1. Record Nr. UNINA9910826055603321 Autore Grudzewski Wiesaw Titolo Application of dimensional analysis in economics / / Wiesaw Maria Grudzewski and Krystyna Rosanowska-Plichcinska Amsterdam: Washington, DC: :: IOS Press, . [2013] Pubbl/distr/stampa ©2013 **ISBN** 1-61499-280-0 Descrizione fisica 1 online resource (152 p.) Collana stand alone Altri autori (Persone) Rosanowska-PlichcinskaKrystyna Disciplina 330.01/5195 Soggetti **Econometrics** Economics, Mathematical Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references. Nota di contenuto ""Title Page""; ""Preface""; ""Contents""; ""Measuring of Economic Quantities""; ""Economic Laws and Categories""; ""Economic Quantities""; ""Quantity Measuring Fundamentals""; ""Measuring Methods""; ""Analysis of Measuring Errors""; ""Sources of Systematic Errors""; ""Maximum Error in Indirect Measurements""; ""Establishing Approximate Values of Measurement Results": ""Measuring Characteristics of Economic Quantities""; ""Measuring Methods for Economic Quantities"": ""Basic Measurement Criteria in Economics"" ""Measuring Methods for Duration Time of Economic Processes and Their Components"""Value Measuring""; ""Modelling of Economic Processes""; ""Quantified Models""; ""Origins of Economic Modelling""; ""Dimensional Analysis as the Basis for Formulation of Quantified Models""; ""Dimensional Quantities""; ""Dimensional Constants""; ""Principles of Dimensional Analysis""; ""Algebraic Framework of Dimensional Analysis""; ""Theorems of Dimensional Function""; ""Modelling of Processes Using a Composite Dimensional Function""; ""Computer-Oriented Modelling Description"" ""Parametric Notation of a Dimensional Function""""Parametric Description of a Composite Dimensional Function""; ""Experiment Designing Based on Dimensional Analysis""; ""Model Similarity Theory"";

""Building of Quantified Dimensional Models""; ""Procedures""; ""Dimensional Models of the Production Function"; ""Problem

Description""; ""Production Function Models Based on Dimensional Analysis""; ""National Income Models Proposed""; ""Models of the Function of Expenses""; ""Definition of a Function of Expenses for Consumer Goods""

""Generalised Model of a Function of Expenses for Necessities"""
Function of Expenses Proposed for Durable Goods""; ""Results of a
Study Concerning Expenses for Selected Everyday Consumables"";
""Economic Development Modelling According to the Model Similarity
Theory""; ""Concept of Creating Economic Development Models"";
""Examples of Dimensionless Models of Economic System
Development""; ""Production Increase Model Described with a
Dimensional Functional""; ""Experiment and Practical Verification"";
""Experiment in Modelling of Phenomena, Processes and Laws""
""Basic Verification Problems""""Verification of Quantified Models"";
""Conclusions""; ""References""

Sommario/riassunto

The modeling of economic phenomena and processes, in terms of their static and dynamic features and with regard to the characteristics of their course, is a major methodological trend in studies of the nature, properties and functioning of contemporary management systems. Models describing management systems must be of a multi-aspect nature, entailing aspects such as technical, economic and sociological factors on the one hand, and forecasting, planning, leading, controlling etc., on the other. Developing a method for incorporating such diverse data into a system of analysis is, needless to sa