Effectiveness of Customs Smart Risk Management among Cross-Border E-Commerce Enterprises: Basis for a Strategic Management Model

Zhengxing Li, Phd
https://orcid.org/0009-0004-2511-8993
Email Add: Lizxcam@gmail.com
Asian Institute of Maritime Studies (AIMS)-School of Graduate Studies (SGS)
Manila, Philippines

Abstract

The rapid growth of cross-border e-commerce has challenged customs authorities to balance trade facilitation, regulatory compliance, and border security. In response, customs authorities are increasingly adopting smart risk management systems supported by digital technologies. This study evaluates the effectiveness of smart customs risk management for cross-border e-commerce enterprises and establishes a strategic management model based on these findings. A quantitative, descriptive-correlational research design was employed. Data were collected via structured questionnaires from 150 respondents representing cross-border e-commerce enterprises. Analysis techniques included frequency distribution, weighted means, Pearson product-moment correlation, Analysis of Variance (ANOVA), simple linear regression, and multiple regression analysis. The results indicate that external environmental factors, organizational factors, and corporate risk management practices are positively correlated with the effectiveness of smart customs risk management, with external environmental factors showing the strongest relationship. Smart customs risk management is generally perceived as effective, particularly regarding transparency and timeliness. The findings also demonstrate that the effectiveness of smart customs risk management significantly influences corporate strategic management responses. Within corporate risk management practices, risk assessment and risk monitoring significantly enhance the effectiveness of smart customs risk management, whereas risk identification and risk mitigation do not show a significant relationship. Multiple regression analysis further identifies transparency and timeliness as key predictors of strategic management responses. Based on these findings, a strategic management model was developed to illustrate how external environmental factors, organizational factors, and corporate risk management practices foster the effectiveness of smart customs risk management and subsequently influence strategic management responses. The study concludes that effective smart customs risk management can strengthen regulatory compliance, organizational resilience, and sustainable competitiveness in cross-border e-commerce.

Keywords: smart customs, cross-border e-commerce, enterprise risk management, strategic management response, customs modernization, risk governance, digital trade, strategic management model, AIMS School of Graduate Studies.