

## ABSTRACT

The habilitation thesis entitled *”Researches and contributions of the statistical methods and tools – efficiency decision support for industry and management”* present the scientific results and activities conducted at *”Petru Maior University”* of *Tîrgu Mureș*, after obtaining the scientific title of doctor (February 2011). The habilitation thesis reflect the inter, intra and trans-disciplinary concerns, in the industry and management fields, both in the productive and academic community (in over 12 years of university experience in the private and public, national and international universities), focused especially on the principle of complementarities.

The habilitation thesis include three sections, in the section I being presented **SCIENTIFIC, PROFESIONAL AND ACADEMIC ACOMPLISHMENTS**, structured into five chapters dedicated to presenting the most relevant achievements in engineering and management directions.

The first sub - chapter, I.1. *”Statistical methods and tools - decision support for industry and management”* is structured into:

- *I.1.1. Researches and contributions in communication management for automotive industry*
- *I.1.2. Researches and contributions in the durable goods industry*
- *I.1.3. Forecasting methods for economic efficiency in furniture industry*
- *I.1.4. Researches and contributions in IT&C field*
- *I.1.5. Researches and contributions in management of pharmaceutical industry.*

and include general considerations for each industrial field and the principal management problems, the main statistical methods and tools used in the empirical researches like: non-parametrical statistical tests, principal component analysis, cluster analysis, Kelly grid, linear regression, stochastic methods for forecasting (Box-Jenkins), neural networks, discriminant analysis, factorial analysis of the correspondences, etc. with the providing of the main results and conclusions.

The second sub – chapter, I.2. *”Statistical methods and tools - brand management decision support in industrial field (brand management)”* contains considerations about industrial brand, trademark (brand), "social brand", Q methodology (Q factor analysis) and other statistical methods used in empirical research, results and conclusions of their contributions in this area.

The third sub –chapter, I.3. ”*Statistical methods and tools used in the hotel management*” present considerations regarding performance and management in the hospitality industry, data and statistical methods used (binomial test,  $\chi^2$  test, parametric and nonparametric correlations, cluster analysis, etc.), empirical research results and conclusions.

The fourth sub-chapter, I.4. ”*Statistical methods and tools - decision support in medical services field (prevention management statistics)*” present the recent contributions (from 2015 I am member of the *International Society of Clinical Biostatistics*) from this field and reflect the collaborations of the author for the study of risk in preeclampsia, using statistical methods like: descriptive statistics, ROC Curve, odd ratio, U Mann – Whitney test, Kolmogorov – Smirnov test, etc.

The last sub-chapter, I.5. ” *Statistical methods and tools – decision support in tourist destination management*” include considerations regarding the particularities of tourist destination management, own contributions to the development of new forms of tourism in Romania (*adventure tourism, dark tourism, red tourism, slum & poverty tourism, luxury tourism, health & wellness tourism, ”mystery & thriller tourism”, ”thanatourism”, museum tourism, gastronomy tourism, thematically parks tourism, silver tourism, wildlife tourism*), statistical methods and qualitative methods used in tourist destination management, the main empirical results and conclusions.

The second section THE EVOLUTION AND DEVELOPMENT PLAN FOR PROFESSIONAL, SCIENTIFIC AND ACADEMIC CARRIER present, based on the synthesis of the scientific and didactic achievements, a set of principles and objectives that underline the future activity, the directions of professional development, and the concrete element which contribute to their being carried in the future.

The section III REFERENCES include the list of associated bibliographical references used in the habilitation thesis.