaluation can provide policymakers, energy sector stakeholders, and export industry leaders with useful guidance on how to improve Pakistan's export competitiveness. It can also help identify knowledge gaps and topics that require further research, and it advocates for deeper insights through in-depth interviews and surveys with industry players (Colla et al., 2020). The review can also broaden the body of knowledge on RCET and the export industry by outlining the key hurdles Pakistan encountered in implementing RCET (Juhász et al., 2023).

3. Literature Review

3.1. RCET and export industry

3.1.1. Regionally competitive energy tariff

"Regionally Competitive Energy Tariff" refers to an energy pricing scheme intended to increase a region's competitiveness, particularly concerning energy prices. The objective is to

attract firms, support economic expansion, and advance investment in that area (Enescu et al., 2023). Setting energy costs at a cheaper or more advantageous level relative to other areas or nations may be required to establish a regionally competitive energy tariff. By doing this, officials seek to entice enterprises that significantly rely on energy usage to the region by lowering operating expenses for these companies (Shyam & Kanakasabapathy, 2022).

Economic growth has been difficult in Pakistan due to its uncompetitive and inefficient energy mix, highlighting significant problems concerning affordability. Energy prices in this country have not been in line with average household income levels or regionally standard prices (Calamaro et al., 2022). The textile industry, Pakistan's largest manufacturing and exporting sector, received the advantages of the regionally competitive energy tariffs granted in support of it in 2018. The industry as a whole, as well as Pakistan's economy as a whole, experienced tremendous expansion and growth as a result. The textile industry has so far been able to fulfill demand. However, expansion has proven elusive due to high energy prices, power shortages, and unreasonable government regulations preventing the sector from growing. Despite these obstacles, the industry did well throughout the COVID-19 era and reported an increase in exports of over 11% in January 2021 (Bashir, 2021).

Regional Energy Tariffs

Region	Electricity Tariff (Cents/Kwh		Gas/RLNG Tariff (S/mmbtu	
Pakistan	9		Sindh	5.9
			General	6.5
Bangladesh	9		4.05	
India	Maharashtra	7.8	4.06	
	Punjab	7.1		
Vietnam	7.3		The PM has the authority to decide which project charged what tariff rates	

Figure 1: Regional Energy Tariffs

The table demonstrates Pakistan's textile industry's unfavorable competitive position if the RCET strategy is abandoned. According to the data, the region's average power cost per kilowatt-hour is 7.4 cents.

The price of petrol similarly demonstrated Pakistan's unfavorable regional position. The typical regional gas/RLNG price is about $4/mmbtu. Pakistan's textile industry spends 7.8 percent more overall than Bangladesh and 2.4 percent more overall than India. The sector's characteristics may be the primary cause of the significant share discrepancy between Bangladesh and Pakistan. Bangladesh works at higher nodes of the value chain and is mainly involved in the garment industry, which generally requires less energy (Sattar & Abbas, 2021).

3.1.2. Export industry of Pakistan

Pakistan's export sector is crucial to its economy, significantly contributing to foreign exchange profits and creating job opportunities. The nation exports a wide variety of items, with the primary industries being rice, leather goods, sports equipment, surgical instruments, and chemicals (Lima & Feijão, 2022).

For the fiscal year 2022, exports were aimed at US$31.20 billion. Following the removal of lockdowns at the beginning of FY2022, the economy stabilized, and many policy measures were implemented to boost industrial activity and re-establish economic momentum. The amount of exports from the nation reached $31.78 billion in the fiscal year 2021–2022 (FY22), the most significant export amount for Pakistan since 1947. This rise in exports resulted from a 25.60% increase from FY2021 (Lima & Feijão, 2022).

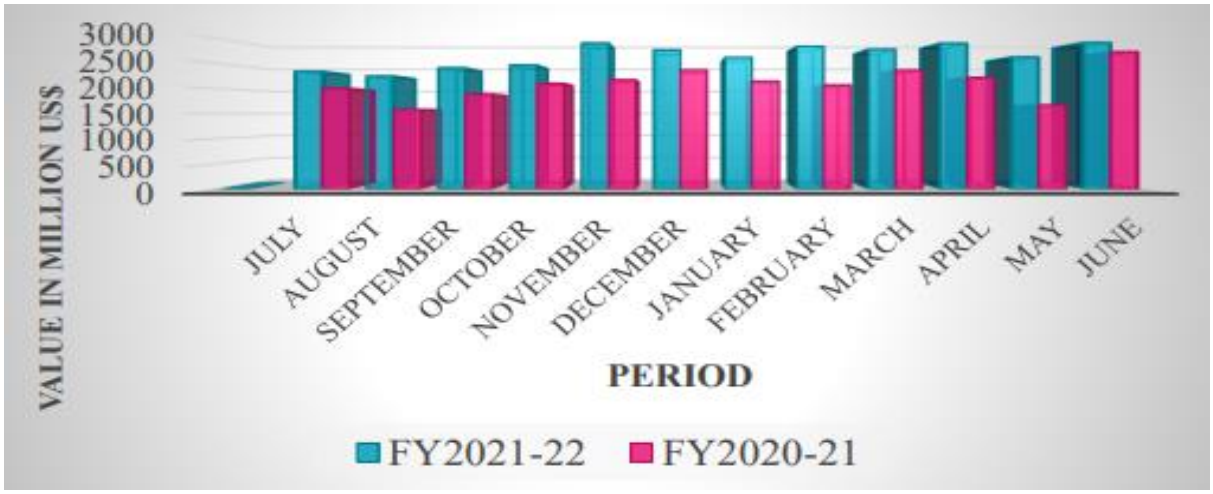

Figure 1: Monthly Export of Pakistan FY 2022

Exports for FY2022 were Rs. 5,661,128 million, up 40.06% from Rs. 4,041,927 million during the same period last year. Exports in US dollars for FY2022 reached $31,782 million compared to $ 25,304 million the previous year, a 25.60% increase. June saw the most significant growth for FY2022, at $2911 million. During FY2022, the number and value of oil seeds, nuts, and kernels exported increased by 64.2% and 104.8%, respectively. The exports of textile manufacturers, which make up 60.82 percent of all exports, increased significantly during FY2022 by 25.5% over the previous year's rise of 22.9%, reaching US$ 19.33 billion as opposed to US$ 15.40 billion (Shyam & Kanakasabapathy, 2022).

Oil and gas exports, which account for a tiny 1.1% percentage of all exports, increased by 83.1% in FY2022 to US$ 333.816 million from US$ 182.303 million due to increases of 142.6% and 75.5% in crude oil and petroleum product exports, respectively. During FY2022, exports of primary commodities climbed by 29.2%, semi-manufacturing by 18.2%, and manufactured goods by 25.6%. At the same time, their respective percentages of all exports for the fiscal year (2022) were 16.0%, 6.6%, and 77.4% (Calamaro et al., 2022).

Chemical and pharmaceutical exports increased by 36.5% and reached US$1.6 billion in FY22, up from US$1.1 billion in FY21. Chemicals had the most significant proportion, accounting for US$ 871.6 million, other than those used in plastic and pharmaceutical goods. Compared to US$ 556.1 million in FY2021, FY2022 saw an impressive rise of 56.7%. During FY2022, plastic material exports increased by 32.8%, reaching US$428.4 million. Despite rising drug costs on the international market, exports of pharmaceutical items fell 0.5% during FY2022 (Khalilpour & Lusis, 2020).

During FY2022, exports of carpets, rugs, and mats had increases in both quantity and value of 51.3% and 12.3%, respectively. During FY2022, the quantity and value of cement exports fell by 26.6% and 16.4%, respectively. The primary factors contributing to reducing cement exports were increased manufacturing costs, higher international freight rates, and rising coal prices (Rahim et al., 2021).

Country-wise, the United States continued to lead exports during FY2022, followed by China, the United Kingdom, the Netherlands, Germany, and the United Arab Emirates. These six nations contributed 53.26% of all exports for FY2022, compared to 52.88% during the same time the previous year (Lima & Feijão, 2022).

Million US$

	COUNTRY	JUL-JUN, 2021-22		JUL-JUN, 2020-21		%CHANGE 2021-22 OVER
		VALUE	%SHARE	VALUE	%SHARE	
	TOTAL	**31,782.09**	**100.00**	**25,304.14**	**100.00**	
1	U.S. America	6,747.51	21.23	5,155.96	20.38	30.87
2	China	3,183.48	10.02	2,428.76	9.60	31.07
3	United Kingdom	2,148.23	6.76	2,032.49	8.03	5.69
4	Netherlands	1,730.81	5.45	1,247.89	4.93	38.70
5	Germany	1,730.66	5.45	1,509.95	5.97	14.62
6	United Arab	1,386.23	4.36	1,006.24	3.98	37.76
7	Spain	1,275.21	4.01	878.26	3.47	45.20
8	Italy	1,149.48	3.62	788.16	3.11	45.84
9	Bangladesh	935.09	2.94	651.84	2.58	43.45
10	Afghanistan	805.14	2.53	1,026.51	4.06	(21.57)
11	Belgium	784.56	2.47	637.20	2.52	23.13
12	France	507.96	1.60	413.20	1.63	22.93
13	Canada	462.64	1.46	320.52	1.27	44.34
14	Malaysia	453.68	1.43	238.39	0.94	90.31
15	Saudi Arabia	427.26	1.34	416.56	1.65	2.57
16	Sri Lanka	385.06	1.21	276.07	1.09	39.48
17	Poland	371.89	1.17	309.07	1.22	20.32
18	Thailand	369.55	1.16	172.32	0.68	114.45
19	Turkey	363.55	1.14	274.41	1.08	32.49
20	Australia	304.20	0.96	281.68	1.11	7.99
	OTHERS	**6,259.91**	**19.70**	**5,238.66**	**20.70**	**19.49**

Table 2: Major Exports of Pakistan

3.1.3. RCET and Export Industry

Any nation's export sector is highly dependent on various variables, and one of the most important is the cost of manufacturing, which includes energy costs. Energy tariffs directly impact export-oriented firms' competitiveness since they can significantly impact their

operational expenses. Compared to places with lower energy prices, a location with higher energy costs may have difficulty exporting goods competitively.(Shyam & Kanakasabapathy, 2022)

High energy tariffs put a heavy burden on exporters, which results in a loss of market share and puts Pakistan well behind its rivals in the area. This is also one of the leading causes of the export market's stagnation, a reality that the government rightly acknowledged in 2018 when it unveiled competitive tariffs. However, there have been encouraging export growth and favorable effects on industry expansion and job creation during the past few months (Bashir, 2021). According to a recent tweet from Minister of Commerce and Investment Abdul Razak Dawood, the nation's exports have exceeded $2 billion for four straight months. According to preliminary data, the exports of goods for January 2021 increased by 8% to $ 2.14 billion from $ 1.98 billion for January 2020. Compared to Jul-Jan 2019-20, when exports were USD 13.507 billion, they climbed by 5.5% to USD 14.245 billion in Jul-Jan 2020-21. The seven-month total exports for FY 2020–21 exhibit an increasing trend. It is impossible to overstate the effect of this export boom on Pakistan's economic stability (Soares et al., 2022).

Dr. Gohar Ejaz, the patron-in-chief of the All Pakistan Textile Mills Association (APTMA), wrote to Prime Minister Shehbaz Sharif, stating that the Regional Competitive Energy Tariff's discontinuation is likely to lead to the closure of a sizable portion of the export industry, resulting in significant unemployment, loss of export revenue, and further deterioration of the Balance of Payments. However, RCET considerably increased industrial competitiveness worldwide and allowed Pakistani products to compete on an equal footing with rival regional nations because of comparable energy input prices. Additionally, Pakistan's textile sector's increased competitiveness attracted an extra $5 billion in investment for development and new projects. By an additional $5–$6 billion, these investments increased the export capacity that was already available (TexTalks, 2021).

Figure 2: Textile Exports

With such encouraging developments, Pakistan was on pace to export goods worth an astounding $22–$24 billion in the current fiscal year. This increasing momentum was, however, halted by the currency restrictions paired with RCET's exit, issues with the energy supply, and a liquidity crisis brought on by the devaluation. From the $19.5 billion in exports generated during the previous fiscal year, Pakistan has already seen a significant over $3.5 billion shortage this year alone (Calamaro et al., 2022).

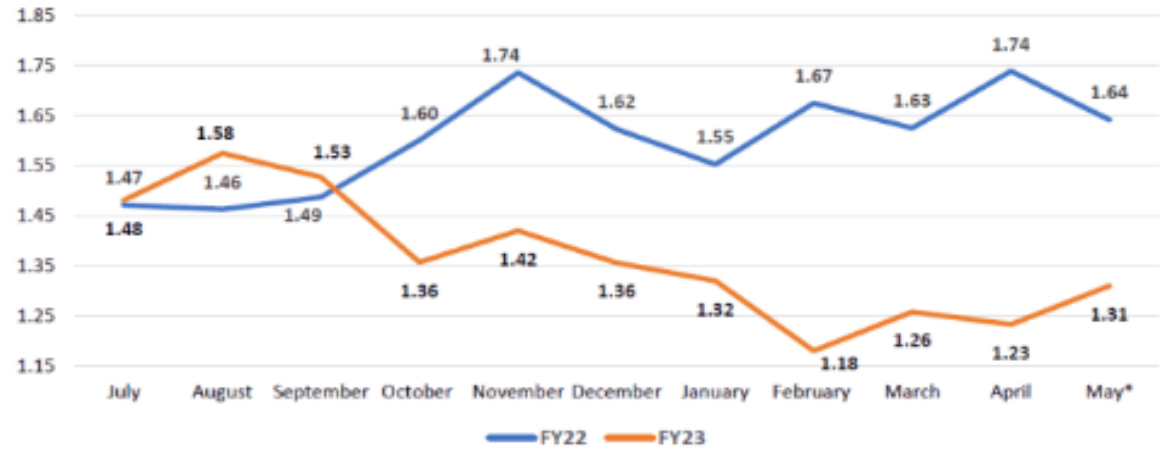

Figure 3: Textile Exports for FY2022-FY2023

The government did well to maintain the RCET facility for the majority of this year despite the financial difficulties. However, it is, to put it mildly, perplexing to withdraw when the nation needs foreign exchange. The textile sector is crucial for generating foreign cash, and without the continuance of RCET, the exports would undoubtedly fall, resulting in an inflow of foreign exchange that is far smaller than planned or anticipated (Global Village Space, 2023).

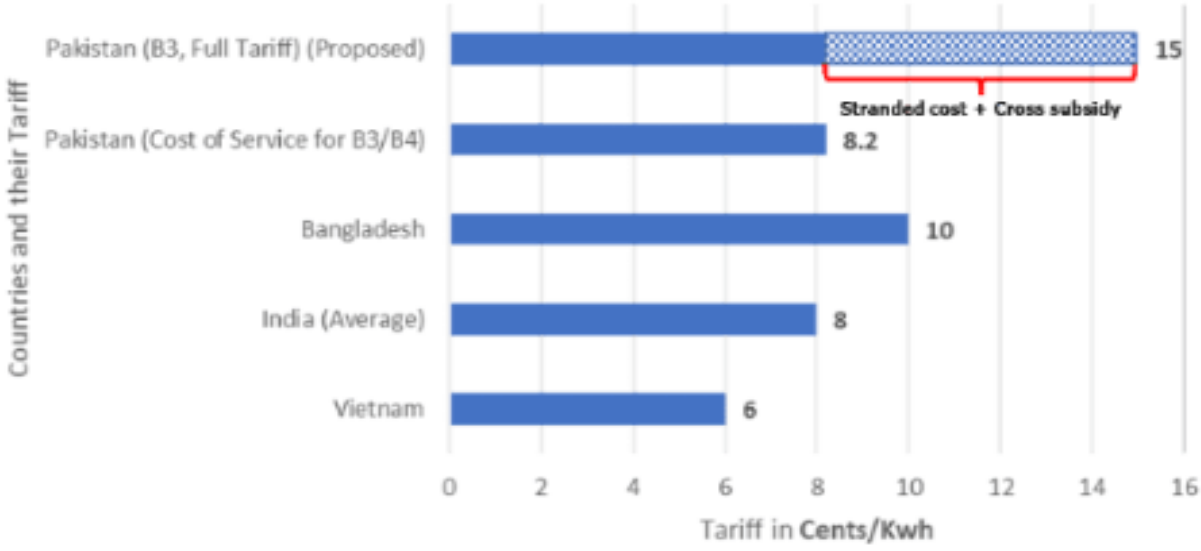

Figure 4: Regionally Competitive Energy Tariffs (RCET)

As seen above, RCET is more or less equivalent to the service cost and does not require subsidies. The NEPRA pricing scheme, which cross-subsidies other industries and underperforming DISCOs, is the cause of the subsidy. In all honesty, the government should directly support these as part of its socio-political duty (Global Village Space, 2023).

Year	Gas/RLNG	Power	Total Cost	Textile Exports	Average Exchange Rate	Textile Exports	Cost of RCET as % of Textile Exports
	Rs Billion			$ Billion		Rs Billion	
FY19	33.59	13.34	46.93	13.33	136.09	1814.08	2.59 %
FY20	41.92	21.24	63.16	12.53	158.64	1987.76	3.18 %
FY21	34.29	9.21	43.5	15.4	159.48	2455.99	1.77 %
FY22	81	26	107	20.5	178	3649.00	2.93 %
FY23	40	64	104	16.1	270.76	4359.24	2.39 %
Total	230.8	133.8	364.59	77.86	180.594	14266.07	2.56 %

Figure 5: Cost of Regionally Competitive Energy Tariffs (RCET)

3.1.4. RCET and Economic Development

Based on current economic theories, energy tariffs and their competitiveness may influence economic growth. Energy prices directly impact how much it costs for businesses to produce goods and services, especially those that use much energy, like the manufacturing sector (Enescu et al., 2023). A reduced energy tariff may result in more production, higher levels of output, and possibly lower consumer prices by lowering the cost of manufacturing. With a competitive regional tariff, energy-intensive enterprises can attract local and international investment. Lower energy prices may attract companies to relocate or expand their operations there, boosting the local economy and creating more jobs (Khalilpour & Lusis, 2020).

Competitive energy prices can improve a nation's export-oriented sectors' ability to compete internationally. Lower energy prices can contribute to cheaper manufacturing costs for exported goods, increasing their marketability on the international market and perhaps increasing exports (Calamaro et al., 2022).

A competitive energy rate for the region can promote broader economic expansion. Businesses in energy-intensive industries grow, which boosts economic activity, income production, and tax collections that may be used to fund public infrastructure and services. Competitive energy prices can encourage companies to implement energy-saving techniques and equipment, fostering sustainable development and lowering greenhouse gas emissions (Soares et al., 2022). Pakistan can create goods at a cheaper cost than many Western nations due to conducive environments, particularly the availability of RCET, and is thus in a solid position to explore the latent export potential through CPEC. Contrary to many countries, which only have access to raw materials or completed products, the nation has a whole textile value chain. A World

Bank report claims that in the following ten years, CPEC will increase Pakistan's GDP by 14% (Khalilpour & Lusis, 2020).

Furthermore, Pakistan is a viable option for China to move its labour-intensive industries. In the event of regionally competitive energy tariffs, this would aid Pakistan in doubling its textile production. The RCET policy has directly contributed to the expansion and growth of the textile industry. Therefore, to maintain competitiveness, meet sectoral expansion modernization objectives, and achieve export-led economic growth, RCET policy must be consistently implemented. Export-led development is the only long-term answer to Pakistan's economic problems, and it is only achievable with the continuance of RCET (Bashir, 2021).

3.1.5. Benefits of RCET for Pakistan

A regionally competitive energy tariff might reduce the cost of energy for businesses, particularly energy-intensive ones like textile, manufacturing, and agriculture. Lower energy prices would boost these businesses' competitiveness locally and abroad, potentially resulting in higher output, jobs, and general economic growth (Lima & Feijão, 2022). Pakistan may entice international investors to build enterprises by offering competitive electricity rates. A key inducement for foreign businesses to locate manufacturing plants or other energy-dependent operations in the nation might be lower energy prices, promoting foreign direct investment (FDI) (Enescu et al., 2023).

A competitive energy tariff across the region can help Pakistan's export-oriented sectors by lowering production costs. Lower energy costs may boost Pakistani exports' price competitiveness on the international market, which might result in more exports and foreign exchange revenues. IF IMPLEMENTED, the RCET might contribute to more balanced regional development, focusing on certain provinces or areas (Rabbani & Zeeshan, 2022). Policymakers may attract investments and promote industrial growth in specific locations by offering competitive energy costs, thereby minimizing regional differences. Businesses could be encouraged to adopt energy-efficient procedures and technology through a well-designed RCET. In addition, lowering energy prices and usage for businesses would also support environmental sustainability (Abbas et al., 2022).

The government may make money by increasing energy use while providing competitive pricing. The expansion of infrastructure, public education, healthcare, and other services may be funded with the increased money, further promoting economic growth and development (Hulio et al., 2022).

The success of an RCET depends on its thorough design, implementation, and monitoring; it is vital to emphasize. Additionally, any particular advantages would need to be assessed in light of actual implementation and data from the real world, which may differ depending on the state of the economy and other variables (Rabbani & Zeeshan, 2022).

3.1.6. Drawbacks of RCET for Pakistan

Introducing a "Regionally Competitive Energy Tariff" (RCET) in Pakistan can have several adverse effects. Several of these include things like lowering energy prices to make them competitive regionally, which may result in less money for the government from the sale of energy, which may influence the spending plan for crucial services and infrastructure initiatives. Depending on how the RCET is set up, certain areas or sectors may profit more than others, causing discrepancies in regional growth and economic inequality (Mukhtar, 2023b; Raza et al., 2022).

Furthermore, a regionally competitive energy tariff may cause market distortions and inefficiencies, leading to overconsumption or underinvestment in specific regions. Designing and implementing a fair, transparent, and efficient regionally competitive energy tariff may be complex and requires careful consideration of economic, social, and political considerations (Xin et al., 2022). If energy suppliers cannot recover their costs through increased tariffs, a significant fall in energy prices may deter investment in the energy sector. Also, lowering energy rates without considering changes in the global energy market might leave Pakistan's energy industry vulnerable when energy costs rise globally (Mehmood et al., 2022).

Subsidizing energy costs to make them competitive might strain government finances and be challenging to manage effectively. Moreover, a regionally competitive energy tariff may attract rent-seeking behaviour, in which some interest groups or businesses push for special treatment, resulting in inefficiencies and unfair benefits (Mukhtar, 2023b).

3.2. RCET and Business Environment

3.2.1. Benefits of RCET for export businesses in Pakistan

Pakistan's Regionally Competitive Energy Tariff (RCET) is a key factor in the success and competitive advantage of the country's export-oriented businesses. This revolutionary legislative change ushers in various significant benefits, considerably enhancing the growth prospects of this crucial sector (Bhatti & Shahrukh, 2023). Among these benefits is the assurance of competitiveness of energy costs for Pakistan's export businesses. RCET effectively translates into lower energy expenses, directly impacting production costs. This cost-efficiency empowers companies to present their products in international markets at more compelling prices, rendering Pakistani goods more enticing and leading to a notable surge in export volumes (Abdi et al., 2023).In addition, RCET promotes an environment favorable to increasing export and production capacities. This expansion increases export revenue and promotes economic stability and growth, providing significant financial resources for spending on other forms of development (Fatima, 2023). Further magnifying these advantages, heightened export profits from RCET generate increased foreign exchange earnings. This influx of foreign currency fortifies Pakistan's currency value and enhances its economic resilience in the face of external economic fluctuations (Abdi et al., 2023).

Also positive for Pakistan's trade balance is RCET's potential to reduce the country's reliance on energy-intensive imports. The tariff assists in redressing trade imbalances and promotes overall economic stability by encouraging domestic production and limiting outflows of foreign currency (Fatima, 2023). Likewise, expanding export-oriented businesses, supported

by competitive energy pricing, sparks job growth throughout the skill spectrum. A trained workforce is produced due to the expansion of these businesses, which lowers unemployment rates and improves the country's economic health (Bhatti & Shahrukh, 2023). In a nutshell, Pakistan's export industry enters a new age of competitiveness and sustainability by implementing a regionally competitive energy tariff. The success of Pakistan's exports can largely be attributed to RCET, which can reduce production costs, increase export volumes, and spur economic growth while strengthening the nation's economic foundations (Abdi et al., 2023).

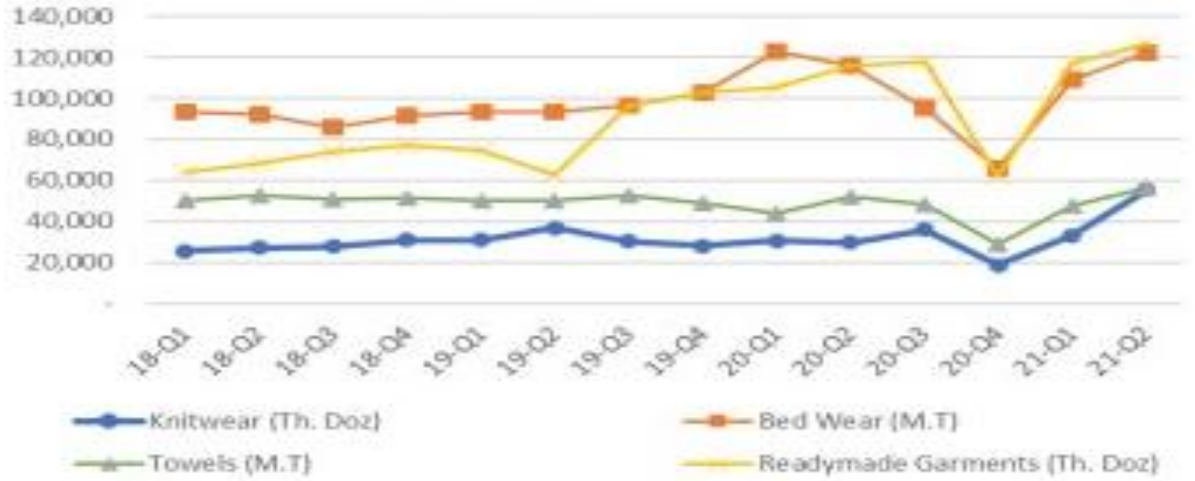

Figure 6: Exports of Value-Added Textiles (Pakistan)

The graph illustrates a favorable upward trajectory in the exports of value-added products. Consequently, if Pakistan aims to elevate its textile exports from $12.78 billion to $26 billion, the foremost focus should be promoting and exporting high-value-added goods, yielding significant advantages for Pakistan (PIDE, 2021).

3.2.2. Drawbacks of RCET for Export Businesses in Pakistan

While the RCET has the potential to offer Pakistan's export businesses many benefits, it is essential to recognize and handle any potential difficulties that may arise during implementation (Sheikh et al., 2023). One major issue occurs when RCET rates are far below the cost-recovery thresholds for energy suppliers. These suppliers may experience revenue losses due to this circumstance, which could lessen their incentives to invest in and maintain energy infrastructure. As a result, the security and accessibility of the energy supply for companies that export goods may be jeopardized (Bhatti & Shahrukh, 2023). Furthermore, the government might be forced to subsidize energy expenses to preserve competitive energy rates. These subsidies could pressure the federal budget and take money that should go to infrastructure development, healthcare, and education. It can be challenging to manage these subsidies responsibly and effectively (Khan & Kakar, 2023). Additionally, the dependence of Pakistan's export businesses on global energy prices introduces an element of volatility. While RCET seeks stability, the fluctuations in the worldwide energy markets can impact the overall competitiveness of these export-oriented industries (Sheikh et al., 2023).

Also, significant infrastructural expenditures and legislative changes may be necessary to implement RCET efficiently. It is crucial to ensure that the energy infrastructure can sustain the escalating needs of industries with an emphasis on exports. Complex regulatory requirements can complicate and make businesses uncertain (Khan & Kakar, 2023). Lastly, a notable challenge lies in the potential lack of awareness or understanding among certain export businesses regarding the benefits afforded by RCET. To maximize its impact, efforts in education and outreach may be essential, ensuring that all eligible enterprises are well-informed and equipped to leverage the tariff's advantages (Bhatti & Shahrukh, 2023).

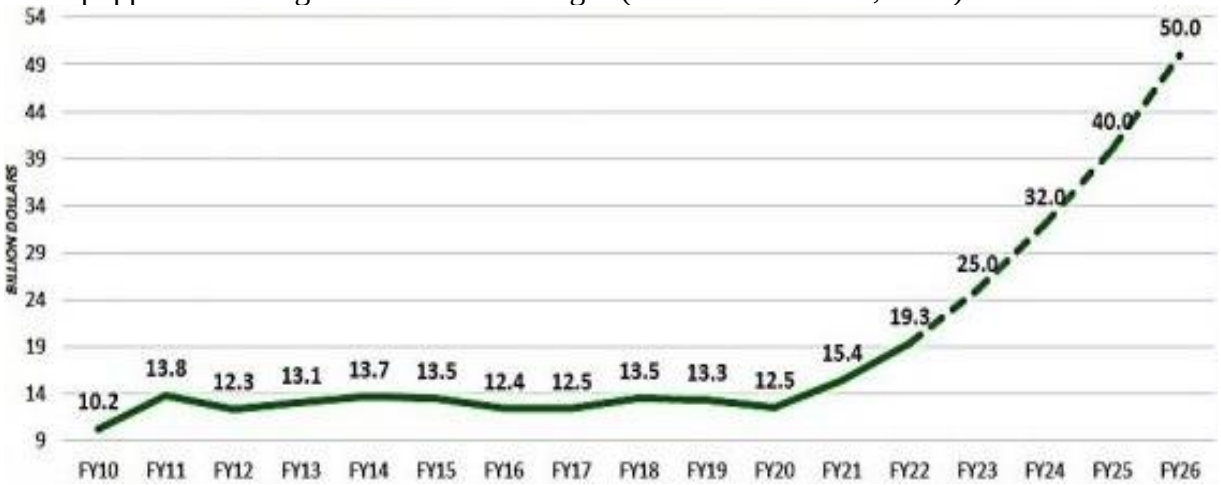

Figure 7: Textile Export Businesses (Pakistan)

The graph indicates that Pakistan's youthful population, constituting 65% of the total, offers a significant opportunity for economic development and societal advancement. As of July 1, 2022, Pakistan's population is approximately 230 million, based on the latest United Nations data. Generating jobs is crucial for economic growth, particularly with a large youth population susceptible to yearly spikes in unemployment. To achieve job growth, there is a need for industry expansion, which, in turn, requires investments in labor-intensive sectors (Ejaz, 2022).

3.3. RCET and Economic Development

3.3.1. RCET and growth opportunities in Pakistan

Recent research highlights the substantial economic potential that could be unlocked in Pakistan by adopting an RCET. RCET can catalyze economic expansion by fostering an environment conducive to domestic and foreign investment (Ahmad et al., 2023). Firstly, RCET can draw in Foreign Direct Investment (FDI) across various sectors, particularly energy-intensive industries like manufacturing. Competitive energy pricing substantially reduces operational costs, rendering Pakistan an attractive destination for foreign investors seeking to establish production facilities and export-oriented enterprises. This influx of FDI stimulates economic growth and injects expertise and technology, nurturing innovation and productivity (Malz et al., 2023).

Additionally, by offering competitive energy tariffs, RCET can promote economic diversification. In turn, this promotes the expansion of export-focused industries outside of

conventional areas. Economic diversification reduces Pakistan's reliance on a single industry, making the country's economy more resistant to outside shocks and changes in the global economy (Rashid, 2022).

Furthermore, RCET can promote job growth. A thriving export industry that is supported by competitive energy prices demands trained employees, which leads to an increase in job possibilities. This helps improve the country's general economic health and lower unemployment rates (Ahmad et al., 2023). In addition, by lowering the need for energy-intensive imports, RCET can improve the country's trade balance. This benefits Pakistan's overall economic stability by preserving foreign exchange and promoting a more favorable trade balance (Rashid, 2022). Even though RCET has the potential to alter Pakistan, achieving these growth prospects calls for efficient management, significant infrastructure development, and a dedication to striking a balance between economic growth and sustainability and environmental concerns (Ahmad et al., 2023).

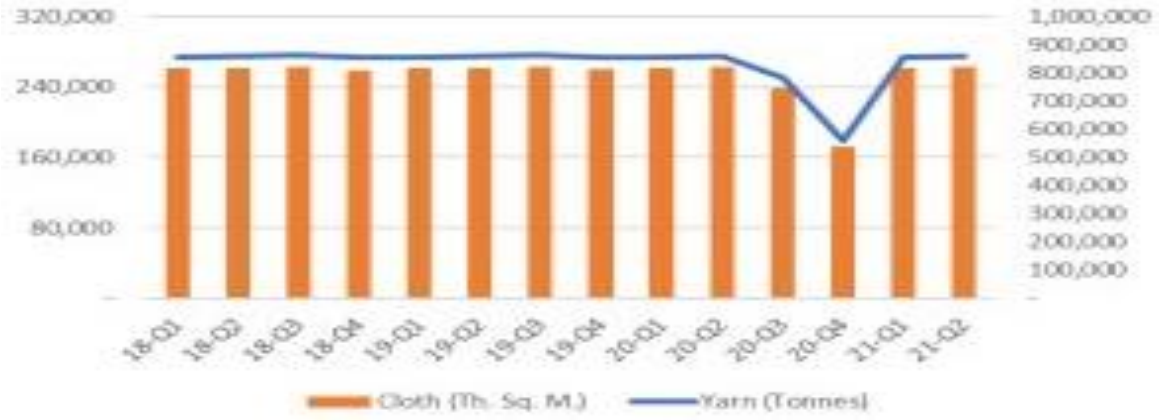

Figure 8: Total Production of the Textile Industry (Pakistan)

In the textile sector of Pakistan in 2021, adopting a Regionally Competitive Energy Tariff (RCET) marked a turning point. Competitive energy rates revitalized the textile industry, boosting production, export growth, and job creation. This underscored RCET's role in unlocking substantial growth opportunities, reinvigorating Pakistan's textile sector, and enhancing its global standing (Ejaz, 2022).

3.3.2. RCET and Barriers to Export in Pakistan

Malz et al. (2023) Stated that RCET can play a pivotal role in overcoming several obstacles that impede export growth in Pakistan. Notably, the high energy costs have long stood as a formidable barrier for Pakistani exporters, inflating production expenditures and undermining competitiveness on the global stage. RCET's principal advantage lies in its capacity to curtail energy expenses for export-driven industries, thus bolstering its competitive edge and enabling it to present products at more appealing price points (Kumar et al., 2022). Similarly, the ongoing problem of frequent power outages and an unstable energy supply has reduced productivity and compelled companies to set aside funds for backup power sources. RCET's advocacy for a dependable and affordable energy supply has the potential to find a solution to

this problem, guaranteeing that exporters can keep their production schedules steady (Ahmad et al., 2023).

Furthermore, inadequate infrastructure, encompassing transportation and logistics networks, has hindered the efficient movement of goods to ports and international markets. RCET's potential to attract foreign investment can catalyze infrastructure development projects, enhancing transport and logistics capabilities and facilitating smoother export operations (Mukhtar, 2023a). Also, the competitive benefits RCET brings can offset the difficulties created by tariffs and foreign trade restrictions, making it easier for Pakistani goods to enter international markets (Ahmad et al., 2023). However, access to financing has been a limiting factor in export businesses' growth and expansion plans. The augmented revenue and profitability arising from RCET's cost-saving benefits could potentially enhance access to financing for exporters, allowing them to expand their capacities and explore new markets (Mukhtar, 2023a).

Figure 9: Growth rates of textile exports in Pakistan

As depicted in the graph, Pakistan's textile exports encompass a wide range of products, including cotton fiber and ready-made garments. The growth trend, except for recent improvements, had declined until 2019. The textile sector holds substantial growth potential, primarily attributed to regionally competitive energy tariff rates, albeit partially impacted by the closure of regional textile markets. This potential, however, requires prudent exploitation (Ejaz, 2022).

3.3.3. Effectiveness of RCET in economic downturn

According to previous research, the effectiveness of implementing an RCET in Pakistan during an economic downturn hinge on its capacity to alleviate financial constraints, preserve and generate jobs, attract foreign investments, stimulate infrastructure development, and facilitate export expansion. Successful implementation must be coupled with comprehensive economic recovery strategies to maximize RCET's impact in mitigating economic downturns and fostering sustainable growth (Bilawal Khaskheli et al., 2023). One pivotal aspect of RCET's effectiveness is its ability to provide crucial relief from heightened financial pressures

businesses face during economic downturns. By trimming energy expenditures for various industries, RCET significantly enhances the competitiveness of domestically manufactured products. This newfound cost-efficiency can expand export opportunities, invigorating economic activity (Mukhtar, 2023a).

Furthermore, economic downturns frequently precipitate job losses. Here, RCET is crucial in safeguarding existing employment positions, particularly within energy-intensive sectors such as manufacturing. Moreover, by luring foreign investments and promoting industrial growth, RCET has the potential to generate fresh employment prospects, alleviating the burdens of unemployment during economic crises (Malik & Urooj, 2022).

Foreign direct investment (FDI) becomes paramount for nations striving to stimulate economic activity amid economic downturns. RCET's provision of competitive energy prices positions Pakistan as an attractive destination for foreign investors seeking economically viable locales for their business operations. This influx of FDI can substantially contribute to economic recovery initiatives (Mukhtar, 2023a). Additionally, implementing RCET often entails investments in energy infrastructure, a dual-purpose endeavor bolsters energy supply reliability and stimulates economic expansion. Infrastructure projects stimulate local economies and create employment opportunities, further fortifying economic recovery efforts (Bilawal Khaskheli et al., 2023). Lastly, RCET's potential to curtail production expenses can significantly augment Pakistan's global export competitiveness. Amplifying exports is especially critical during economic downturns, as it generates foreign exchange reserves and stabilizes the nation's economic footing (Malik & Urooj, 2022).

3.3.4. Lacking in RCET during Economic Downturn

The lack of or deficiencies in an RCET in Pakistan during an economic downturn can have several significant adverse effects and difficulties, notwithstanding its potential benefits. Firstly, businesses still struggle with high energy costs during economic downturns without RCET or its efficient implementation. This financial strain may increase Their overall financial stress, making it difficult to maintain operations and competitiveness (Mukhtar, 2023a). Similarly, the absence of RCET can lead to higher operational expenses for energy-intensive industries, potentially triggering layoffs and exacerbating unemployment rates. This, in turn, hampers economic recovery efforts as job creation is essential during downturns (Malik & Urooj, 2022). Additionally, without competitive energy prices, Pakistan may find it challenging to entice FDI, essential for boosting economic activity during hard times. FDI can provide the economy with much-needed capital and skills (Nishimura, 2022).

Likewise, investments in the construction of energy infrastructure may be hampered by a shortage of RCET. An unreliable energy supply during an economic downturn might be caused by inadequate energy infrastructure, interrupting corporate operations and hindering recovery (Rashid, 2022). Also, Pakistan's export-focused industry may struggle to sustain competitive pricing on the international market without RCET. This could impede export growth, a significant revenue source from foreign exchange (Malz et al., 2023). However, these factors can collectively hinder economic recovery and prolong the downturn's effects.

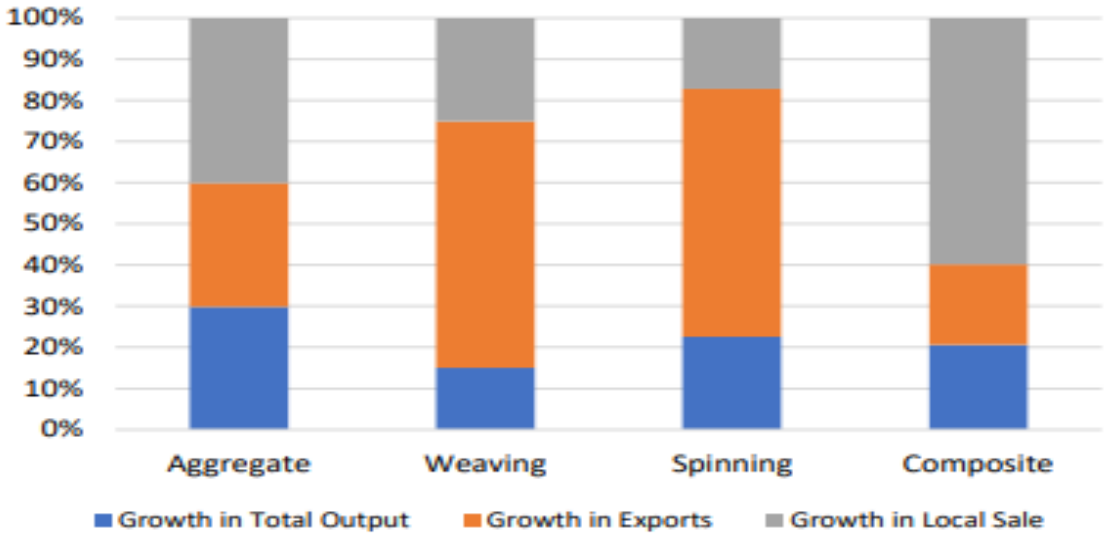

Figure 10: Growth in the Output (Average 2018-2020)

Despite the reduction in production costs due to the RCET policy, there is concern about its impact on increasing production, sales, and profit margins. This graph illustrates the average sales growth of listed companies. Total sales and export revenues increased by 14%, while local sales grew by 19%. The spinning and weaving subsectors experienced higher export growth than local sales, with a 22% increase in sales in Q1 2021 compared to the same quarter in 2020 (Ejaz, 2022).

4. Conclusion and Recommendations

4.1. Conclusive Remarks

The research aims to identify and analyze the key challenges and complexities associated with implementing Regionally Competitive Energy Tariffs (RCET) in Pakistan's export sector. The concept of RCET has enormous potential for Pakistan's export sector. This investigation focused on how RCET can influence Pakistan's export industry structure. With its goal of offering competitive energy prices to export-oriented enterprises, RCET is a critical catalyst for boosting competition, igniting economic growth, and promoting innovation. Moreover, numerous advantages of RCET exist. One of the biggest obstacles for export enterprises in Pakistan is high energy expenses, which are directly addressed by this. RCET helps businesses cut these expenses so they may sell their products on the international market for competitive pricing. The nation's currency is strengthened, export growth is encouraged, and revenue increases.

Furthermore, RCET's ability to attract local and foreign investments is a noteworthy advantage. The prospect of stable and competitive energy pricing entices investors to establish manufacturing facilities and export-focused enterprises in Pakistan. This stimulates economic growth and creates job opportunities across various skill levels. Likewise, RCET supports Pakistan's need to diversify its export market. It decreases the country's reliance on a single

industry, increasing economic resilience by supporting various industries, from manufacturing to textiles.

Additionally, RCET supports Pakistan's need to diversify its export market. It decreases the country's reliance on a single industry, increasing economic resilience by supporting various industries, from manufacturing to textiles. However, the successful implementation of RCET is not without its challenges. Governments must carefully navigate the complexities of energy pricing and subsidy management to ensure sustainability. Furthermore, infrastructure development and regulatory reforms are essential for optimizing RCET's impact. However, Pakistan might become a competitive and hardy export powerhouse by effectively deploying RCET with supportive policies and reforms.

4.2. Recommendations

Implementing RCET in Pakistan's export sector presents a multifaceted challenge, and several managerial recommendations are vital for its successful execution. First and foremost, maintaining good cooperation between the government and stakeholders in the export sector is crucial. The company's managers should establish A robust public-private partnership to foster an atmosphere that will make RCET implementation possible. Furthermore, a clear and open regulatory framework for energy pricing and subsidies must be created to give exporters a sense of security and stability. Similarly, managers should prioritize investing in energy infrastructure to provide a consistent and dependable supply. In order to lessen reliance on expensive fossil fuels and ultimately lower the cost of energy, special attention should be paid to incorporating renewable energy sources into the energy mix.

Additionally, improving energy efficiency is essential for reducing RCET's adverse effects on enterprises. Energy audits and training on energy-efficient techniques should be encouraged by managers to help exporters maximize their use of energy. Additionally, providing incentives to companies that use energy-efficient technologies, such as tax exemptions or lower tariffs, might encourage widespread adoption. Likewise, the tariff structure and pricing strategy must be carefully considered. Managers should concentrate on implementing RCET progressively, enabling enterprises to adapt to the new tariff structure gradually and minimizing interruptions. Regular tariff reviews and modifications are required to guarantee that RCET rates appropriately reflect shifting energy costs and market conditions. In addition, deploying modern technology can significantly aid the management of energy expenses. For instance, smart metering enables businesses to monitor energy consumption in real time and make data-driven decisions to cut expenses. Managers should concentrate on that Energy Management Systems (EMS) should be encouraged to offer helpful information for improved energy management.

Furthermore, to improve the technical capabilities of the staff in energy management and conservation, managers should implement capacity-building activities. Supporting research and development initiatives can also help find cutting-edge methods and technology for conserving energy. Also, the energy mix needs to be more diverse if we want to be sustainable in the long run. Alternative energy sources like hydroelectric, solar, and wind can help lessen

dependency on pricey imported fuels. Managers should concentrate on the fact that investing in energy storage solutions is essential, especially in regions with problems with erratic energy supply.

Further, trade agreements and market access are important considerations. Demand will increase, and competitiveness will be improved through facilitating market access for Pakistani products through trade agreements and efforts. Managers should focus resources and support services for export-oriented industries by building export clusters. Consequently, data and analytics play a pivotal role in informed decision-making. Establishing a comprehensive database on energy consumption patterns, costs, and trends is crucial. Implementing data analytics tools can help identify inefficiencies and areas for improvement in energy consumption.

Moreover, managers must concentrate on ongoing evaluation and monitoring to gauge RCET implementation's success. Establishing key performance indicators (KPIs) and carrying out routine evaluations will aid in locating bottlenecks and enabling prompt corrections. Nevertheless, these recommendations for management also address technological, infrastructural, regulatory, and capacity-building issues, thereby fostering export sector competitiveness and sustainability while assuring accessible, reasonably priced energy.

4.3. Limitations and Future Research

The research on Regionally Competitive Energy Tariffs (RCET) implementation in Pakistan's export sector has certain limitations that warrant consideration. Firstly, the research may face data availability and reliability challenges, particularly concerning confidential tariff information and industry-specific data. This could impact the comprehensiveness and accuracy of the analysis. Similarly, the study's scope may be limited to a specific time frame or not capture the evolving dynamics of the energy sector and export industry. Changes in government policies, international market conditions, and technological advancements could influence the RCET implementation over time.

Additionally, the research might primarily concentrate on problems without going into great detail about possible fixes or policy recommendations, which could limit its practical application. However, future research could address these limitations by conducting in-depth interviews or surveys with key industry stakeholders to gain insights into the RCET implementation challenges. Additionally, longitudinal studies could track the progress and impact of RCET over an extended period, providing a more comprehensive understanding of its effects on Pakistan's export sector. Furthermore, investigating novel policy measures and techniques to address identified issues and improve the export sector's competitiveness under RCET may be a fruitful area for future study.

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