

## A B S T R A C T

The dissertation reviews extensively literature on Economic Analysis and Diffusion/Adeoption process for SWHSs in India. The literature review points out the need for studying issues like existing method of specification, economic evaluation, existing pattern of adoption and market barriers for SWHSs.

The study applies a computer model, popularly known as  $\Phi$  F-CHART method for studying the thermal performance of SWHSs. The model gives the energy supplied by SWHSs for various collector areas. The results of the model indicate that there is a diminishing gain in incremental energy as the size of SWHS is increased.

The model for thermal performance is linked to a model of economic analysis. Life-cycle savings analysis and pay-back period have been computed for various collector areas. The economic analysis indicates that there are diseconomies of scale involved.

A survey of adopters and non-adopters of SWHSs was conducted to study the purchase activating factors, comparative evaluation of water heating systems, manufacturer preference and organisational factors that have a bearing on the adoption/non-adoption of SWHS.

Based on the study, recommendations have been proposed about the method of specifications, economic analysis, segmentation of the market, reduction in first-cost barrier and structural arrangement for speedy market penetration of SWHSs in India.