

Vector Error Correction Model Vecm Cointegrated Var

This volume is a collection of selected empirical studies on determinants of economic growth and development in Ethiopia. The core argument for editing this book is to provide an up-to-date picture of the state and patterns of growth and development in Ethiopia. Ethiopia has been under focus in the past due to draughts, war, famine, development changes and the effects of global economic crisis in the country. A main contribution of this volume is that it helps identify selected important determinants of growth and development in Ethiopia and provides an estimation of their effects using up-to-date data, modelling and methods. Taken together the studies provide a comprehensive picture of the state of growth and development, their measurements, causal relationships and evaluation of efficient policies and practices in achieving progress in Ethiopia. The issues covered represent major challenges to the government and development organizations who are aiming at achieving higher growth and alleviating poverty in the country. The studies cover transition from rural agriculture to urban industry and the development of services.

Thesis (M.A.) from the year 2016 in the subject Economics - Case Scenarios, grade: 3.89, , language: English, abstract: The main objective of this study is to investigate the macroeconomic determinants of economic growth in Ethiopia from 1974-2014. A Vector Error Correction Model (VECM) to cointegration approach is applied in order to investigate the long run and short run relationship between real GDP and its macroeconomic determinants. The finding of the cointegration test shows that there is a stable long run relationship between real GDP, gross domestic saving, labor, human capital, export, FDI, foreign aid and external debt. The long run empirical result reveals gross domestic saving, human capital proxied by government expenditure on health and education, and labor force have positive and significant relationship with real output. However export and real GDP have positive but insignificant relationship. External debt, foreign aid and FDI have negatively significant relationship with real GDP during the study period. The short run dynamic results shows that human capital, saving and FDI have positive relationship with output growth whereas labor, export, aid and external debt have negative relationship with Real GDP. The coefficient of equilibrating error term (ECM) suggests that the speed of adjustment (feedback effect towards the long run equilibrium) takes few years for full adjustment when there is a shock in the system. In order to sustain long run growth the government or policy makers should design appropriate policies that results in the efficient use of resources contributing to economic growth and proper management of variables resulting to negative growth in order to reverse their effect on output.

Applied Econometrics: A Simple Introduction offers a detailed guide to some of the central methods and applications of applied econometrics, with theory, models, calculations, and graphs to support analysis. S&P 500 equities, GSCI commodities, and US Treasury Bill risk-free rate datasets are assessed for their data distributions, autocorrelation, and stationarity. The Engle-Granger 2 step method, Johansen test and the Vector Error Correction Model test for and correct cointegration. ARMA models determine the optimal AR and MA processes to model returns data, and GARCH models assess the optimal p and q number of lags to model variance, using the Akaike Information Criterion. Alternative GARCH versions are examined. Dynamic portfolio strategies are evaluated using Sharpe Ratio portfolio performance evaluation tools, with a focus on the 2007-8 global financial crisis period. Static portfolio strategies are assessed using ARMA return and GARCH variance forecasting. Results are used alongside established financial literature to assess the optimal portfolio strategy.

Research Paper (undergraduate) from the year 2017 in the subject Mathematics - Applied Mathematics, grade: 8.5, , course: Empirical

Econometrics II, language: English, abstract: This paper investigates the effects of monetary policy in the US by comparing a system of equations – estimated from a VECM (vector error correction model) – to a SVAR (structural autoregressive) model. Vector error-correction models are used when there exists long-run equilibrium relationships between non-stationary data integrated of the same order. Those models imply that the stationary transformations of the variables adapt to disequilibria between the non-stationary variables in the model. In contrast, SVAR models focus on the contemporaneous interdependence between the variables. The authors apply these two methods on a model with a contractionary monetary policy which affects the short-term interest rate. Following Sims and Zha the authors use a shock to the Treasury Bill rate instead of a shock to the Federal Funds rate. The paper continues as follows. First, a description of the data is given. Secondly, it presents a system of equations built from the LSE approach, aiming at macroeconomic simulations. Thirdly, it compares results obtained from the previous part to those obtained using SVAR impulse response functions (IRFs) identified with sign restrictions. The paper focuses on the impact of the simulated policies or monetary shocks on GDP and its growth rate.

The liberalization and globalization of the Indian economy has made India more vulnerable to macro issues. This book provides a comprehensive analysis of the dynamic relationship between macroeconomic variables and stock prices in India. The research findings and policy implications discussed here may also be relevant for other emerging economies.

International Transaction Journal of Engineering, Management, & Applied Sciences & Technologies publishes a wide spectrum of research and technical articles as well as reviews, experiments, experiences, modelings, simulations, designs, and innovations from engineering, sciences, life sciences, and related disciplines as well as interdisciplinary/cross-disciplinary/multidisciplinary subjects. Original work is required. Article submitted must not be under consideration of other publishers for publications.

Tourism is a global phenomenon. Because it is an important, even vital, source of income for many countries in the world. Its importance was recognized in the Manila Declaration on World Tourism of 1980 as “an activity essential to the life of nations because of its direct effects on the social, cultural, educational, and economic sectors of national societies and on their international relations and its indirect effects on the development of allied industries like transport, hotel etc.”. Medical Tourism is one form of tourism and which means a journey that patients take from one country to another country to get cost effective and efficient medical treatment, followed by a great vacation at some of the most beautiful locations. India is one of the major players in this industry. Currently, it hosts about 1.27 million medical tourists from industrialized countries like UK, USA and Canada and from its neighboring countries such as Bangladesh, Sri Lanka, and China. Its foreign exchange earnings from medical tourism are estimated to be around US \$ 1.8 billion. The estimated number of medical tourists in India in 2015 would be between 1.21 million and 2.78 million. The estimated revenue would lie between US \$ 1719 million to US \$ 3964 million in 2015. Medical tourism industry in India has potential to contribute around 25 percent to the country's Gross Domestic Product in the next five years, if fully tapped. The present book titled Sociology of Medical Tourism highlights various dimensions, identifies different issues and suggests further development of this multimillion dollar industry in India in an in-depth manner. Medical Tourism is one of the most important trust areas which emerge in the past century and because of its multiple level of use it also become subject matter of research in various subjects including Sociology. It is hoped that this book, with its wide-ranging and in-depth content, critical insights and detailed analysis of the concept, prove to be immensely resourceful to the readers. I also assure that this book should be proven an informative referral for those who are working and doing research in the field of medical tourism.

Many economic models imply that ratios, simple differences, or spreads' of variables are $I(0)$. In these models, cointegrating vectors are

composed of 1's, 0's and -1's, and contain no unknown parameters. In this paper we develop tests for cointegration that can be applied when some of the cointegrating vectors are known under the null or under the alternative hypotheses. These tests are constructed in a vector error correction model (VECM) and are motivated as Wald tests in the version of this Gaussian model. When all of the cointegrating vectors are known under the alternative, the tests correspond to the standard Wald tests for the inclusion of error correction terms in the VAR.

Modifications of this basic test are developed when a subset of the cointegrating vectors contains unknown parameters. The asymptotic null distribution of the statistics are derived, critical values are determined, and the local power properties of the test are studied. Finally, the test is applied to data on foreign exchange future and spot prices to test the stability of forward-spot premium

With the rapid development of economic globalization and information technology, the field of economic forecasting continues its expeditious advancement, providing business and government with applicable technologies. This book discusses various business intelligence techniques including neural networks, support vector machine, genetic programming, clustering analysis, TEI@I, fuzzy systems, text mining, and many more. It serves as a valuable reference for professionals and researchers interested in BI technologies and their practical applications in economic forecasting, as well as policy makers in business organizations and governments.

This monograph deals with spatially dependent nonstationary time series in a way accessible to both time series econometricians wanting to understand spatial econometrics, and spatial econometricians lacking a grounding in time series analysis. After charting key concepts in both time series and spatial econometrics, the book discusses how the spatial connectivity matrix can be estimated using spatial panel data instead of assuming it to be exogenously fixed. This is followed by a discussion of spatial nonstationarity in spatial cross-section data, and a full exposition of non-stationarity in both single and multi-equation contexts, including the estimation and simulation of spatial vector autoregression (VAR) models and spatial error correction (ECM) models. The book reviews the literature on panel unit root tests and panel cointegration tests for spatially independent data, and for data that are strongly spatially dependent. It provides for the first time critical values for panel unit root tests and panel cointegration tests when the spatial panel data are weakly or spatially dependent. The volume concludes with a discussion of incorporating strong and weak spatial dependence in non-stationary panel data models. All discussions are accompanied by empirical testing based on a spatial panel data of house prices in Israel.

Includes traditional elements of financial econometrics but is not yet another volume in econometrics. Discusses statistical and probability techniques commonly used in quantitative finance. The reader will be able to explore more complex structures without getting inundated with the underlying mathematics.

This book is designed for self study. The reader can apply the theoretical concepts directly within R by following the examples.

This edited volume explores and dissects Africa's economic growth and sustainable development using an optimal conceptual model of the progressive continent's development up to and until 2030. Africa is studied not against the background of developed (OECD) and leading developing (e.g. BRICS) countries, but as a separate economy and as a self-sufficient region which follows its own priorities, and implements its own unique opportunities and vectors of growth and development. This volume addresses the contemporary and topical issues of inclusive growth, digital modernisation, and sustainable development, recommending policy outcomes for the future.

The growth of manufacturing industries is one of the key sectors in helping to mitigate global recessions. Productivity Growth in the Manufacturing Sector thoroughly discusses issues and potential remedies of this sector for a range of international countries.

"This reference is a broad, multi-volume collection of the best recent works published under the umbrella of computer engineering, including

perspectives on the fundamental aspects, tools and technologies, methods and design, applications, managerial impact, social/behavioral perspectives, critical issues, and emerging trends in the field"--Provided by publisher.

In the last decade, energy markets have developed substantially due to the growing activity of financial investors. One consequence of this massive presence of investors is a stronger link between the hitherto segmented energy and financial markets. This book addresses some of the recent developments in the interrelationship between financial and energy markets. It aims to further the understanding of the rich interplay between financial and energy markets by presenting several empirical studies that illustrate and discuss some of the main issues on this agenda.

This economic and political science work is a rigorous analysis that demonstrates that although it is a privilege and a benefit for the US to have its currency, the dollar, as the leading world reserve currency, the privilege also proves to be a very significant economic and security burden imposed on the nation.

Structural vector autoregressive (VAR) models are important tools for empirical work in macroeconomics, finance, and related fields. This book not only reviews the many alternative structural VAR approaches discussed in the literature, but also highlights their pros and cons in practice. It provides guidance to empirical researchers as to the most appropriate modeling choices, methods of estimating, and evaluating structural VAR models. The book traces the evolution of the structural VAR methodology and contrasts it with other common methodologies, including dynamic stochastic general equilibrium (DSGE) models. It is intended as a bridge between the often quite technical econometric literature on structural VAR modeling and the needs of empirical researchers. The focus is not on providing the most rigorous theoretical arguments, but on enhancing the reader's understanding of the methods in question and their assumptions. Empirical examples are provided for illustration.

The Faculty of Economics and Business Bengkulu University (UNIB) Provinsi Bengkulu, Indonesia, organized the 3rd Beehive International Social Innovation Conference (BISIC) 2020 on 3rd- 4th Oct 2020 in Bengkulu, Indonesia. The number of participants who joined the zoom room was recorded at 450 participants. Participants came from 4 countries, namely Indonesia, Malaysia, Philippines, Thailand. BISIC 2020 is implemented with the support of a stable internet network system and a zoom application. In the implementation there were several technical obstacles encountered by the participants, namely the difficulty of joining the zoom application due to the unstable internet signal. The holding of a virtual conference felt less meaningful, due to the lack of interaction between speakers and participants. The BICED 2020 committee 30 papers were presented and discussed. The papers were authored by researchers from Thailand, Malaysia, Philippines and Indonesian. All papers have been scrutinized by a panel of reviewers who provide critical comments and corrections, and thereafter contributed to the improvement of the quality of the papers.

Commodity Modeling and Pricing provides extensions and applications of state-of-the-art methods for analyzing resource commodity behavior. Drawing from the seminal work of Professor Walter Labys on the development of econometric methods for forecasting commodity prices, this collection of essays features expert contributors ranging from practitioners in private industry, public sector, and nongovernmental organizations to scholars in higher education—all of whom were Labys's former students or collaborators. Filled with in-depth insights and expert advice, Commodity Modeling and Pricing contains the information you need to excel in this demanding environment.

The aim of the Ebook series of Research Topics in Agricultural & Applied Economics (RTAAE) is to publish high quality economic researches applied to both the agricultural and non-agricultural sectors of the economy. The subject areas of this Ebook series

A Vector Error Correction Model (VECM) Approach in Explaining the Relationship Between Interest Rate and Inflation Towards Exchange Rate Volatility in Malaysia
A Vector Error Correction Model (VECM) of Stockmarket Returns
The Effects of Monetary Policy in the US. The Vector Error Correction Model (VECM) compared to the Structural Autoregressive Model (SVAR)
GRIN Verlag

Essentials of Time Series for Financial Applications serves as an agile reference for upper level students and practitioners who desire a formal, easy-to-follow introduction to the most important time series methods applied in financial applications (pricing, asset management, quant strategies, and risk management). Real-life data and examples developed with EViews illustrate the links between the formal apparatus and the applications. The examples either directly exploit the tools that EViews makes available or use programs that by employing EViews implement specific topics or techniques. The book balances a formal framework with as few proofs as possible against many examples that support its central ideas. Boxes are used throughout to remind readers of technical aspects and definitions and to present examples in a compact fashion, with full details (workout files) available in an on-line appendix. The more advanced chapters provide discussion sections that refer to more advanced textbooks or detailed proofs. Provides practical, hands-on examples in time-series econometrics
Presents a more application-oriented, less technical book on financial econometrics
Offers rigorous coverage, including technical aspects and references for the proofs, despite being an introduction
Features examples worked out in EViews (9 or higher)

The global financial crisis has called to attention the importance of financial development to economic growth as modern countries continue to struggle with debt, unemployment, and slow growth. However, a lack of agreement on how to define and measure financial development slows the development of global financial systems and markets. The Handbook of Research on Strategic Developments and Regulatory Practice in Global Finance creates a common framework for not only identifying but discussing the key factors in establishing a strong global market and financial system. This book will be a valuable reference for those interested in an in-depth understanding of the financial markets and global finance, including academics, professionals, and government agencies and institutions.

This proceedings volume presents new methods and applications in applied economic research with an emphasis on advances in panel data analysis. Featuring papers presented at the 2017 International Conference on Applied Economics (ICOAE) held at Coventry University, this volume provides current research on econometric panel data methodologies as they are applied in microeconomics, macroeconomics, financial economics and agricultural economics. International Conference on Applied Economics (ICOAE) is an annual conference that started in 2008 designed to bring together economists from different fields of applied economic research in order to share methods and ideas. Applied economics is a rapidly growing field of economics that combines economic theory with econometrics to analyse economic problems of the real world usually with economic policy interest. In addition, there is growing interest in the field for panel data estimation methods, tests and techniques. This volume makes a contribution in the field of applied economic research in this area. Featuring country specific studies, this book will be of

interest to academics, students, researchers, practitioners, and policy makers in applied economics and economic policy. This book introduces econometric analysis of cross section, time series and panel data with the application of statistical software. It serves as a basic text for those who wish to learn and apply econometric analysis in empirical research. The level of presentation is as simple as possible to make it useful for undergraduates as well as graduate students. It contains several examples with real data and Stata programmes and interpretation of the results. While discussing the statistical tools needed to understand empirical economic research, the book attempts to provide a balance between theory and applied research. Various concepts and techniques of econometric analysis are supported by carefully developed examples with the use of statistical software package, Stata 15.1, and assumes that the reader is somewhat familiar with the Stata software. The topics covered in this book are divided into four parts. Part I discusses introductory econometric methods for data analysis that economists and other social scientists use to estimate the economic and social relationships, and to test hypotheses about them, using real-world data. There are five chapters in this part covering the data management issues, details of linear regression models, the related problems due to violation of the classical assumptions. Part II discusses some advanced topics used frequently in empirical research with cross section data. In its three chapters, this part includes some specific problems of regression analysis. Part III deals with time series econometric analysis. It covers intensively both the univariate and multivariate time series econometric models and their applications with software programming in six chapters. Part IV takes care of panel data analysis in four chapters. Different aspects of fixed effects and random effects are discussed here. Panel data analysis has been extended by taking dynamic panel data models which are most suitable for macroeconomic research. The book is invaluable for students and researchers of social sciences, business, management, operations research, engineering, and applied mathematics. The editor of this book is to be congratulated for providing us with the works of a group of authors who combine proficient technical skills with elegant and lucid writing capabilities. . . This book would make excellent recommended reading for both undergraduate and graduate classes in international trade and finance. Herb Thompson, *Journal of Contemporary Asia* This book is based on the premise that Regional Trade Agreements (RTAs) in the Asia-Pacific significantly impact on the material progress of the peoples of this region. These impacts in terms of the benefits and costs associated with RTAs will vary greatly from country to country. The internationally acclaimed contributors examine the theoretical perspective of RTAs in relation to exchange rates, the role and goals of the WTO and agriculture. The tensions and trade frictions resulting from the formation of trade blocs and their conflicts with the roles and goals of the WTO are also examined in the book. Those economies that are considered the economic powerhouses of the region including China, Japan, South Korea, major ASEAN countries and Australia are discussed in depth. The findings of the book suggest that RTAs are becoming increasingly popular in the Asia-Pacific region. However the associated costs and benefits depend on a number of complex factors including exchange rates, negotiation skills, the sectors included or excluded from the RTA, and the level of economic development of the nations signing the RTAs. The book will be particularly useful to academics, researchers, consultants, students, policy makers (including trade negotiators), and practitioners involved in trade and

development in the Asia-Pacific region.

This proceedings book presents outcomes of the Innovative Economic Symposium – 2020 organized by the Institute of Technology and Business in České Budějovice (VŠTE) in Russia in collaboration with two universities: Financial University under the Government of the Russian Federation (Moscow) and Samara State University of Economics (Samara). The symposium aims to bring together experts and young scientists in economy, management, international relations, finance, marketing, and professional education from Asian and European countries, to share knowledge and experience and discuss issues related to stable economic development, international business, entrepreneurship, Industry 4.0, cooperation between educational and business structures, strategic decision-making, and processes of economic globalization and fragmentation. The book consists of two parts corresponding to the thematic symposium areas. The book content covers two sections: stable development in unstable world and globalization and fragmentation forces of the current world economy. The main topics included in the book are as follows: - Where is the world moving to and where is the economy in it? - Institutionalization of innovations. - Network architecture of economic relations. - Competences for the future. - Smart change management. - Monetary and fiscal policy development as a factor of economic modernization. - Role of international trade in the economy globalization. - Impact of globalization and economic fragmentation on the enterprise's internal environment. - Financial conditions for entrepreneurship under the economic modernization. - Impact of scientific and technological progress on globalization and fragmentation of the economy.

We provide a shrinkage type methodology which allows for simultaneous model selection and estimation of vector error correction models (VECM) when the dimension is large and can increase with sample size. Model determination is treated as a joint selection problem of cointegrating rank and autoregressive lags under respective practically valid sparsity assumptions. We show consistency of the selection mechanism by the resulting Lasso-VECM estimator under very general assumptions on dimension, rank and error terms. Moreover, with computational complexity of a linear programming problem only, the procedure remains computationally tractable in high dimensions. We demonstrate the effectiveness of the proposed approach by a simulation study and an empirical application to recent CDS data after the financial crisis.

The development of any contemporary economy is affected by numerous factors. By creating stable infrastructures, countries can more easily thrive in competitive international markets. Social, Health, and Environmental Infrastructures for Economic Growth is a comprehensive source of academic material that examines the impact of infrastructure development on modern economies. Highlighting relevant perspectives on topics such as employment, rural development, and energy production, this is an ideal reference source for researchers, students, professionals, practitioners, and policy makers interested in the social, health, and environmental infrastructures in contemporary economies.

The Extended Energy-Growth Nexus: Theory and Empirical Applications advances the established bivariate econometric relationship which inextricably links energy consumption to economic growth. The book extends this "nexus" to accommodate variables such as globalization, institutional variables, financial variables and the energy "mix." Rooted firmly in the modern literature, it covers empirical applications such as the evaluation of renewable energy incentives, the electricity generation mix, and sustainable development. Each application area incorporates modern econometric methodologies, including VAR, panel VAR, ARDL, panel ARDL, Asymmetric panel ARDL, and Panel Quantile Regression. Throughout chapters are accompanied by illustrative Stata and EViews code, demonstrating their uses in applied research. Provides a rich set of working tools for econometricians working on real-world energy and growth problems. Accompanied by representative databases and illustrative Stata and EViews code, facilitating replication and use. Following the successful of previous conference, 3rd International Conference on Administrative Science, Policy, and Governance Studies (ICAS-PGS) in strategic alliance with 4th International Conference of Business Administration and Policy (ICBAP) 2019 will be held on October 30-31, 2019 in Universitas Indonesia, Depok, West Java, Indonesia. This year's conference theme is "Strengthening Strategic Administrative Reform Policy to Promote Competitiveness and Innovation in Industrial Revolution 4.0: The Opportunities and Challenges." This conference is hosted by Faculty of Administrative Science Universitas Indonesia (FIA UI). The conference covers debates over problematic situation, theoretical frameworks, as well as prescribed policies the way that governments, businesses, and civil societies essentially need to outline strategies to realize reform commitment and achieve change efficacy for purposes of harnessing innovation while considering the opportunities and challenges as well as maintaining sustainability, engaging in a more dynamic predicament such as regulatory frameworks that affect relations of multiple governance actors in today's dynamic towards Industrial Revolution 4.0. The main objective of this conference is to discuss and debate the recent trends in administrative science on a range of issues such as public, business, and fiscal and the interconnectedness of all in Industrial Revolution 4.0. This conference is aimed to bring researchers, academicians, scientists, policymakers, professional managers, students, and other related stakeholders; together to participate and present their latest research findings, developments, and practical solutions related to the various aspects of administrative challenges in public and private sector. The general theme of 3rd ICAS-PGS and 4th ICBAP 2019 is "Strengthening Strategic Administrative Reform Policy to Promote Competitiveness and Innovation in Industrial Revolution 4.0: The Opportunities and Challenges." The conferences consist of three streams representing differences of focus and scopes of research interests within the discipline of public, business, and fiscal administration and policy. We

convey our gratitude to our esteemed Committee, Speakers and Participants, for giving their best to the success of the conference

Written for those who need an introduction, Applied Time Series Analysis reviews applications of the popular econometric analysis technique across disciplines. Carefully balancing accessibility with rigor, it spans economics, finance, economic history, climatology, meteorology, and public health. Terence Mills provides a practical, step-by-step approach that emphasizes core theories and results without becoming bogged down by excessive technical details. Including univariate and multivariate techniques, Applied Time Series Analysis provides data sets and program files that support a broad range of multidisciplinary applications, distinguishing this book from others. Focuses on practical application of time series analysis, using step-by-step techniques and without excessive technical detail Supported by copious disciplinary examples, helping readers quickly adapt time series analysis to their area of study Covers both univariate and multivariate techniques in one volume Provides expert tips on, and helps mitigate common pitfalls of, powerful statistical software including EVIEWS and R Written in jargon-free and clear English from a master educator with 30 years+ experience explaining time series to novices Accompanied by a microsite with disciplinary data sets and files explaining how to build the calculations used in examples

This book is a comprehensive examination of the Indian textile industry and the various determinants affecting its export performance, trends in labour, and capital productivity in the post-liberalization years. Employing 45 million people, including skilled and unskilled workers, the Indian textile and clothing industry occupies a significant position in the Indian economy in terms of industrial production, employment, and exports. This work traces the growth and expansion of this industry in the post-reform period and studies its contributions to the economic development of the nation. It discusses global trade agreements, India's share in international exports, and its major trading partners across the globe including the USA, UK, UAE, Germany, China. It also provides recommendations to Indian policy makers for a possible improvement in the textile exports across the globe. The Textile Industry and Exports in Post-Liberalization India will be of interest to students and researchers of politics and international relations, economics, development studies, labour economics, sociology and social policy, and South Asian studies.

[Copyright: d13c1615e210c2f1aa1b2806819318fa](#)