



HAL
open science

“Methodologies For Demand Forecasting in supply chain: A Systematic Literature Review And Bibliographic Analysis”

Nguyen Thanh Tuan, Bekrar Abdelghani, Le Thi Muoi, Artiba Abdelhakim,
Chargui Tarik

► To cite this version:

Nguyen Thanh Tuan, Bekrar Abdelghani, Le Thi Muoi, Artiba Abdelhakim, Chargui Tarik. “Methodologies For Demand Forecasting in supply chain: A Systematic Literature Review And Bibliographic Analysis”. *Mardi de Chercheurs*, Mar 2024, Mons, Belgium. 2024. hal-04542842

HAL Id: hal-04542842

<https://uphf.hal.science/hal-04542842>

Submitted on 11 Apr 2024

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Thanh Tuan NGUYEN

«Methodologies For Demand Forecasting in supply chain: A Systematic Literature Review And Bibliographic Analysis»

Abdelghani BEKRAR – LAMIH, Université Polytechnique Hauts-de-France, Valenciennes, France

Thi Muoi LE - CRISS, Université Polytechnique Hauts-de-France, Valenciennes, France

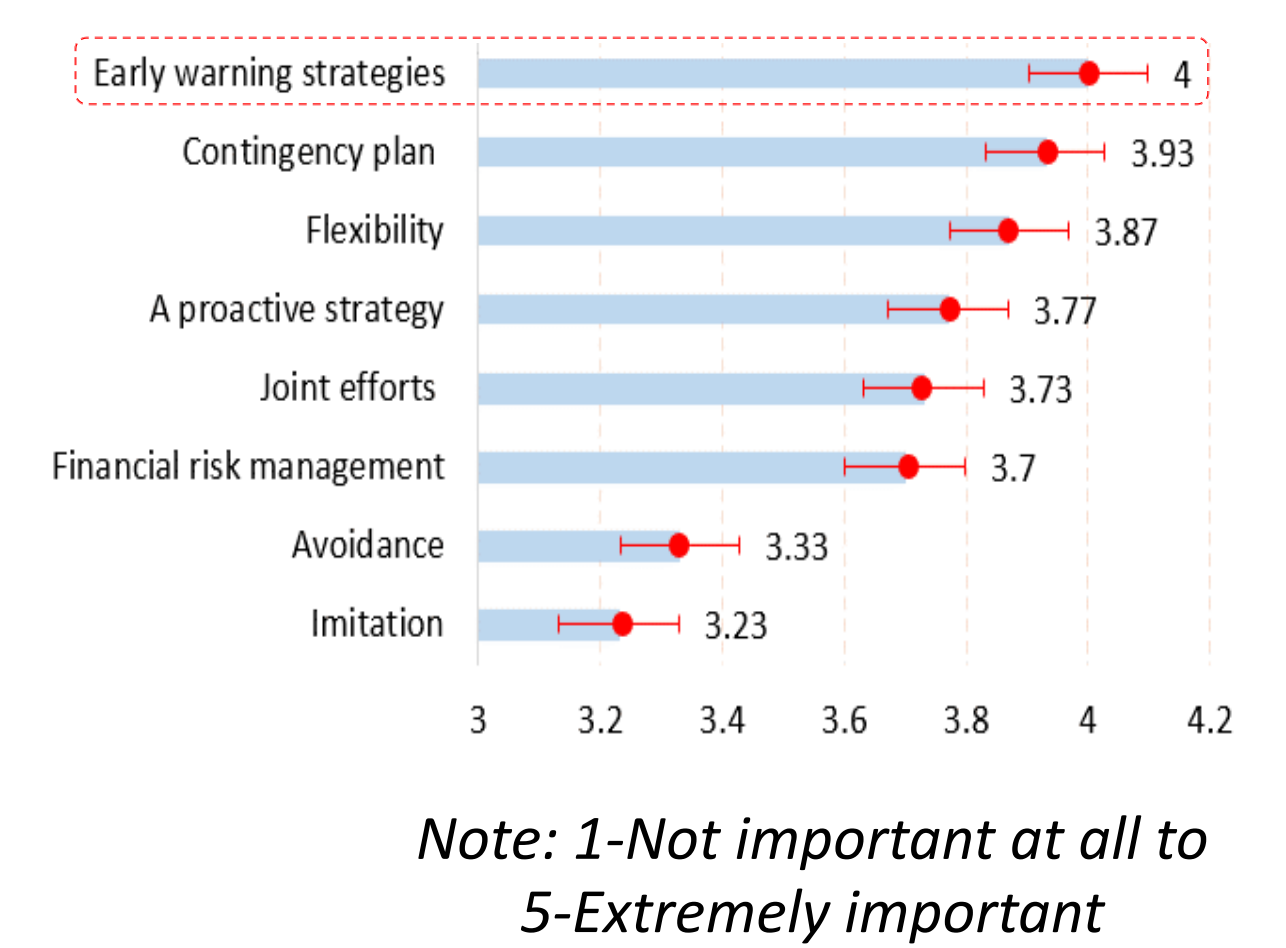
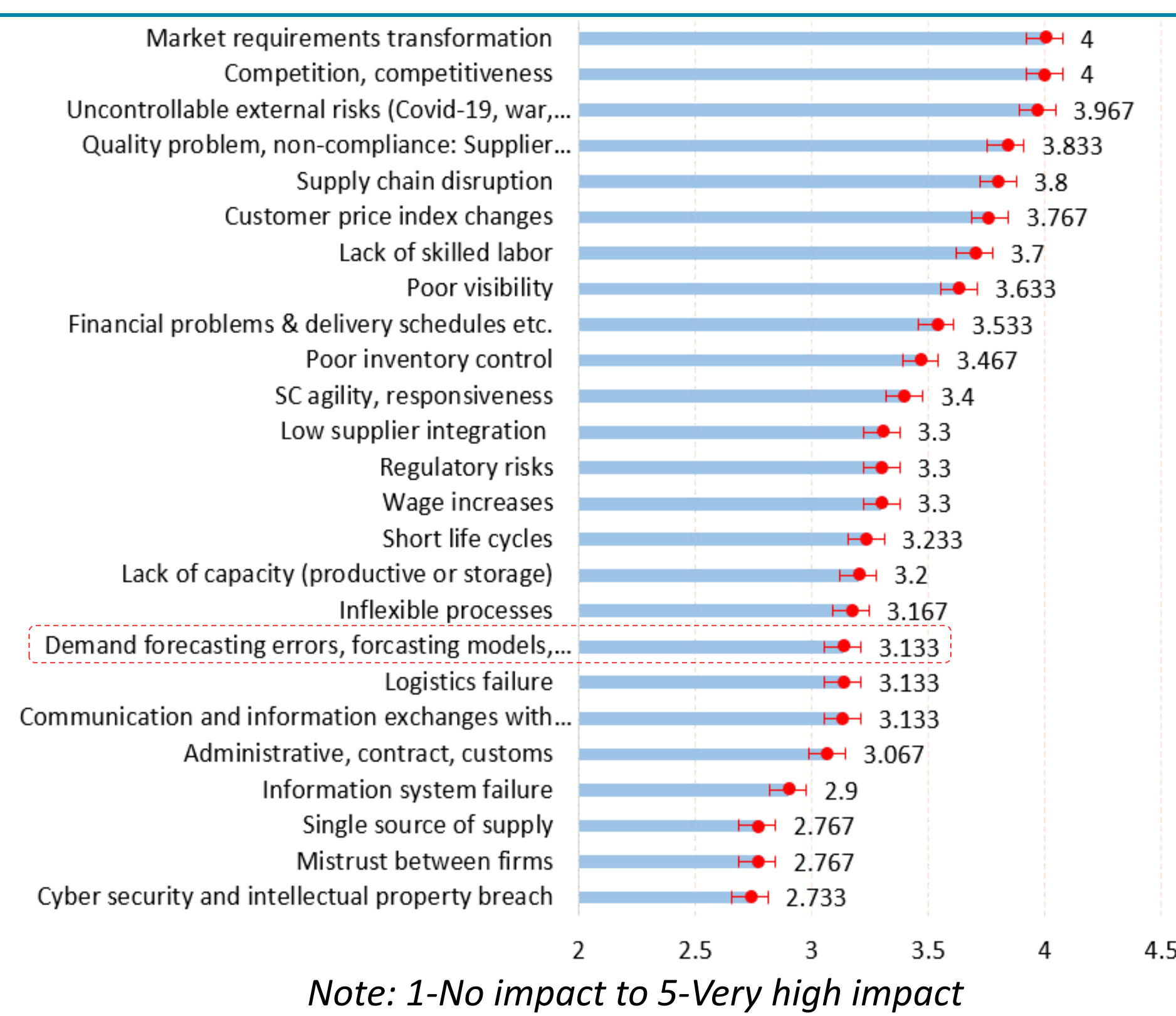
Abdelhakim ARTIBA - LAMIH, Université Polytechnique Hauts-de-France, Valenciennes, France

Tarik CHARGUI - LAMIH, Université Polytechnique Hauts-de-France, Valenciennes, France

Département Informatique du LAMIH

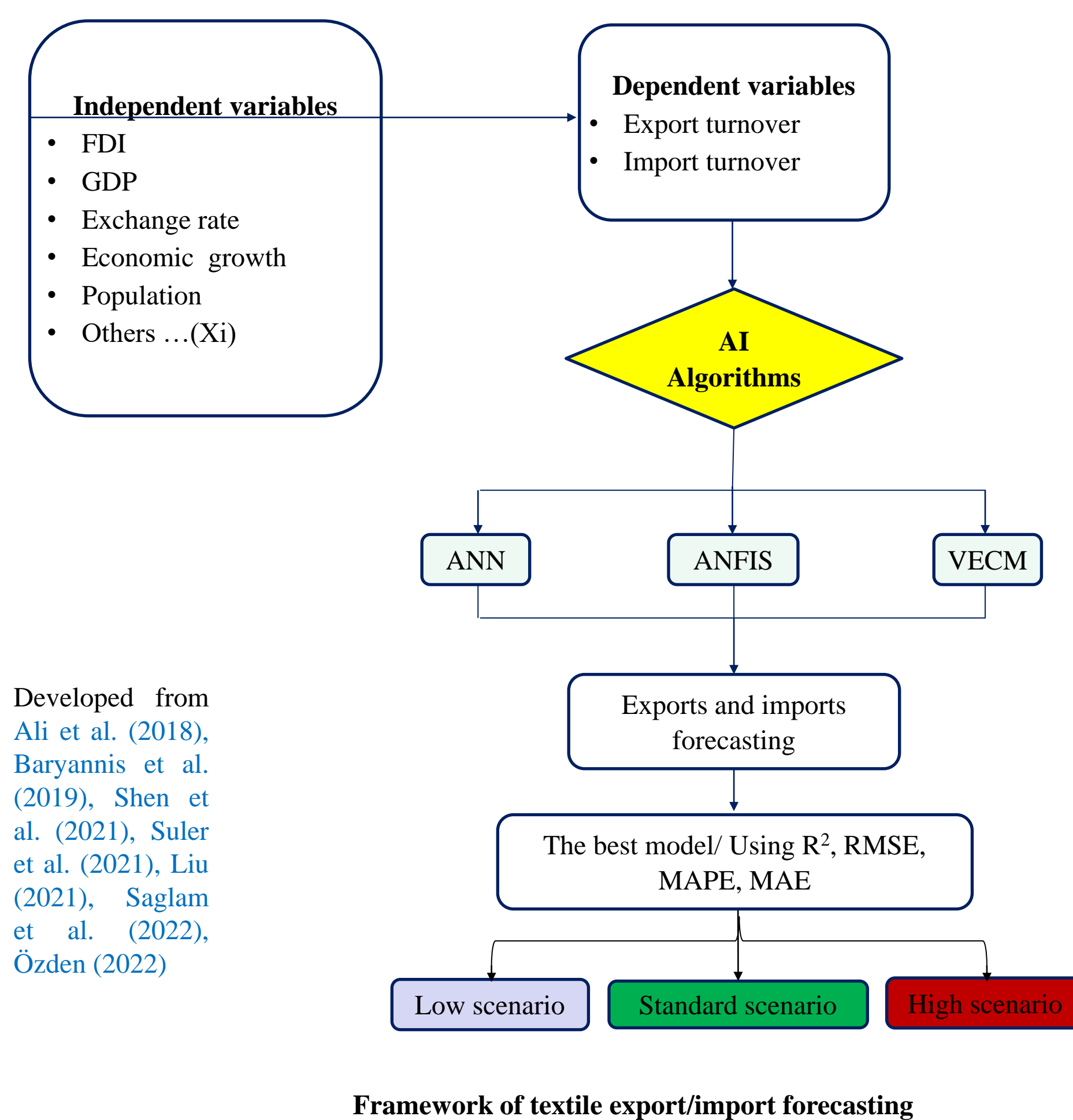
Context & Problem

- ❖ Promptly identifying risks in an ever-changing economy is posing a huge challenge for an enterprise within the SC.
- ❖ Enterprises need to understand how the market is likely to change in the future in order to make informed decisions.
- ❖ There are so many methods for forecasting but AI and ML have been proven to provide more accurate and reliable forecasts.

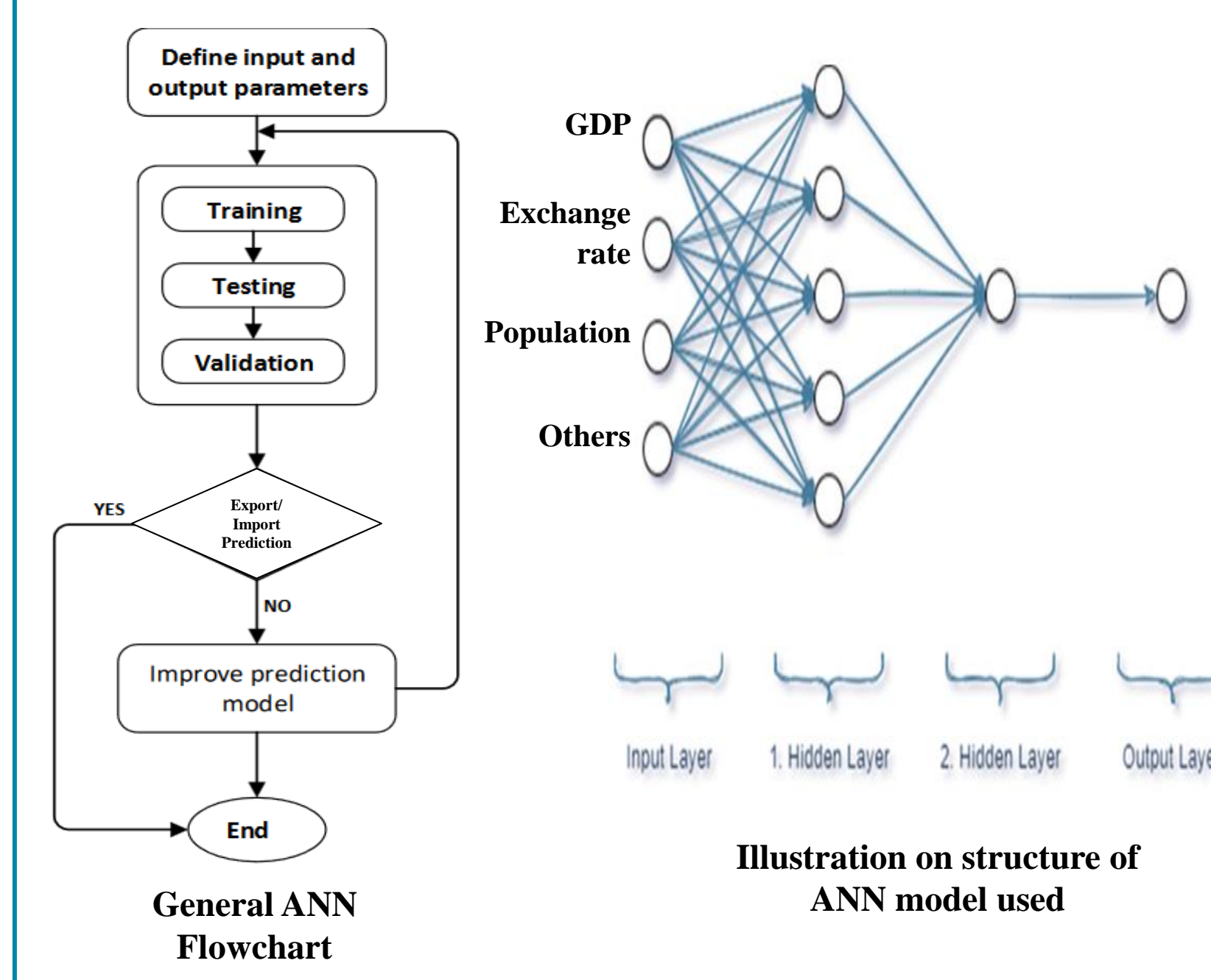


T. T. Nguyen, A. Bekrar, T. M. Le, A. Artiba, T. Chargui and T. T. Huong Trinh, "New Digital Technologies In Supply Chain Risk Management: Empirical Results Of Vietnam's Textile Industry" 2023 IEEE International Conference on Technology Management, Operations and Decisions (ICTMOD), Rabat, Morocco, 2023, pp. 1-8, doi: 10.1109/ICTMOD59086.2023.10438148.

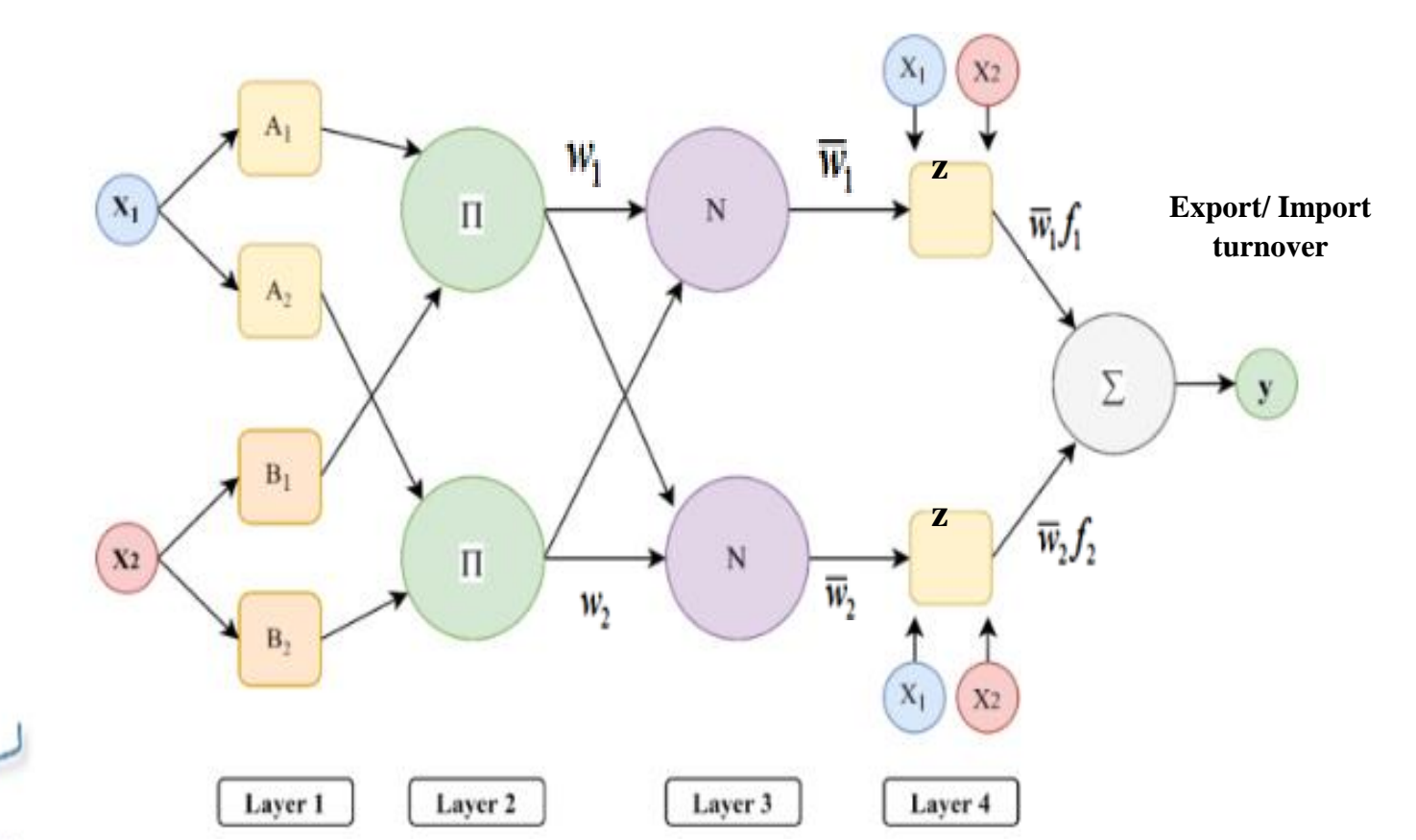
Targeted Solution



- ❖ ANN has the ability to form a complex non-linear system.
- ❖ No assumption on inputs; self-learning ability



- ❖ ANFIS was first used in 1991, is one of the best examples of hybrid models (Özden, E., 2022).
- ❖ ANFIS = ANN + Fuzzy Systems → effective results.
- ❖ Rapid learning capacity, the capability of seizing the nonlinear structure of a process, capability of adaptation.



Özden, E. (2022). Forecasting of Export Volume Using Artificial Intelligence Based Algorithms. *Bitlis Eren Üniversitesi Fen Bilimleri Dergisi*, 11(2), 715-726. <https://doi.org/10.17798/bitlisfen.1107311>

State Of The Art

Search formula:

TITLE-ABS-KEY ("import" OR "export" OR "trade" AND "forecast*" OR "predict*")

Period: 2019-2025
Scopus database

