## Abstract

Micro, small, and medium businesses (MSME) are India's second largest job creators after agriculture and one of the worst-affected industries by the coronavirus epidemic. Among the MSMEs in India, the handloom sector is a major contributor. India is the world's largest manufacturer of handloom textiles, accounting for 85 per cent of total production. Handloom "micro" entrepreneurs are highly vulnerable in the business environment, as they do not have enough capacity or resources to cope with changes. This will result in increased poverty and related issues. However, even before the coronavirus (COVID-19) pandemic, the industry faced myriad issues, such as a lack of working capital, poor infrastructure, and the threat of imitation, among others. The COVID-19 pandemic and related economic turbulence led to a 72% decrease in handloom demand. Amidst COVID-19, policymakers and stakeholders in the MSME sector have increasingly shown interest in understanding the key barriers to enhancing the overall performance of the MSME sector. This thesis uniquely investigates the handloom industry barriers, analyses the interaction among them, and also examines the significance of these barriers, which are affecting the performance of the Indian handloom "micro" sector. We used a successive exploratory hybrid method, starting with the qualitative phase by applying the Delphi technique, the quantitative phase using multi-criteria decision-making techniques (MCDM), and concluding with structural equation modelling (SEM).

Objective 1 of the thesis aims to compare the challenges of the Indian textile and apparel industry before and after the coronavirus pandemic. We have used a two-phase (before and after the onset of the coronavirus pandemic), successive exploratory mixed method, starting with the Delphi technique (the qualitative phase) and concluding with multi-criteria decision-making. Also, most of the applications of MCDM in the extant literature have focused on only one time period, while we analyzed two periods (during and after the COVID-19 pandemic). A total of 31 Indian microentrepreneurs were approached from April 2018 until January 2021. The seventeen key critical barriers identified in Phase 1 were reduced to twelve in Phase 2 analysis. In Phase 1, the modelling suggests that a lack of effective government policies, demonetization, and tax policy implementation are the most significant barriers to the performance of the said industry. Phase 2 pinpoints the lack of effective government policies as the most significant barrier to the Indian handloom industry's performance, particularly after the pandemic. Moreover, the lack of branding is the most critical link between the independent and dependent barriers.

Resumption of business post the lockdowns comes with a lot of uncertainty that has been induced due to the forced lockdowns in an attempt to curb the spread of the virus. Thus, studying the cause and effect of these barriers on their performance is essential and has not been studied in the extant literature. Therefore, to frame policy decisions, understanding the key barriers and their mutual relationships during and after post pandemic is important. Thus, objective 2 of the thesis develops an integrated sequential approach for identification, ranking, and determining the cause and effect of perceived barriers for Indian handloom micro-enterprises in the pandemic using qualitative and quantitative mixed methods, the DELPHI-DEMATEL technique. A total of 56 Indian MSMEs were approached from April 2020 until January 2021. In Phase 1, 16 key barriers were identified, which were reduced to 13 in later phases. The findings of this study reveal eight barriers in the effect group and five in the cause group. Also, barriers such as a lack of effective integration and a complex supply chain were found to be of high prominence.

Objective 3 of this thesis aims to identify the underlying variables among these barriers and model validation of perceived barriers for the Indian textile and handloom stakeholders in the COVID-19 pandemic using a three-phase successive exploratory mixedmethod approach, starting with the Delphi technique, exploratory factor analysis, and concluding with structural modelling using Partial least square analysis. The purpose of this part of the thesis is to assess a theoretical model for Indian handloom sectors' performance using constructs based on EFA analysis, i.e., macroenvironmental barriers. microenvironmental barriers, and supply chain barriers. A total of 190 Indian handloom microentrepreneurs were approached from April 2020 until January 2022; 120 responses were recorded. The interrelationships between the barriers were established, and their direct and mediating effects on the drop-in sustainable performance of the textile MSMEs were estimated. The results indicate among the three types of barriers discussed; macro-economic barriers have the most significance, followed by microeconomic barriers and supply chain barriers have the least significant impact on handloom MSME.

Our thesis has several theoretical contributions: First, a few studies have depicted the overall situation of various sectors during the COVID-19 pandemic (Berkel, 2020b; Nicola et al., 2020). However, no study thus far has lent any insight into the core situation of handloom MSMEs. Additionally, to the best of our knowledge, there has been no study comparing the change in performance barriers before and after the onset of the pandemic. Notably, this study was conducted in two phases; phase 1 was conducted before the pandemic, while phase 2 was conducted during the pandemic. This helps us better clarify the changes in the performance

barriers for the MSME sector at large. Second, the context chosen for the thesis is the Indian Handloom industry which in the area itself is unique. Although many studies have focused on the organized textile sector of India, the Indian handloom industry, which is mainly consisting of MSMEs, has not been explored. Third, with the help of industry experts, this thesis contributes to the extant literature by adding performance barriers such as imitational threat, tax policies implementation, and paucity of new designs, all of which have not been included in previous literature. Fourth, this is one novel approach that focuses on the MCDM method's application in a time dimension. Most of the applications of MCDM in the extant literature have focused on only one time period, while we analyzed two periods (during and after the COVID-19 pandemic). Fifth, though several authors have identified the barriers to MSMEs, they have not given their relative importance, and they have not determined the underlying variable among them (Luthra et al., 2011; Majumdar and Sinha, 2019; Mathiyazhagan et al., 2013; Mokhethi and C., 2019; Raut et al., 2019; Ullah and Narain, 2020). Therefore, this thesis extends and complements the previous contributions by testing an integrated model that includes four constructs: macro-environmental barriers, macro-environmental barriers, and supply chain barriers. Sixth, many studies have individually noted the impact of macroenvironmental, micro-environmental, and supply chain barriers on the firm's performance. This thesis analyses the simultaneous effect of these three approaches on the firm's sustainable performance. Policymakers and stakeholders in the handloom industry have been increasingly emphasizing understanding the barriers to enhancing the overall supply chain performance, especially in the middle of this global pandemic. The findings of this thesis would help policymakers take corrective measures and frame policy decisions for the greater good of the sector.

Keywords: Indian handloom industry, micro entrepreneur's, performance barriers, Delphi, Multi-Criteria Decision Making, exploratory factor analysis, structural equation modeling.