

FUNCTIONS OF STAKEHOLDERS FOR DIFFUSION OF ENERGY EFFICIENCY  
TECHNOLOGIES IN SMALL AND MEDIUM SIZED ENTERPRISES: A CASE STUDY OF  
THE SRI LANKAN APPAREL INDUSTRY

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ABSTRACT

The highly competitive environment in the apparel industry has forced the manufacturing companies to achieve the required quality with very competitive prices. The apparel-making countries are trying to compete based on different aspects such as higher quality, labour compliance, lead time and total service providing, but still the price remains as the main factor for the sourcing decision by the buyers. While the Sri Lankan apparel industry is trying to compete with other countries based on the higher quality of products and labour compliances, it recently experiences a lack of price competitiveness due to higher infrastructure cost and increasing labour cost because of labour shortage. This issue has led the large apparel manufacturing companies to move towards green manufacturing, where they can obtain a competitive advantage by both cost reduction and product differentiation.

The apparel manufacturing industry in Sri Lanka is an important driver of the economy, contributing to 40% of the industrial production and is one of the most energy-intensive industries in the country. In the apparel industry, energy cost is a significant component of the total operational cost, and in Sri Lanka the energy cost is higher compared with most of the competitors, which is another reason for the large companies to introduce energy-efficient technologies (EET) in their factories. However, the Small and Medium sized Enterprises (SMEs) are not yet using those technologies due to the lack of knowledge, finance and motivation.

Although several studies has been carried out illustrating the importance of energy efficiency in reducing the cost and providing recommendations about the possible EET in the apparel industry, there have been very few studies examining the diffusion of those technologies.

The methodological approach to this study includes interviews and questionnaire surveys with SMEs and organizations including apparel associations in Sri Lanka to gather information about the environmental performance, SME networks, external collaborations and the barriers for introducing EET. Thirty seven factories out of 268 registered garment factories were selected, which had less than 500 employees and 250 machines and with correct contact information. Nineteen factories agreed to participate in the survey, and detailed data was obtained by visiting each factory and interviewing the owner or senior managers using a structured questionnaire. Directors of the National Cleaner Production Centre and three apparel associations were interviewed using a semi-structured questionnaire. Managers who handle SME lending in two state banks, one private bank was interviewed using semi structured questionnaire and with one SME specialized bank and the Central bank of Sri Lanka unstructured interview was carried out.

During the study the buyers, industry associations, banks, government, universities and Energy Service Companies (ESCOs) were identified as the key stakeholders required for EET diffusion. The industry association acts as an intermediary as the SMEs do not have a direct relationship with the universities and technical institutes and they are experiencing difficulties in dealing with banks. In the study it was identified that while the higher energy cost is a critical issue in the apparel industry, the awareness among the SMEs regarding the existing EET is still lacking.

The apparel associations are currently trying to remove the knowledge barrier by conducting seminars and training programs with various institutions, still many SMEs have a lack of awareness regarding EET. There are some ESCOs who provide services to medium sized garment companies and using the service of them will be an efficient way of creating awareness as the energy efficiency potential can be accurately presented in monetary terms. The proposals they create after the energy audit should be recognized by the banks to give finance to the SMEs and ESCOs should build a trust with the banks to do so.

The other main barrier is the lack of access to finance and many banks have higher interest for SME loans. Also they request collateral even many SMEs cannot provide sufficient assets for security. Considering these factors, a low interest loan scheme coupled with a CGS for energy efficiency will be more suitable. A proper refinancing mechanism also should be developed as the previous schemes are now closed due to the finishing of the fund. The industry associations should create a monitoring scheme to evaluate the performance of their members to recommend them more effectively to the banks. The recommendation from the industry associations, project proposal from the ESCOs and the CGS for energy efficiency will help the SMEs to get the low interest loans for the EET projects without any issues. The SMEs in the Sri Lankan apparel industry are scattered and it is difficult to get the information about them in a single institution. Therefore it is recommended to make it mandatory for the apparel exporting SMEs to join industry associations so that the information gathering and policy implementation will be effective.

*Key words:* Industry associations, Electricity cost, Access to finance, Access to information