

APPLICATION OF THE ANALYTIC NETWORK PROCESS (ANP) TO SELECT NEW FOREIGN MARKETS TO EXPORT SOFTWARE SERVICES: STUDY OF COLOMBIAN FIRMS

Diana Lesmes*
Industrial Engineering Department
Universidad de los Andes
Bogotá, Colombia
E-mail: d-lesmes@uniandes.edu.co

Luis Buitrago
International Business School
Universidad del Rosario
Bogotá, Colombia
E-mail: luis.buitrago36@urosario.edu.co

Carolina Cendales
International Business School
Universidad del Rosario
Bogotá, Colombia
E-mail: cendales.sonia@ur.edu.co

ABSTRACT

The selection of export markets is a complex and important decision for small and medium enterprises (SMEs) of developing countries interested in exporting for the first time. Given this issue, SMEs enroll export programs to receive consultancy for their internationalization process. One of these export programs is managed by the Colombian trade bureau, a Trade Promotion Organization (TPO). This TPO developed a market selection model that lacks a process to validate the weights selected. Therefore, the results of the TPO model are deficient in generating enough confidence to motivate the company's owners to export. On the other hand, we identified that some of the criteria used in the TPO model were related to each other, but this model assumes criteria as independent. Due to the fact that the selection of export markets is a multi-criteria decision that involves feedback, we proposed an ANP model for selecting countries to export software services for Colombian SMEs. Upon comparing the market TPO selecting model to the ANP model, we identified that the results of both models are similar in ranking the countries. However, we concluded that the proposed model is better because it has a structured methodology to assign weights that allows evaluating the consistency of the weights allocated to the selected criteria. Besides, we also preferred it because allows analyzing sensitivity to changes in the priority's weights. The categories of variables that we used in both models are: market, economy and logistics, among other.

Keywords: Analytic Network Process, Software Services, International Commerce, Selection of Markets

* Corresponding author