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ASSESSING THE QUALITY OF INSTITUTIONS' RANKINGS OBTAINED THROUGH MULTILEVEL LINEAR REGRESSION MODELS

Bruno **ARPINO**, Roberta **VARRIALE**
Università *Bocconi*, **Italy**,
Tilburg University, **Netherlands** and Università *di Firenze*, **Italy**
bruno.arpino@unibocconi.it, roberta_varriale@ds.unifi.it

Abstract:
The aim of this paper is to assess the quality of the ranking of institutions obtained with multilevel techniques in presence of different model misspecifications and data structures. Through a Monte Carlo simulation study, we find that it is quite hard to obtain a reliable ranking of the whole effectiveness distribution, while, under various experimental conditions, it is possible to identify institutions with extreme performances. Ranking quality increases with increasing Intra Class Correlation coefficient and/or overall sample size. Furthermore, multilevel models where the between *and* within *cluster components of first-level covariates are distinguished, perform significantly better than both multilevel models where the two effects are set to be equal and the fixed effect models.*

Keywords: effectiveness, multilevel models, ranking of institutions, second-level residuals distribution.

JEL Classification: C1

1. Introduction

In the last decades, there has been an increasing use of performance indicators in the form of rankings or "league tables" in many areas of public sector, such as educational, health and socio-economic fields, with the aim of comparing the effectiveness of public institutions. Traditionally, performance indicators based on "raw" measures have been used to depict comparative performance in sport and commerce and their extent to rank services provided by public institutions has attracted resistance and criticism (Adab *et al.* 2002). Nowadays, it is widely recognized that raw rankings can be misleading (Goldstein and Spiegelhalter 1996). First of all, simple league tables ignore the quantification of uncertainty associated with the rankings. Secondly, it should be recognized that the institutions' performances depend not only on the characteristics of the institutions itself but also on those of their components. As an example, in the educational context, schools' performance is obviously affected by students' socio-economic background: schools with more problematic students tend to perform worse than schools serving advantaged students. Therefore, in order to make valuable comparisons among institutions, it is important to use some "net" measures that adjust for the so-called "compositional cluster effect".

The general approach to obtain such adjustment is through regression analysis having an indicator of effectiveness as dependent variable, while the characteristics of the institutions and those of their components are included as covariates (see e.g., Tekwe *et al.* 2004). Within this general approach, multilevel models became a widely affirmed approach because they explicitly recognize the hierarchical structure of the data (individuals clustered within institutions) and overcome the inadequate assumption of independence among units belonging to the same institution, typical of standard models (Snijders and Bosker 1999). Examples of applications of multilevel regression models can be found in many disciplines, such as medicine (Hofer *et al.* 1996, Normand *et al.* 1997) and poverty analysis (Aassve and Arpino 2007).

An important research field where multilevel modelling techniques found particularly fruitful application is the educational research, where the focus is usually on the assessment of schools' or universities' performances. In this context, the necessity to evaluate the effectiveness of the institutions was originally justified on two distinct grounds: accountability and school choice (Leckie and Goldstein 2009). The former aims at increasing the quality of the educational system and the latter at providing useful information for the choice of the future school for children. With reference to the general problem of ranking schools, the seminal work by Aitkin and Longford (1986), successively discussed by Goldstein *et al.* (1993), describes the advantage of using multilevel regression models compared to the one-level models. Subsequently, many other applied works in the same context of analysis used similar methodologies (see e.g., Raudenbush and Willis 1995, Rampichini *et al.* 2004, Chiandotto and Varriale 2005, Jürges and Sneider 2007, Wößmann 2008).

As described by Goldstein and Spigelhalter (1996), in a two-level model, e.g. with students nested within schools, the second level residuals can be interpreted as a measure of the school effectiveness with respect to the given outcome net of the effect of the covariates and they can be used to evaluate and rank the schools. The choice of the specific outcome as well as schools' and students' characteristics that have to be adjusted for in the model depends on the final aim of the ranking, as highlighted by the recent literature on the value-added models in educational research (see, for example, Ladd and Walsh 2002; Downey *et al.* 2008; Leckie and Goldstein 2009). However, the debate on value-added models is beyond the purpose of the paper and we refer the interested readers to the cited literature.

The quality of the ranking obtained through multilevel models depends on the validity of the assumptions underlying the multilevel regression model, that are similar to those used in ordinary multiple regression analysis, such as homoscedasticity and normal distribution of the residuals. While some Monte Carlo simulation studies have been carried out in order to evaluate the robustness of multilevel models with respect to the parameter estimates and standard errors in case of violations of these assumptions (see, as an example, Maas and Hox 2004), we focus on the effect of different model misspecifications on the ranking quality. Furthermore, we assess the role of the data structure (cluster size and number of clusters) and of the intra-class correlation coefficient (ICC). Finally, we evaluate and discuss the consequences of assuming that the between and within effects of the level-1 covariates are equal, as implicitly done in many applied works. In our work, we focus in particular on the ability of multilevel models to identify extreme performing institutions, which usually are the most interesting for researchers and policy makers.

Recent works focused on the empirical comparison among different modeling approaches for value-added assessment. For example, Tekwe et al (2004) and Jürges and Schneider (2007) compared the rankings obtained with different model specifications. Ladd and Walsh (2002) discussed different fixed effects models, focusing in particular on the impact of measurement error on the ranking of schools. They found that the ranking is not always robust to the choice of the model and covariates to adjust for. In our simulation, we use a different perspective. In particular, we compare the estimated ranking with the generated (true) one in presence of different model misspecifications and we evaluate if these model misspecifications affect the ranking quality. Moreover, to the best of our knowledge, the implication of having different between and within covariate effects did not receive the attention it deserves.

Another interesting work assessing the quality (in terms of uncertainty) of rankings obtained through multilevel models has been presented by Loockwood *et al*. (2002). In their work, the authors focused on the Bayesian perspective, while we use a frequentist approach. The paper is structured as follows: in Section 2 we provide a brief overview of the multilevel linear model and the mostly used methods to obtain the estimates of higher level residuals; in Section 3 we describe the simulation study and in Section 4 we present the results; Section 5 concludes the work with a discussion and concluding remarks.

DOES THE ECONOMIC CRISIS AFFECT OLTENIA'S ENVIRONMENT?

Cristina **BARBU**
Spiru Haret University, Craiova, **Romania**
cristina_barbu2000@yahoo.co.uk

Abstract

The global financial crisis, brewing for a while, really started to show its effects in the middle of 2007 and into 2008. On the positive side, some scientists think that the crisis will move people to use less energy and help limit carbon emissions. The global slowdown means people will have less money to buy. This translates into fewer products and goods being manufactured which means fewer natural resources used. On the negative side, other scientists argue that with the financial crisis, there will be less economic activity around the globe within the next few years. This could mean people putting the economy ahead of the environment, although until very recently, the environment got center stage in world attention. This paper tries to find out if the economic crisis is good or bad for Oltenia's environment.

Keywords: economic crisis, environment, social life.
JEL Classification: N5, O13

1. Introduction

The world is caught between two ongoing crises. The financial crisis has undermined confidence in the global economy and has dragged the world into its worst recession for generations. The other – the sustainability crisis exemplified most acutely by climate change – is more fundamental and has been gathering momentum since the beginning of the industrial revolution.

History has provided us with numerous examples of economic stagnation and breakdown, as well as environmental degradation caused by human activity, even before capitalism existed. But capitalism's central characteristic - the incessant drive to invest and accumulate wealth - gives birth to never - ending economic and environmental crises.

Although the tendency toward economic crises is an intrinsic characteristic of capitalism, there is a second fundamental form of contemporary crisis that is also derived from the relentless pursuit of profits - namely, the rapid growth of ecological degradation. The environment is best viewed as a whole, with interactions and exchanges going on among the living organisms and between organisms and the physical aspects of water, soil, and air. (There is also exchange and interaction between substances in the water, soil, and atmosphere.) Millions of years of evolution have made most natural systems efficient at cycling nutrients and water and allowing energy, generated by green plants using sunlight, to flow as in a gentle stream from one organism to another (that uses the previous one for food), to another, and so on. Most natural systems produce high quality air and water conducive to the continuation of life. Taken together, the vast multitude of organisms, large and small fill all available ecological niches (which they partly create) and few resources are wasted (Magdoff 2002).

The last quarter-century has been marked by capital – in response to the problems of slow growth and lower profits than desired – waging class war, with largely successful attempts to reverse many working- and middle-class gains while inhibiting new increases in wages and benefits for workers. When major financial crises appear – the savings and loan bankruptcies, the Asian crisis of 1997–1998, the near-perpetual third world debt crisis, etc. – the representatives of capital do their best to ensure that capital suffers least, while the pain is spread to the masses.

The struggle over environmental problems – the land, air, and water degraded with poisons and other harmful chemicals, the destruction of large areas of forests, the depletion of nonrenewable resources, and the loss of many species – goes through an ebb and flow similar to the class struggle. When enough people, sometimes even including representatives of capital, are concerned and mobilized over threats to their own health or the long-term well-being of the planet, real progress can occur in cleaning up the environmental mess that is one of the twin crises of capitalist production. Of course, every effort is made by capital to socialize the costs of such cleanups, by using general tax revenues whenever possible (Magdoff 2002).

The current economic crisis is closely linked with housing, and this too has a silver lining. Many dwellings built in the heyday of sub prime lending were oversized homes in distant suburbs far removed from public transit, or second homes in Sunbelt vacation sites far from owners' primary residences. These houses consumed a lot of energy and needed long commutes. Now, many of these exurban/vacation homes are up for sale and it is doubtful that many of them will be occupied for a long time to come. People are staying where they are, moving closer to public transit, and flying less to second homes. This will also produce a substantial decrease in energy use and CO_2 emissions. It's unclear at this point whether the crisis will do more good or more harm for the environment. In the short term, it will certainly slow the increase in carbon dioxide emissions. It will also cause a delay in developing environmentally hazardous projects like Canadian tar sands. But if the crisis also sets back the development of energy alternatives for any significant length of time, it will cancel out any of these positive developments. Many people are waiting and watching what happens in the global financial markets. Likewise, the verdict is still out on the ultimate impact of the crisis on the environment.

How long the crisis will last is anyone's guess at the moment. What is certain is that legislation on climate change issues is taking a backseat to reviving the world economy (Amado de Jesus 2006).

There are two sides to this question. On the positive side (Amado de Jesus 2006), some scientists think that the crisis will move people to use less energy and help limit carbon emissions. The global slowdown means people will have less money to buy. This translates into fewer products and goods being manufactured which means fewer natural resources used.

People in the United States are buying less fuel and building fewer houses. This means less building materials such as steel, glass and bricks- materials that are produced using electricity. Since less fossil fuel is being used to run power plants, as well as produce and transport goods, there will also be less pollution. The rate of deforestation will also be reduced as fewer trees will be cut down due to less consumption of wood and paper.

Some optimists project that the current situation may prompt countries to boost investment in efficiency and clean energy to tackle climate change. This move could result in more international cooperation. Investing in energy efficiency during a recession and spending on renewable and other low-carbon industries also help stimulate the economy.

During economic crisis, more low-scale and down-to-earth projects are expected to be given more attention. Natural lighting, natural ventilation and passive cooling technology will be very cost effective.

Innovative and lightweight structural systems will reduce cost of building materials. Green and renewable energy sources will continue to be in vogue. Collection and recycling of water will prove to be very helpful. Reuse and recycling of materials cannot be overemphasized. Flexible space planning will be more and more adopted.

On the negative side (Amado de Jesus 2006, the pessimists argue that with the financial crisis, there will be less economic activity around the globe within the next few years. This could mean people putting the economy ahead of the environment, although until very recently, the environment got center stage in world attention.

With less money to spend on research for dealing with environmental concerns, important programs may be suspended indefinitely as donations are reduced or driven away from environmentally oriented institutions.

Ambitious plans that could be stopped or reduced in scope include investment in wind, solar and renewable energy, carbon trading, and biodiesel refining and burying carbon dioxide from coal-fired power plants.

Before the crisis, people using public transportation increased, they left their cars at home and car pooling gained popularity, all for the sake of fuel conservation. With the reduced price of oil today, due to the financial crisis, people may just decide to go back to using their cars. It could even dampen their initial enthusiasm to buy hybrid cars.

According to a European Union - Commissioned Study, the global economy is losing more money from the disappearance of forests than through the current banking crisis. It estimates the annual cost of forest loss at between $2 and $5 trillion. The report explains that as forests decline, nature stops providing services which it used to provide essentially for free. Consequently, we have to resort to building water reservoirs and facilities to sequester carbon dioxide, or farming foods that were once naturally available.

FINANCIAL CRISES AND CYCLIC DEVELOPMENT ACCORDING TO THE APPROACH OF PAOLO SYLOS LABINI

Marcella **CORSI,** Giulio **GUARINI**
Sapienza" Università di Roma, Dipartimento di Studi Sociali, Economici, **Roma**
marcella.corsi@uniroma1.it giulio.guarini@uniroma1.it

Abstract

In his "Le prospettive dell'economia mondiale" ("Prospects for the world economy") of 2003 Paolo Sylos Labini analyses the real and financial factors of the American economy and expresses pessimistic forebodings on the future economic trends in the USA and other parts of the world which, in the light of the events occurring as from 2007, can now be seen to have been justified. The aim of this paper is to provide his ideas with a place in the present debate on the American financial crisis and, to this end, the paper is divided into three parts. To begin with we will delineate the approach taken by Paolo Sylos Labini in examining the links between the financial system and economic system, highlighting the classical, Schumpeterian and Keynesian elements contained in it. We will then turn the focus on the four key elements of financial crisis according to Sylos Labini: income distribution, innovation, market forms and debt sustainability. Finally, we will recall some considerations by Sylos Labini on the three themes central to the present debate on the American crisis, namely the rate of interest in monetary policy, the role of the managers, and expectations.

Keywords: Paolo Sylos Labini, financial crises, cyclic development.

JEL Classification: G01, B50, O10.

1. Introduction

All Paolo Sylos Labini's considerations on the origins of financial crises are formulated within the theoretical/empirical framework of analysis of economic development. He defines his as an "integrated approach" (micro-macro),[2] since it emerges from an original combination of classical, Keynesian and Schumpeterian elements.

THE INFLUENCE OF TRANSFORMATIONAL LEADER UPON ORGANIZATIONAL CULTURE

Elena **BICĂ,** Camelia **FIRICĂ**
Spiru Haret University, Craiova, **Romania**
ebica62@yahoo.com, cameliafirica@yahoo.com

Abstract

The need to promote reform is so widespread in today's business society that participatory, democratic, relations-oriented and considerate leadership styles are needed in order to create progressive organizations. The type of leadership that combines all these attributes is the transformational one. Transformational leaders stimulate their associates to view the world from new perspectives, angles, and informational source. Tthey are motivated by a sense of mission to recreate the organization to survive in a challenging external environment.

The paper deals with the importance transformational leaders have in the process of organizational change.

Key words: *transfornational leadership, transformational leaders, organization, organizational culture, change.*

JEL Classification: M12, L2

1. Introduction

In the late 1970's, as a response to the need for a new type of leadership, James MacGregor Burns, a political scientist and social historian, defined transformational leadership and drew the distinction between this style and the transactional leadership one. According to him transformational leadership increases not only the leaders' but also the followers' level of motivation and moral and determines them to become more active. Transformational leadership" occurs when one or more persons *engage* with others in such a way that leaders and followers raise one another to higher levels of motivation and morality". (Burns 1978, 20)

Several researchers, Bass (1985), Bennis and Nanus (1985), Kouzes and Posner (1988), Tichy and Devanna (1990), Bass and Avolio (1990), continued to study and define transformational leadership starting from Burns' idea. Bass and Avolio (1990) also took into consideration the contributions of Bennis and Nanus (1985), Tichy and Devanna (1990) when postulated the formal concept of transformational leadership. Bass asserted (1990b:21) that transformational leadership"

[2] This original operation of synthesis appears by no means obvious, nor immune from possible questioning; in fact, Sylos Labini himself writes: "Thus we have much to gain if we combine certain elements of Keynesian analysis of effective demand with some parts of the Schumpeterian analysis of technological progress and cyclic development of the economy. If we reread the fiercely critical review of the *General Theory* that Schumpeter wrote shortly after its publication (1936) and if we reconsider the reason why Schumpeter rejected the aggregate analysis in the *Business cycles* (pp. 43-44 and 144), a thesis such as we offer here may seem surprising. Let us remember, however, that after the Second World War Schumpeter toned down his criticism considerably" (Sylos Labini 1984a, 107). In a note he adds "In the course of economic theory which I followed in 1949 when I was at Harvard as researcher, Schumpeter dedicated two lectures to the models of Keynesian derivation based on interaction between the multiplier and accelerator; he illustrated them taking a cool but not hostile attitude; indeed, he appeared to consider them analytically useful, albeit only at an auxiliary level, to account for short cycles (Kitchin), as proposed by Metzler in 1941." (Sylos Labini 1984a, 107) (See Keynes 1936, Schumpeter 1939 and 1971, and Metzler 1941)

occurs when leaders broaden and elevate the interests of their employees, when they generate awareness and acceptance of the purposes and mission of the group, and when they stir their employees to look beyond their own self-interest for the good of the group". According to him (1990a, 53) this transcending beyond self-interest is for the interest of the "group, organization, or society".

Transformational leadership differs substantially from the transactional one being more concerned about progress and development. Burns (1978) regarded transformational leadership as opposite to transactional leadership, while, according to Bass (1985), a leader makes use of both transformational and transactional leadership style, even if the transactional and transformational dimensions are separate. Bass (1990a, 53) considered we can speak about transactional leadership in case leaders" exchange promises of rewards and benefits to subordinates for the subordinates' fulfillment of agreements with the leader". According to Daft (2002) a transactional leader acknowledges the followers' needs and defines the exchange process for meeting those needs. Tracey & Hinkin's (1998, 220-236) point of view is that transactional leadership is based on bureaucratic authority and organizational standards, focused on task completion, and relies on reward and punishment, while transformational leadership is a process that motivates people by making appeal to higher ideals and moral values, defining and articulating a vision of the future, and founding a base of credibility. If the transactional leader makes use of the authority and power that already exists in the organization (Davidhizer, Shearer 1997, 16-21) and transactional leadership is a networking of power (Schuster 1994, 39-43), the transformational one motivates people to work and create change and adds to the quality of people's and organization's life. Stephen King (1994, 7-9) differentiates between transformational and transactional leadership styles by referring to the former as a leader of innovation and the latter as a manager of planning and policy. In Mink's (1992, 21-23) opinion new pathways inside an organization are created by transformational style, while the transactional one depends on the existing structures. In the final analysis transformational leadership is a process of building commitment to organizational objectives and then empowering followers to accomplish those objectives, the consequence of which is the enhanced performance of the followers.

PREDCITING REAL ECONOMIC GROWTH IN FRANCE, GERMANY, NEW ZEALAND, AND THE UNITED KINGDOM

Ivan O. **KITOV**
Institute for the Geospheres' Dynamics
Russian Academy of Sciences, Moscow, **Russia**
ikitov@mail.ru

Abstract

The growth rate of real GDP per capita is modeled and predicted at various time horizons for France, Germany, New Zealand, and the United Kingdom. The rate of growth is represented by a sum of two components – a gradually decreasing trend and fluctuations related to the change in country-specific age population. The trend is an inverse function of real GDP per capita with constant numerator. Previously, similar models were developed and validated for the USA and Japan.

Keywords: real GDP per capita, modeling, prediction, population.

JEL Classification: E1, E3, O4, O5

1. Introduction

The end of the first decade of the 21st century highlighted acute and deep problems in the conventional economics. It failed again in predicting sharp falls in real growth rate often called recessions. The irony of it is that the mainstream economists only gain strength instead of shame which usually accompanies poor description and prediction. The new motto is - the crisis allows understanding economic processes better. Seemingly, the economics profession wins again and again. This is not a fair win, however. It is an overall loss for everybody – the absence of clear understanding easily transforms into a negative emotional excitation, as one can see from the stock market behavior. The real problem with the description of economic processes is that no other science, including physics, can overcome economics despite numerous claims (Bouchaud 2008). Without a valid

quantitative theory of economic processes this hopeless situation will last forever (Kitov 2009). To be valid any scientific theory must fit observations and predict new effects or future evolution. Unfortunately, the current economic paradigm denies, without any formal or empirical proof, the possibility to develop a deterministic economic theory. Such a theory does exist, however.

Three years ago we introduced a new concept describing the evolution of real Gross Domestic Product (GDP) as driven by the change in specific age population and the attained level of real GDP per capita (Kitov 2006a, 2008, 2006b, 2009). According to this model, the growth in real GDP per capita (for the sake of brevity, below we often omit "per capita") in developed countries is characterized by an annual increment, as expressed in dollars per year, which is constant over time, and all fluctuations around the long-term trend defined by the increment can be explained by the change in the number of people of country-specific age population. Therefore, real GDP would be growing as a linear function of time, when no change in the population of relevant age is observed. As a rule, in Western Europe the cumulative growth in the specific age population during the last 60 years is negligible and thus the cumulative input of the population component is close to zero. In the USA, the overall increase in the specific age population is responsible for about 20% of the total growth in real GDP since 1960 (Kitov (2008). The presence of constant increment implies that the rate of growth of real GDP is an inverse function of the attained level of real GDP itself.

Our model of real economic growth was first derived from data for the United States (Kitov 2006a) and Japan (Kitov 2006c). Since all GDP time series are intrinsically non-stationary ones we have conducted a comprehensive statistical analysis including tests for cointegration (Kitov et al 2009). Both the Engle-Granger and Johansen approaches confirmed the presence of a cointegrating relation between real GDP and the specific age population, which is nine years in the USA and eighteen years in Japan. In this paper, we demonstrate the possibility to predict the evolution of real GDP in France, Germany, New Zealand, and the United Kingdom. Due to shorter time series for these countries, no econometric (statistical) techniques are used to validate the concept except obvious visual fit between dynamic and cumulative time series. The remainder of the paper consists of two Section and conclusion. Section one introduces the model. Section two summarizes principal results for the four studied countries.

THE RELATIONSHIP BETWEEN OUTPUT GROWTH AND INFLATION: EVIDENCE FROM TURKEY

Tolga **OMAY,** Nilay **ALUFTEKIN,** Ece C. **KARADAGLI**
Cankaya University, Ankara, **Turkey**
omayt@cankaya.edu.tr, aluftekin@cankaya.edu.tr, ece@cankaya.edu.tr

Abstract

In this study, a bi-variate Generalized Autoregressive Conditional Heteroscedasticty model is used in order to investigate the Granger causality relationships between output growth, inflation rate and their uncertainties. Our test results show that the existence of Granger-causality is observed from nominal uncertainty to inflation, from nominal uncertainty to real uncertainty, from output growth to real uncertainty, from output growth to nominal uncertainty and from inflation to nominal uncertainty. These findings prove that theoretical predictions of Cuikerman and Meltzer (1986), Okun (1971) and Friedman (1977) are valid for the period 1986, 6 - 2007, 1 for Turkey. On the other hand, 'Short-run Phillips Curve' and 'Taylor Effect' have proven empirically to be invalid for Turkey for this sample period. Moreover, we deduce that Turkish inflation is affected by the output growth through the nominal uncertainty channel.

Keywords: inflation, output growth, uncertainty, Granger-causality, bi-variate GARCH.

JEL Classification: C22, E0

1. Introduction

High inflation rate is the major problem of Turkish Economy like all the other developing countries. In recent years, this prolonged high inflation rates are beginning to decrease where this phenomena leads to an improvement in the conditions of Turkish economy. From the Friedman (1977) paper, we know that increasing average inflation induces high levels of inflation uncertainty. Moreover, high inflation uncertainty is one of the important obstacles in making investment decisions

for the private sector. Thus, decreasing investment results in low levels of output which shows declining levels of growth. Shortly, these inefficiencies, created by inflation uncertainties, can be summarized by deterioration of relative prices, additive risk primaries on long-run investment project by risk-averse investors and increasing interest rates. In order to cope with these inefficiencies, central banks implement contractionary monetary policies. For the Turkish case, covering the period 1986:6-2007:1 the Central Bank of the Republic of Turkey attempts to execute same kind of policies. In this period, Turkish monetary authority implemented several stabilization programs and monetary policies; from these attempts only the last stabilization program reached its goals which established price stability in Turkey.

In this study, we use bi-variate Generalized Autoregressive Conditional Heteroscedasticty (GARCH) model and Granger causality test for analyzing the aforementioned issues. By using bi-variate GARCH model, we obtain inflation and output uncertainty which we will use them as separate variables in Granger causality test. Finally by using these 4 variables, we obtained 12 bidirectional causality relationships.

In section 2, we discuss the theoretical relationships and empirical researches about the links between these variables. In section 3, estimation and identification of bi-variate GARCH model and Granger causality test are given. Finally, Section 4 concludes.

INDO - BRAZILIAN TRADE: TRENDS, COMPOSITION AND FUTURE

Rajesh K. **PILLANIA,**
Asia Programs Fellow, Ash Institute, Harvard, **USA**
rajesh@pillania.org

Abstract:

India and Brazil are among the fastest growing economies of the world and are widely projected as major economies of future. Indo-Brazil links go back five centuries. In recent years, relations between Brazil and India have grown considerably and co-operation between the two countries has been extended to diverse areas such as science and technology, pharmaceuticals and space. Bilateral trade has jumped to USD 3.12 billion in 2007, from a mere USD 488 million in 2000. The two sides have set a target of USD 10 billion trade by 2010. Though it will be a small fraction of trade of each country and with the existing trends it may be a challenging target to achieve. Due to large size of economies and high growth rates as well as growing political will from both sides, the bilateral trade will grow further and would have significant impact on global trade and economy.

Keywords: India, Brazil, trade, IBSA, emerging economies.

JEL Classification: F14, F41, F43.

1. Introduction

India and Brazil are among the fastest growing economies of the world and are widely projected as major economies of future (Goldman Sachs, 2003, 2007). India's links with Brazil go back five centuries. Portugal's Pedro Alvares Cabral is officially recognised as the first European to "discover" Brazil in 1500. Cabral was sent to India by the King of Portugal soon after the return of Vasco de Gama from his pioneering journey. Cabral is reported to have been blown-off course on his way to India. Brazil became an important Portuguese colony and stop-over in the long journey to Goa. This Portuguese connection led to the exchange of several agricultural crops between India and Brazil in the colonial days. Indian cattle were also imported to Brazil. Most of the cattle in Brazil are of Indian origin. Diplomatic relations between India and Brazil were established in 1948. The Indian Embassy opened in Rio de Janeiro on May 3, 1948. It shifted to Brasilia on August 1, 1971 (Brazil's capital had moved to Brasilia in 1960) (Indian Embassy, Brazil, 2008). In recent years, relations between Brazil and India have grown considerably and co-operation between the two countries has been extended to such diverse areas as science & technology, pharmaceuticals and space. The two-way trade in 2005 nearly doubled to US$ 2.34 billion from US$ 1,207 billion in 2004 (Indian Embassy, Brazil, 2008). India's trade with Brazil has jumped to 3.12 billion dollars in 2007, from a mere 488 million dollar in 2000. The two sides have set a target of 10 billion dollars trade by 2010(PTI, 2008).Both countries have focused on strengthen the cooperation and trade in recent past. This has

been supported by highest level visits namely Man Mohan Singh visit of Brazil in 2006 and Brazilian President visits to India in 2007, besides trade ministers visits.

Apart from being major bilateral trade partners, India and Brazil are the two most important members of the Group of 20, a pressure alliance of the developing countries in the World Trade Organisation, working for a balanced multilateral Doha trade deal (PTI, 2008). "India and Brazil must continue to be close partners in the UN, WTO and international for on issues such as social development, health care, sustainable economic development and poverty alleviation," Nath said. He said the two countries are together in "reformulating the big questions that affect foreign policy and trade at the international level" (PTI, 2008).This paper studies Indo-Brazil trade, with a focus on this decade i.e. 2000s. It consists of two more sections besides the introduction part. Next section studies various aspects of bilateral trade and the last section is conclusion part.

COMPETITION AND ECONOMIC GROWTH: A CRITICAL SURVEY OF THE THEORETICAL LITERATURE

Alessandro D. **SCOPELLITI**
University of Warwick, Department of Economics, **United Kingdom**
A.D.Scopelliti@warwick.ac.uk

Abstract

The paper examines the relationship between competition and economic growth, in the theoretical framework described by endogenous growth models, but with a specific interest in the policy implications. In this perspective, the key issue in the debate can be presented as follows: do competition policies always create the best conditions for promoting innovation and growth? Or do they also produce some disincentives for the investment decisions in R&D, such to limit the development of industries with higher innovation? In order to answer these questions, the paper presents a survey of the theoretical literature on competition and growth and it discusses the main models of endogenous growth, both the ones based on horizontal innovation, and the ones based on vertical innovation. In particular, specific attention is paid to the most recent models of Schumpeterian growth, which show the existence of a non-linear relationship between competition and growth, by considering either the initial degree of competition or the distance from the technological frontier. Finally, the review of the previous models of endogenous growth allows drawing some conclusions about further and possible developments of research on the relation between product market competition and economic growth.

Keywords: expanding product varieties, increasing product quality, incentives for innovation, creative destruction, escape-competition effect, distance to frontier.

JEL Classification: O31, O33, O34, O41

1. Introduction

The present paper presents some of the most important developments in the theoretical literature on the relationship between competition and economic growth. The questions that lead such discussion are the following ones. How can competition affect the relevant factors for long-run growth? Does competition always have a positive impact on productivity growth? Or can it also produce a negative effect?

Many different aspects must be considered in order to discuss this issue. According to a common view, also supported by empirical evidence, competition can generate strong incentives for innovation, because firms can succeed in a really competitive environment only if they are able to introduce significant improvements in the quality of the products and in the efficiency of the production processes. But, on the contrary, in the analysis of Schumpeterian models of endogenous growth, competition policies which reduce the monopoly rents gained by successful innovators can also lower the incentives for the investments of firms in R&D, and then compromise the future perspectives for technological progress.

Some explanations have been proposed to reconcile these different views and to understand which of these aspects prevails, and under which conditions. In order to tackle the issue, we will firstly present the basic models of the literature on endogenous growth theory and after we will discuss some of the solutions suggested in the recent theoretical literature on Schumpeterian growth models. Finally we will draw some conclusions about the current state of the literature in order to identify new directions for future research.

BUSINESS INTELLIGENCE AS SUPPORT OF E-COMMERCE SYSTEMS IN CONNECTION WITH DECISION MAKING AND CROSS-BORDER ONLINE SHOPPING

Petr **SUCHÁNEK**
The Silesian University in Opava
School of Business Administration in Karviná, **Czech Republic**
suchanek@opf.slu.cz

Abstract:

Recent business development in connection with the present state of world economy evokes the managers to make alterations in their decision making. Companies´ managements can make right decisions only with the aid of current and precision information. In addition, managers have to get all information in time. Decision-making processes should be realized quickly and under the strong thumb of a competitive environment. Some years ago, for the support of top level of management, information systems development was oriented to decision support systems (DSS). On the present, decision support systems development is transformed to development of business intelligence (BI) systems. Business intelligence technologies provide historical, current, and predictive views of business operations. In business intelligence, described views are represented by reporting, ad-hoc reporting, OLAP analysis etc. With the aid of business intelligence systems development, managers have more possibilities to choose types and structures of information. This article deals with business intelligence systems development in connection with the e-commerce systems, cross-border online shopping and business companies´ management needs.

Keywords: e-commerce system, online shopping, customer requirements, management needs, business intelligence, reporting.

JEL Classification: C87, C88, F43, F47, L21, M15, M16, M21, O31, O33, Q55.

1. Introduction

Electronic Commerce or e-commerce is the trade of products and services by means of the Internet or other computer networks. E-commerce is expected to influence a wide range of supply chain systems and thus lead to unidentified environmental impacts. E-commerce provides customers with a platform to search product information through global markets with a wider range of choices, which makes comparison and evaluation easier and more efficient. Although number of Europeans and world shopping on-line grow up, there are a high percentage of unsuccessfully business transactions in foreign internet shops. Business environment and its development in connection with a present state of world economy urge managers to look for new methods and procedures lowering financial charges especially in the sphere of ancillary processes. Many companies have to redefine some internal and external processes and IS/IT architecture and in many cases companies have to use support of internal functions with help of external resources (outsourcing). Managers can make right decision only if they get precision information in a required form in right time. To this goal, recent development of information systems is oriented to business intelligence. Business intelligence is rapidly becoming a major source to achieve competitive advantage and often aims to support better business decision-making, among others, in the sphere of e-commerce (online shopping).

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