

Zero Covid Policy: Understanding its impact on China's Apparel Comparative Advantage

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China remained the top apparel exporter in the world in 2021, with 32.8% of the global clothing export share (Sabanoglu, 2022). China's economy heavily relies on its textile and apparel sector, as evidenced by its contribution to the country's GDP (7.1%) and employing over 8 million people (Asia Garment Hub, 2022). The Covid-19 pandemic brought China's manufacturing to a standstill as it had done in most countries of the world. In response, the government set up a strict "zero-COVID" policy, which included mass testing, building-to-county lockdowns, port closures, and travel restrictions to reduce the number of Covid-19 cases to zero or close to zero (Davidson, 2022). This policy has had far-reaching implications for the textile and apparel industry, affecting everything from production to exports (Castañeda-Navarrete, et al., 2021). China experienced a significant drop in its apparel export market share to a record low of 21.3% in February 2020, a substantial decrease from its market share of 31% in 2019 (Lu, 2020).

The Zero Covid policy caused havoc in the industrial production and was responsible for canceled orders, factories closing, and global disruptions in the apparel supply chains (Lu & Langro, 2021). This policy was also responsible for shutting down the world's third-busiest port, Ningbo-Zhoushan, which stressed the global supply chains and caused the shipping costs from China to spiral out of control (Leggett, 2021). Processing delays at Shenzhen's Yantian terminal was also caused due to this policy which resulted in a wait time for shipments that tripled from three to eight or nine days, causing significant disruptions in the supply chain (Tan, 2021). The strict zero Covid measures caused some companies to primarily move their orders from China to Vietnam, Bangladesh, and India, to protect their supply chain (Husband, 2022). As a result, China's clothing exports to the U.S. fell by 46.1% in February 2020 compared to February 2019 (Lu, 2020). China's total clothing exports decreased to US\$ 141.5 billion in 2020 from US\$ 157.9 billion in 2018 (WTO, 2022). Covid-19 had a severe impact on China's export competitiveness.

The Revealed Comparative Advantage (RCA) index developed by (Balassa, 1965) is a frequently used tool for measuring export competitiveness. RCA is a well-established macroeconomic tool to measure a country's competitiveness (Kilduff and Chi, 2007). Multiple studies have also used the RCA framework to measure the textile and apparel industry (Saki et al., 2019). Product level monthly trade data (HS code 61 and 62) from the United Nations Commodity Trade database was acquired for this study from 2017 to 2021 (60 months). RCA and its variant Normalized Revealed Comparative Advantage (NRCA) is calculated for the two-digit HS code to determine export comparative disadvantage for the apparel categories during this period. To identify specific textile and apparel subcategories with export comparative disadvantage, a RCA

and NRCA for subsequent four digit and six digit HS codes are generated. A non-parametric rank correlation is applied to evaluate the consistency between the RCA and NRCA indices.

Results indicated that China sustained comparative disadvantages in seven out of thirty-four subcategories at the four-digit level before the zero covid policy took place. HS 6101(men's or boys' knitted coats or jackets), HS 6102 (women's or girl's knitted coats or jackets), HS 6105 (men's or boy's knitted shirts), HS 6106 (women's or girl's knitted shirts or blouses), HS 6113 (garments of knitted fabrics), HS 6206 (women's shirts or blouses, not knitted), HS 6217 (clothing accessories, not knitted) are the seven categories in which China had comparative disadvantages. Interestingly, only one subcategory (HS 6205: men's or boys' shirt, not knitted) showed a comparative disadvantage after the policy got initiated. Our analysis also pointed out the seven subcategories which were previously experiencing a comparative disadvantage, got exposed to a further downfall in their export competitiveness after the policy came into effect.

The RCA and NRCA analysis of above-mentioned product categories at the six-digit level for China indicated twenty-four subcategories which continued years of disadvantages and decline in comparative advantage. HS 610120 (Men's or Boy's knitted coats made of cotton) [disadvantage in January-December for the year of 2020 and 2021], HS 610130 (Men's or Boy's knitted coats made of man-made fibers) [disadvantage in February, March, April, May, December for the year of 2020 and 2021], HS 610130 (Men's or Boy's knitted coats made of cotton) [disadvantage in January-December for the year of 2020 and 2021], HS 610210 (Women's or girl's coats made of wool fiber) [disadvantage in February, March, April, May, September, October, November, December for the year of 2020 and 2021], HS 610220 (Women's or girl's coats made of cotton fiber) [disadvantage in January-December for the year of 2020 and 2021], HS 610230 (Women's or girl's coats made of man-made fiber) [disadvantage in February, March, April, December for the year of 2020 and 2021], HS 610290 (Women's or girl's coats made of textile materials) [disadvantage in January-December for the year of 2020 and 2021], HS 610510 (Men's or Boy's non knitted shirts made of cotton) [disadvantage in January-December for the year of 2020 and 2021], HS 610590 (Men's or Boy's non knitted shirts made of textile materials) [disadvantage in January-December for the year of 2020 and 2021], HS 610610 (Women's or girl's blouses or shirts made of cotton) [disadvantage in January-December for the year of 2020 and 2021], HS 610620 (Women's or girl's blouses or shirts made of man-made fiber) [disadvantage in January, March, April, May, September for the year of 2020 and 2021], HS 610690 (Women's or girl's blouses or shirts made of textile materials) [disadvantage in January-December for the year of 2020 and 2021] HS 611300 (Garments made up of knitted fabrics) [disadvantage in January, February, March, April for the year of 2020 and 2021], HS 620520 (Men's or Boy's non knitted shirts made of cotton) [disadvantage in January, March, April, May, June, July, August, September, November, December for the year of 2020]. HS 620530 (Men's or boy's non knitted shirts made of man-made fibers) [disadvantage January, February, March, May June, August, October, November, December for the year of 2020].

The findings of the study have significant contributions and implications. It fills the research gap regarding the impacts of zero covid policy on Chinese apparel export and contributes to the existing academic literature on how China performed in terms of apparel export competitiveness during this global crisis. The study could help the policymakers to create more industry-friendly legislations in future. This could also attract increased investments from the government or the investors in general which would help the industry to attain much stronger position in the world apparel market.

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