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Structuring the Prediction Model of Export Performance of Selected Indian Industries: A Comparative Analysis

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Introduction

e ability to compete in world markets by adopting successful export marketing strategies is critical to a rm's export performance. Yet, there is no uniform de nition of export performance, and it is one of the least understood areas of international marketing despite a widespread literature [1]. Our aspiration is to develop and estimate an integrated empirical model of export performance. Measurement models are speci ed for each construct and a path model is then developed to explore interdependencies between them. Exploratory factor analysis is used to examine the dimensionality of constructs and these are con rmed by con rmatory factor analysis. Finally, a structural equation model (SEM) is speci ed to examine interdependencies between constructs and their measures. e SEM complements multiple regression analysis by considering various project factors in a systematic and realistic manner. is paper further provides theory explanations and research conclusions through a comparative analysis of SEM with multiple regression analysis and arti cial neural network (ANN). Finally, the authors draw advantages of SEM over the other two models in this speci c research domain characterized by unstable, uncertain, and dynamic export market conditions of selected Indian industries.

Literature Review

Many types of analysis methods have attempted to model complicated prediction processes in international market entry and management. ese models were developed to t each subject of interest and the research characteristics—including objectives, intention to use the model, and the scope of data required.

Typically, statistical methods can show a causality of the prediction results to ensure the result in the form of statistically reliable gures. Among those statistical methods, multiple regression analysis is one of the most widely used for modeling because it requires a relatively simple process Chan [2]. However, the modeling method using a multiple regression analysis has a signi cant aw because it ignores all the potential measurement errors of the observed variable. On the other hand, SEM is superior to multiple regression methods because it recognizes the measurement error, and further o ers an alternate method for measuring prime variables of interest through the inclusions of latent variables and surrogate variables. e former refers to a hypothetical concept which cannot be directly observed nor measured; the latter is a substitute variable that can be measured directly in lieu of the latent variables. Since the development of SEM, the use of this model has expanded rapidly with the aid of the development of computer science. According to Reddy [3] SEM is considered preferential as it aids in the following:

variables. In addition, it is possible to visualize the complex relations through a graphical representation that shows the directional paths among variables.

Further review and analysis of the relevant empirical studies and the theoretical literature on exporting revealed the correlation between four sets of rm-related constructs and export marketing activity of individual rms [4]. ese constructs focus on

1. Di erential rm advantages
2. Decision-maker international orientation

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and dynamic factors than domestic marketing; frequently being exp foreign market environment (i.e. trade barrier, political, economical risks from within the organization itself. This study develops a structu success of market entry mechanism. Through a comparative analysis artiýcial neural network (ANN), SEM shows a more accurate predicti to consider various risk variables in a systematic and realistic way. depicting the paths of how those complicated variables are interrelat the complex system and its underpinned causes that critically affect

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SEM has strong potential to accurately and reliably predict the probable performance of international construction projects.