SUPERVISOR'S RECOMMENDATION FOR THE DISSERTATION DEFENCE

Applicant:	Ing. Evelyn Toseafa Faculty of Economics and Administration University of Pardubice
Title of dissertation:	Forecasting Regional Financial Performance using Soft-Computing Methods
Study programme:	System Engineering and Informatics
Supervisor:	prof. Ing. Petr Hájek, Ph.D. Science and Research Centre Faculty of Economics and Administration, University of Pardubice

Review of applicant activities

The PhD student started her full-time studies on 4 October 2016. In the academic year 2023/2024, the candidate is a 7th year student. During her studies, she has shown perseverance and effort in engaging in a range of faculty activities, including teaching, research projects and publishing. I particularly appreciate her proactive approach to all these matters. Her pedagogical activities included seminar teaching of Artificial and Computational Intelligence I. although it was not required, the candidate participated in a research internship at the University of Ghana Business School, Ghana. Furthermore, she actively participated in several projects of the Student Grant Competition and grant projects of the Czech Science Foundation.

Objectives of the dissertation thesis, research methodology and results

PhD student Ing. Evelyn Toseafa presents her dissertation entitled "Forecasting Regional Financial Performance using Soft-Computing Methods". The dissertation is divided into 7 sections and has 128 pages.

Forecasting financial outcomes for public entities, notably regional governments, has garnered heightened scholarly attention in recent times. This surge in interest is attributable to the expanding influence of these regions and the escalating intricacies involved in evaluating their fiscal health. A comprehensive evaluation of financial performance necessitates the consideration of an extensive array of indicators, demanding considerable expertise and resources. Consequently, forecasting these evaluations presents a sophisticated challenge characterized by significant uncertainty. Thus, this thesis is positioned within a critically relevant, intellectually demanding, and important domain of research.

The aim of this doctoral thesis is to develop and validate a predictive model for assessing the financial performance of regions, employing an array of soft computing techniques in various configurations. The detailed and precise nature of the subordinate goals suggests that the candidate has thoroughly explored the topic. Nevertheless, there is a need for a more robust

justification of the proposed hybrid models. Section 1 is dedicated to reviewing the current advancements in the field of regional financial performance forecasting. This section offers a contemporary survey of pertinent literature. Section 3 delineates the research methodology designed for this dissertating, presenting a clear narrative but predominantly concentrating on previously established forecasting methodologies. The findings presented in Section 5 confirm the efficacy of the suggested model across various datasets. Furthermore, the candidate enhanced the model by integrating additional elements and hybrid approaches, aiming to encompass broader economic variables and the inherent uncertainties in evaluating regional financial health.

In summary, the dissertation sets forth a formidable objective, and the model put forward offers a compelling strategy for the prediction of regional financial performance.

Publication activity of the applicant

The candidate has published 2 conference papers and 6 journal articles, of which one is indexed in WoS and two in Scopus. Although not all articles are related to the topic of the dissertation, the list of publications can be considered sufficient.

Recommendation

The candidate has exhibited a proficient capacity to engage in research addressing a multifaceted issue. It is my opinion that the candidate has undertaken an active and autonomous role in investigating this problem. Based on the above, and I **do recommend** Evelyn Toseafa for defence of the dissertation in the study programme System Engineering and Informatics.

In Pardubice, February 12, 2024

prof. Ing. Petr Hájek, Ph.D.