Demonetization and its impact on India's Textile and Apparel industry's Comparative Advantage

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On November 8, 2016, the Prime Minister of India, Narendra Modi, took the nation by surprise by announcing that the government was demonetizing currency with denominations of 500 or 1,000 rupees (Indian currency), with immediate effect. This amounted to the demonetization of 86 percent of the Indian currency in circulation (Lahiri, 2019). A unique aspect of the Indian measure was that it was carried out during a period of economic stability, but with very little time given to the public to exchange their demonetized bills. This created the potential for a lot of disruption and inconvenience since the demonetized bills, especially the 500-rupee bill (worth about US\$14 at prevailing exchange rates), were heavily in use for daily transactions. The demonetization caused almost two months of acute disruption of basic economic and manufacturing activity in a country heavily dependent on cash transactions (Zhu, Gupta, Majumder, & Steinbach, 2018).

The demonetization highlighted sharp job losses in small and medium manufacturing enterprises. Labor market statistics showed that up to 3.5 million jobs have been lost during the three months following demonetization while 15 million people have exited the labor force (Lahiri, 2019). The Indian textile industry which contributes 10 percent of the manufacturing production, 2 percent to the GDP of India and employs over 45 million people has also been impacted by the demonetization (AEPC, 2019). Demonetization phase as well as the post demonetization phase saw a significant drop in the sales of the apparels and other textile products due to the increased cash crunch in the market. Demonetization affected the entire value chain of the textile and apparel industry. It led to increased labor turnover due to lack of production as a cascading effect of the falling demand for the products due to the demonetization.

Estimating the effects of demonetization is difficult because the event is still relatively recent, and the time series aggregate data are not long enough to allow any credible econometric analysis of the economic consequences. However, analyzing international trade at the industry level provides greater detail and a better understanding of the competitiveness dynamics of nations than on the country level (Balassa, 1965). Through investigating the degree of specialization of the textile and apparel industry, demonetization's impact on the industry's

comparative advantage or disadvantages can be identified. Revealed comparative advantage (RCA) framework is applied to measure the country's competitiveness in the textile and apparel industry, and to understand the impact of demonetization on the Indian textile and apparel industry. RCA and its variant normalized revealed comparative advantage (NRCA) is used in this study to measure demonetization's impact on the textile and apparel competitiveness of India.

To determine comparative advantage for the textile and apparel categories, RCA and NRCA are calculated for the two digit HS code that subsequently provide basis for identifying products impacted through demonetization. The study utilizes data from the United Nations Conference on Trade and Development (UNCTAD, 2020) and the WTO for the years 2014-2018 for the textile and apparel industry (HS code 50 to 67). The five-year time period in the data allows for an analysis of changing global dynamics, especially important in fast-changing emerging economies such as India. A non-parametric rank correlation is applied to evaluate the consistency between the RCA and NRCA indices. RCA and NRCA at the four digit HS code levels is generated to identify the impact of demonetization on the specific textile and apparel subcategories.

The RCA and NRCA indices over the five consecutive twenty years (2014 to 2018) that suggest advantage include twelve codes: HS50 silk; HS52 cotton; HS53 vegetable textile fibers; HS54 man made filaments; HS55 man made staple fibers; HS57 carpets and other textile floor coverings; HS58 fabrics (special woven fabrics, tufted textile fabrics, lace, tapestries, trimmings, embroidery); HS61 apparel and clothing accessories (knitted or crocheted); HS62 apparel and clothing accessories (not knitted or crocheted); HS63 textiles (made up articles; sets; worn clothing and worn textile articles; rags); HS64 footwear; and HS67 feathers and down (articles made of feather or of down; artificial flowers; articles of human hair). The non-parametric correlation test to evaluate the relative rankings of RCA and NRCA (2014 to 2018) indicates a positive Spearman's rho ($\rho = 0.8163$, $p\text{-value} < 0.001$) that suggests the correlation between RCA and NRCA. Based on the analysis, HS52 ranked first among all textile and apparel exports in terms of relative advantage, followed by HS62, HS63, HS61, and HS57.

RCA and NRCA analysis were calculated for the four digit HS sub categories for the years 2014 to 2018. The HS5201 subcategory indicated the largest NRCA magnitude among textile and apparel products for the 5 year period, suggesting its superior competitiveness within the industry followed by HS5203, HS6205, HS6208, and HS6106. In 2014, India had a comparative advantage in 124 sub categories. In 2015, India had a comparative advantage in 126 sub

categories. In 2016, India had a comparative advantage in 98 sub categories, a loss of comparative advantage in 28 sub categories. In 2017, India had a comparative advantage in 104 sub categories and comparative advantage in 110 sub categories in 2018. The HS6406 subcategory is a subcategory example where India lost its comparative advantage since 2016. When looking at the aggregate data, India's textile exports decreased to U.S. \$16.12 billion in 2016 from U.S. \$18.26 billion in 2014. India's textile exports amounted to U.S. \$18.15 billion, in 2018 still trying to recover from the effects of demonetization. India's apparel exports aggregate data also shows that exports decreased to U.S. \$17.93 billion in 2016 from U.S. \$18.16 billion in 2015. The Indian apparel exports in 2018 were U.S. \$16.55 billion, a clear indication of the extended impacts of demonetization policy on India's apparel comparative advantage.

The study results would help the government policymakers, industry associations, and exporters in identifying the clusters where incentives could be given to increase the export of T&A products. Findings would help the Indian exporters in identifying the products where comparative advantage can be regained after removing the constraints that has restricted the growth of this sector due to demonetization. The results pointed out that though India has comparative advantage in textile and apparel products, India has lost some of its share in world textile and apparel market.

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