

# ECO2013

International Conference on Energy, Regional  
Integration, and Socio-Economic Development

Baku, Azerbaijan

September 5-6, 2013



## **Welcome to the First Baku Forum-Conference!**

Dear Participants,

It is our pleasure to welcome you to Baku, capital city of the Republic of Azerbaijan, for the ECO2013-International Conference on Energy, Regional Integration and Socio-Economic Development held in the framework of First Baku Forum of Economic Think-Tanks of Economic Cooperation Organization member states. On behalf of the Economic Cooperation Organization, EcoMod Network, and the Institute for Scientific-Research on Economic Reforms of the Ministry of Economic Development of the Republic of Azerbaijan, we would like to thank you for joining us at this challenging conference, and hope that sharing your research and views with all the participants will work to making the conference a success.

A decision to host the First Forum of Economic Think-Tanks of Economic Cooperation Organization member states was taken in 2012 at the 20th Meeting of the Council of Ministers, and at the 2nd Meeting of the ECO Permanent Steering Committee of Economic Research (PSCER). To raise the academic profile of the First Baku Forum, we decided together with EcoMod Network that provides services to the world's leading institutions, governments, central banks, and businesses in more than 100 countries, to hold ECO2013 International Conference in the framework of the Baku Forum. Taking this opportunity, I would like to thank leadership of the Ministry of Economic Development and ECO Secretariat for support to holding the Forum-Conference, as well as to EcoMod Network and the management of the «Azeristilik» JSC for organizational support, and hope that with our joint efforts future conferences will be even more comprehensive transforming into a large international forum for researchers and policymakers alike.

With common borders, ECO member states possess prospective human resources, rich in oil-gas and hydroenergy resources, large and arable agricultural lands, picturesque nature for tourism, wide transport-transit network, etc. However, we believe that there is some concern about use of these resources, particularly, responding to such crucial worldwide challenges as global energy and environment, regional integration, productivity and development, monetary policy, etc. I do hope the conference will enable not only identification of potential and capacity of ECO member states in this area, but also a proposition of new vision, approach and idea allowing to use optimally this potential in the long-run, as well as define new areas for research.

Suggestions and recommendations acquired as a result of the ECO2013 Conference will be of particular significance in resolution of issues of global, regional and national importance, and serve as a crucial means in the development and integration of ECO member states as well as in increased role of the organization overall.

ECO2013 Conference will bring together more than 110 selected participants from a number of countries along with ECO member states.

We hope that the contribution of each and every participant will add to our precious stock of knowledge about our economic, natural and social world and about the best ways to maintain it sustainable, working each parcel that contributes the whole.



In addition, I extend my special thanks to our co-organizers of the Baku Forum-Conference, and we wish you a fruitful and productive attendance at this international meeting hosted by the Institute for Scientific Research on Economic Reforms of the Ministry of Economic Development of the Republic of Azerbaijan. We hope that you will join us for all the planned events, and we look forward to welcoming you in the beautiful city of Baku.

Please enjoy the First Baku Forum-Conference in Baku!



**Prof., Dr. Vilayat VALIYEV**  
The ECO2013 Co-Chairman



Session	Session A	Session B	Session C
	<b>Wednesday, September 4</b>		
15:00 - 18:00	Pre-Forum Sessions		
19:30 - 23:00	Dinner at Şamdan Restaurant		
	<b>Thursday, September 5</b>		
09:00 - 10:00	Registration		
10:00 - 11:00	Opening Ceremony		
11:00 - 11:30	Refreshment Break		
11:30 - 13:00	Agriculture	Energy	Labor Market Issues
13:00 - 14:00	Lunch		
14:00 - 15:30	ECO Regional Integration	Energy	Labor Market Issues
15:30 - 16:00	Refreshment Break		
16:00 - 18:00	Trade Issues	Modeling	Finance
20:00 - 23:00	Gala Dinner at Mugam Club Restaurant		
	<b>Friday, September 6</b>		
09:00 - 11:00	Socio-Economic Development	Energy	Innovation
11:00 - 11:30	Refreshment Break		
11:30 - 13:00	Socio-Economic Development	Energy	Globalisation
13:00 - 14:00	Lunch		
14:00 - 15:30	Socio-Economic Development	Energy and Environment	Regional Integration
15:30 - 16:00	Refreshment Break		
16:00 - 17:30	Plenary Session		
17:30 - 18:00	Closing Ceremony		
19:30 - 22:30	Dinner at Palma Restaurant		





Wednesday, 4 September 2013

15:00-18:00 **Pre-Forum Sessions**

**Opening of the First Baku Forum-Conference  
(Voicing the Anthem of Azerbaijan)**

**Introductory Statement**

Vilayat VALIYEV

Institute for Scientific-Research on Economic Reforms

Ministry of Economic Development of the Republic of Azerbaijan

**Introductory Remarks by ECO**

Bayan ADILBEKOVA

Director for Projects, Economic Research and Statistics of ECO

**Sessions & Discussions**

Adoption of Agenda

- I. Economic Think-Tanks of ECO Member States: directions of scientific-research cooperation: (i) energy & environment; (ii) regional integration: transport, communication & others; (iii) agriculture development and (iv) international trade**  
Bayan ADILBEKOVA  
Director for Projects, Economic Research and Statistics of ECO
  
- II. Modeling and database system for supporting evidence-based economic policies and regional integration among the ECO Member States**  
Ali BAYAR  
President of the EcoMod Network
  
- III. Discussion of the Draft Stature/Charter of the Eco Economic Research Center**  
Bayan ADILBEKOVA, Vilayat VALIYEV
  
- IV. Establishment of the Permanent Coordination Council of Economic Think-Tanks of ECO Member States**  
Bayan ADILBEKOVA, Vilayat VALIYEV

## **V. Signing of Bilateral MOUs among the ECO Member States**

- (i) Institute for Scientific-Research on Economic Reforms (AZE) – National Institute for Strategic Studies (KGZ)
- (ii) Institute for Scientific-Research on Economic Reforms (AZE) – Pakistan Institute of Development Economics (PAK)
- (iii) Institute for Scientific-Research on Economic Reforms (AZE) – EcoMod Network – “Economic Research Institute” JSC (KAZ) – National Institute for Strategic Studies (KGZ)

## **VI. Closing & Group Photo**

19:30-23:00 **Dinner at Şamdan Restaurant (18th floor of the Qafqaz Baku City Hotel & Residence)**

**Thursday, 5 September 2013****09:00-10:00 Registration****10:00-11:00 Opening Ceremony**

**Inauguration Statement by the Ministry of Economic Development  
of the Republic of Azerbaijan**  
Shahin MUSTAFAYEV

**Inauguration Statement by H.E. Secretary General of the  
Economic Cooperation Organization (ECO)**  
Shamil ALESKEROV

**Welcome Statement by the President of the Azerbaijan National  
Academy of Sciences (ANAS)**  
Akif ALIZADE

**Welcome Statement by the President of the EcoMod Network**  
Ali BAYAR

**Welcome Statement by the Director of the Institute for Scientific-  
Research on Economic Reforms under the Ministry of Economic  
Development**  
Vilayat VALIYEV

**11:00-11:30 Tea & Coffee break****11:30-13:00 Parallel Sessions****Session A: Agriculture**

**Chair:** Sevket KALANLAR

**Balanced Use of Fertilizer Nutrients and its Determinants: A Case  
of Cotton Crop**  
Khuda BAKHSH

**The impact of Iranian Targeted Subsidy Plan on the Comparative  
Advantage of Dairy Farms**  
Ali YOUSEFI, Parisa KARBASI, Amir-Mozafar AMINI

**Applications for Food Safety in Istanbul Level of Recognition by  
Consumers**  
Sevket KALANLAR, Ahmet YÜCER, Muhammet DEMİRTAŞ

**Session B Energy**

**Chair:** Arslanbek OMURZAKOV

**Unlocking Caspian Gas Potential: Azerbaijan's Vital Role in European Energy Supply Diversification**

Nigar MURADKHANLI

**Energy Security of Azerbaijan: Realities and Possibilities**

Fexreddin ISMAYILOV, Qanimat SAFAROV

**Bargaining Power, Energy Security and Networks: an Applied Game Theory Approach**

Roberto ROSON, Franz HUBERT

**Azerbaijan: A Strategic Actor in the Regional Energy Chessboard**

Fabio INDEO

**Session C Labor Market issues**

**Chair:** Gorkhmaz IMANOV

**Development Inclinations of the Human Potential in the CIS Countries**

Farhad MIKAYILOV

**The Study Of Employers as a Way to Get Additional Information about Labour Market Needs**

Akima OROZALIEVA

**Fuzzy Model Estimation Quality of Human Capital**

Gorkhmaz IMANOV

**13:00-14:00 Lunch**

**14:00-15:30 Parallel sessions****Session A ECO Regional Integration**

**Chair:** Güven SAK

**Transportation and Logistics in the ECO**  
Emil GASIMOV

**Role of Transport Corridors in Economic Integration of ECO Countries**  
Ussal ŞAHBAZ

**Evaluation of Priorities for Development of Logistics Infrastructure in Cooperation between Azerbaijan And ECO Countries**  
Konul HUSEYNOVA, Azer GURBANOV

**Session B Energy**

**Chair:** Haruo IMAI

**Bio-Energy, the Future of Bio-Fuels and the Effects of Agriculture in Turkey**  
Sevket KALANLAR, A. Ahmet YÜCER, Muhammet DEMİRTAŞ

**Prospects of use of Renewable Energy Resources and Energy-Efficient Technologies for Heating Supply in Azerbaijan and Kyrgyzstan**  
Alaybek OBOZOV, Ruslan ISAEV, Vilayat VALIYEV, Yashar HASANOV, Ilham MIRZALIYEV, Fexri IMAMVERDIYEV

**Effect of Boric Acid Content on the Structural and Optical Properties of ZnO Films Prepared By Spray Pyrolysis Technique**  
Mustafa ÖZTAS, Zehra KAYA

**Standardized Baseline Setting Methodology for Energy Related Projects in the International Climate Change Policy**  
Haruo IMAI, Jiro AKITA, Hidenori NIIZAWA

**Session C Labor Market Issues**

**Chair:** Masuma MAMMADOVA

**Special Weight of Salary in People's Income and Tendencies of its Changing**

Aysel IMANOVA

**Exploring Public-Private Partnership in Preschool Education Provision as a Contributor to Socio-Economic Development**

Aynur NABIYEVA, Ulviyya MIKAYILOVA, Vitaly RADSKY

**Identifying Demand-Supply Ratio in the Labor Market of Azerbaijan: Informational Aspects**

Masuma MAMMADOVA

**15:30-16:00 Tea & Coffee break**

**16:00-18:00 Parallel sessions**

**Session A Trade issues**

**Chair:** Normizan BAKAR

**The Study of Intra Industry Trade among ECO Members**

Saeed RASEKHI

**Export Performance of Transition Economies**

Jalal GAYTARANOV, Lowell F. GUNTER

**Analyzing and Valuing of the Existing Situation of Export Multiplication in the Azerbaijan Republic**

Elchin SULEYMANOV, Ayaz ZEYNALOV, Ruslan HUSEYNOV

**Optimal Transport and Trade Policy under Bertrand Competition in the Presence of Restricted Geographical Condition**

Normizan BAKAR

## **Session B Modeling**

**Chair:** Suat Sisik

### **Assessment of Economic Development Level on Regions in the Countries that Are Member Countries of Economic Cooperation Organization**

Matanat RASULOVA, Elnur RUSTAMOV

### **Fuzzy Model of the Factors Affecting Selection of Non-Oil Export**

Aynura ISMAYILOVA

### **Principal Features of Building Social Accounts Matrix and Improving Statistical Database for ECO Countries**

Vilayat VALIYEV, Malik MEHDIYEV, Arzu SULEYMANOV, Elnur ALEKBEROV, Rauf MUSAYEV, Elvira NAGOIBAEVA, Natalya ZAKHAROVA

### **A Macroeconometric Model for Making Effective Policy Decisions in the Republic of Azerbaijan**

Fakhri HASANOV

## **Session C Finance**

**Chair:** Anoshirvan TAGHIPOUR

### **Determinants of Sector Holders' Bilateral Portfolio Investments**

Faruk BALLI, Hatice Ozer BALLI, Syed Abul BASHER, Jiayuan GUO

### **To What Extent Stock Returns Are Driven by Mean and Volatility Spillovers Effect (EU, US&OIL)?**

Abdulla ALIKHANOV

### **Optimum Budget Expenditures Having a Maximum Influence on the Personal Income Per Capita. The Case of Azerbaijan**

Jeyhun ABBASOV

### **Financial Reform and Liberalization in Iran and Comparison with two ECO Members: Pakistan and Turkey**

Anoshirvan TAGHIPOUR

**20:00-23:00 Gala Dinner at Mugam Club Restaurant ("Old City")**

**Friday, 6 September 2013**

**09:00-11:00 Parallel sessions**

**Session A Socio-Economic Development**

**Chair:** Cem BASLEVENT

**Performance Evaluation of Crops Insurance on the Farmers' Motivation in Hamadan Province, Iran**

Ali YOUSEFI, Samira SAJADI, Ami-Mozafar AMINI, Mohammad HASSAN-ZADEH

**Insurance Sector Development and Economic Growth in Azerbaijan**

Cihan BULUD, Afat HASANOVA

**A Social Exchange Approach to People's Participation in Sustainable Management of Water Resources Programs in Iran**

Reza BAGHERIAN, Majid SANAEI

**Socio-Demographic Determinants of the Support for Turkey's Justice and Development Party**

Cem BASLEVENT

**Session B Energy**

**Chair:** Nurali YUSIFBEYLI

**Relationship Between Energy Consumption, CO2 Emissions and Income in Iran**

Fatemeh FATHI, Farnaz POURZAND

**The Methodological Approach for Reduction of Commercial Losses of Electricity and Their Recording in the Economic Cooperation Organization Countries**

Hikmat HASANOV

**Evidence of Electricity Theft From Electric Utilities in Pakistan**

Faisal JAMIL, Eatzaz AHMAD

**Dynamics of the Major Indicators of Energy Security in the Context of the Sustainable Economic Development of the Azerbaijan Republic**

Nurali YUSIFBEYLI, Vagif NASIBOV



**Session C Innovation**

**Chair:** Ufuq BATUM

**Noise Technologies and Systems for Minimization of Economic Damage from Destructive Earthquakes in the Countries of Seismically Active Regions**

Telman ALIYEV, Ali ABBASOV, Tofiq BABAYEV, Gambar QULUYEV, Farhad PASHAYEV

**Economic Cooperation Organization Member Countries' Economic Development, the Importance of Assessing Technoparks**

Yahya ÖZDEMİR

**Problems Arising from the Functioning of Industrial Parks**

Narmina ISMAYILOVA

**The Role Of High Techno-Parks in Ensuring Socio-Economic Development and their Efficient Management**

Alovsat ALIYEV, Roza SHAHVERDIYEVA

**11:00-11:30 Tea & Coffee break**

**11:30-13:00 Parallel sessions**

**Session A Socio-Economic Development**

**Chair:** Adalat MURADOV

**On the analysis of the economic efficiency of the integration of the OEC countries**

Sailau BAIZAKOV, Lyaila ELEUSIZ, K.K.KARIMOVA

**Methodology for Calculating of "Comprehensive National Strength" Index of the Azerbaijan Republic**

Adalat ALIYEV

**Azerbaijan 2020: New Directions of the Economic Policy**

Adalat MURADOV

**Session B Energy**

**Chair:** Ingilab AHMADOV

**What Makes Oil Revenue Funds Effective**

Dina AZHGALIYEVA

**Assessment of Institutional Quality in Resource Rich Caspian Basin Countries**

Jeyhun MAMMADOV, Ingilab AHMADOV, Kenan ASLANLI

**Value Chain Approach in the Extractive Industries Management: The Case of Azerbaijan**

Ingilab AHMADOV

**Session C Globalisation**

**Chair:** Imran GARAYEV

**Globalization and Socio-Economic Development: Progress or Regress**

Seymur GULIYEV, Rasim ABUTALIBOV

**A Feasibility Assessment for Supporting Business Complementarities between European Union Member States, Turkey, and the Pilot countries (Egypt, Tunisia and Palestine) - Global Business Bridges Initiative**

Esen ÇAĞLAR

**Globalization of Economy and Tax Base Erosion**

Imran GARAYEV, Akif MUSAYEV

**13:00-14:00 Lunch**

**14:00-15:30 Parallel sessions****Session A Socio-Economic Development**

**Chair:** Amela HUBIC

**Application of Marketing and Innovations in Social and Economic Development of the Region**

Fuad SAMEDOV, Akif FATULLAYEV, Irade ABDURRAKHMANOVA, Mushfiq ALIYEV

**The State Main Strategic Directions of the Innovative Processes Development in External Trade Operations**

Samira ABASOVA

**Assessment of ICT impact on the formation and development of innovative economy**

Alovsat ALIYEV, Aybeniz ALIYEVA

**Session B Energy and Environment**

**Chair:** Ihtiyor BOBOJONOV

**Business Cycle Synchronization: A Study of ECO members**

Saeed RASEKHI, Somaye SADEGHI

**Climate Change, Wheat Production and Food Security: A Case of Pakistan**

Anum TARIQ, Nazia TABASAM, Muhammad ASHFAQ

**Farm Level Effects of Trade Liberalization Between Central Asia Countries under Climate Change**

Ihtiyor BOBOJONOV, Aden AW-HASSAN

**Session C Regional Integration**

**Chair:** Suat SISIK

**Target Program Methods of Regulating Regional Development in order to Ensure Sustainable Development of the Country**

Nadjiba HAJIYEVA

**Tourism as the Main Factor of Socio-Economic Development of Regions in Azerbaijan**

Rufat MAMMADOV

**Potential of Tourism in Regional Integration of Azerbaijan in Competitiveness Background**

Elchin AKBAROV

**15:30-16:00 Tea & Coffee break**

**16:00-17:30 Plenary sessions**

**Chair:** Ali BAYAR

**Modeling Techno Parks for Economic Development**

Ufuq BATUM

Middle East Technical University Technology Park, Vice President

**Analyzing Regional Integration Processes: The Role of Comparison**

Philippe De LOMBAERDE

United Nations University Institute on Comparative Regional Integration Studies (UNU-CRIS), Associate Director

**ECO Bank and its Role in Regional Development**

Saulat Ali KHAN

ECO Trade and Development Bank, Vice President

**17:30-18:00 Closing Ceremony**

**Closing Remarks**

Shamil ALESKEROV, Secretary General of ECO

Ali BAYAR, President of EcoMod Network

Vilayat VALIYEV, Director of ISRER

**Presenting of the Winners, Certificates Award**

**Venue of the Next Conference**

Aynura ISMAYILOVA, Head of Department (ISRER)

**Vote of Thanks and Group Photo**

**19:30-24:00 Dinner at Palma Restaurant (Seaside)**

## **Abstracts**



## **Balanced use of fertilizer nutrients and its determinants: a case of cotton crop** Khuda BAKHSH

One of the strategies to boost farm productivity is by means of agricultural intensification. However, the process of intensification in agriculture depends on the sufficient supply of plant nutrients to the crops for assuring high yield of the respected crops (Amar and Cisse 2007).

Fertilizer is a key player to enhance crop production by upgrading soil fertility. It also serves as a key for securing the food requirements of a country. None of the country has been able to boost agricultural productivity without making expansion in the use of chemical industry. Balanced fertilization refers to application of essential nutrients of plant, chiefly the major nutrients-Nitrogen (N), Phosphorous (P) and Potassium (K) in optimal quantities through accurate method and application time in precise proportion (Alam and Khan 1999). Balanced fertilization leads to enhance the yield of crops, quality of crops and farm income. Further it serves as a remedy to correct soil nutrient deficiencies and helps in maintaining the soil fertility. But it can also be observed that in-spite of increased use of fertilizers overtime in Pakistan, productivity of crops could not be increased (Afzal and Ahmad 2009). Some empirical studies had also showed this fact that on many high-yielding lands, the rate of nitrogen fertilizer application has been too high, resulting not only in decrease in efficiency and high costs, but also negative effects on air and water quality had been observed (Zhu and Chen 2002, Wang et al. 2005). Similarly, Weight and Kelly (1999) stated the following negative impacts of over-fertilization or imbalance use, acidification of soil may occurs as a result of excessive ammonium N fertilizers usage, negative effects on traditional systems and environment i.e. increase in pollution and emission of green house gases.

The use of commercial fertilizers in Pakistan was initiated in 1952-53, and its consumption was only 1,000 nutrient tonnes of N whereas phosphorus was introduced in 1959-60 with an initial off-take of 100 nutrient tonnes. Potash fertilizer usage was started in 1966-67 with a volume of about 120 nutrient tones (Quddus et al. 2008). These trends of fertilizer usage gave emphasis to the significance and function of fertilizer in the national economy. Currently, the consumption of fertilizer in Punjab province was about 3054 thousand N/Tones in the year 2010-11 (Govt. of Punjab 2011). So far, there has been an incessant rise in the utilization of fertilizers (Quddus et al. 2008). Of all the farm inputs fertilizer is the most profitable. Furthermore, the relative low cost of fertilizer in contrast with the cost of other farm inputs such as land, wages and farm machinery, have also contributed towards increasing the fertilizer consumption in the country (Alam and Khan 1999).

At present fertilizer usage in the country is imbalanced. There is a rapid increase in the consumption of nitrogenous (N) fertilizer than those of phosphate (P<sub>2</sub>O<sub>5</sub>) and potash (K<sub>2</sub>O) fertilizers during the last 4 decades, thus leading to severe imbalance between N, P and K nutrients (Rashid 1994 and Afzal and Ahmad 2009). This rapid rise in nitrogen consumption can be ascribed to a range of economic and technical factors. Urea which is the chief source of nitrogen is cheaper, provides rapid crop response and locally accessible. In contrast, phosphate and potash fertilizers are pricey and imported from other countries (Solaiman and Ahmad 2006).

There is an immense requirement of utilizing recommended doses of fertilizers for getting utmost crop yield. The superlative option is to determine the nutrient contents of soil through soil or plant analysis and then apply fertilizers in accordance with the requirements. However, in reality most of the farmers are not getting their soil analyzed

and hence harvest low yields (Alam et al, 2005). The other feasible option is to use the trial data of relevant district and develop site specific recommendations. At the same time, it is crucial to make the management practices as a part of site-specific recommendations to overcome the constraints which are impairing the efficiency of various nutrients.

Cotton is an important non-food cash crop which contributes significantly in foreign exchange earnings of the country. In 2010-11, it accounts for about 1.4 percent of GDP. During 2009-10, an important development in cotton production was the rising usage of Bt cotton by the farmers. In Punjab, Bt cotton was grown approximately on 80% areas (Government of Pakistan 2010-11). The use of genetically modified Bt cotton seed will result into less pesticide usage and higher output of cotton (Thirtle et al. 2003 and Qaim and Matuschke 2005).

This paper made an attempt to emphasize the adoption of balanced nutrients in Bt cotton production in Multan District of Punjab, in order to throw light on the fact that whether there is adoption of balanced fertilizers in that locality or not and what are the factors effecting the adoption of balanced fertilization in particular crop.

### **Optimum Budget Expenditures Having a Maximum Influence on the Personal Income Per Capita. The Case of Azerbaijan.**

Jeyhun ABBASOV

The dependance between income per capita and investment to economy, salary, payment of pension and compensation, state bodies, education, health, social protection etc. as well as the expenditures on material and technical supply, establishment of fixed assets and its restoration have been determined. Then having solved the optimization problem with help of Lagranje multiple, the optimum distribution of budget expenditures among the proper expenditures items have been fixed. Optimal distribution have been defined both periods for 2001:Q1-2008:Q4 and 2001:Q1-2012:Q3 and comparative analyses have been determined. As a result of analysis it came to a conclusion that the budget policy of the state have been more social based since 2008. Because, the deviation of factual distribution from the calculated optimal distribution for 2001:Q1 - 2012:Q3 has been softened than that one for 2001:Q1 - 2008:Q4.

### **Value Chain Approach in the Extractive Industries Management: The Case of Azerbaijan**

Ingilab AHMADOV

Azerbaijan is one of the countries with the richest natural resources in the world. Extractive industries (oil, gas and mining) generated approximately 51% of Gross Domestic Product (GDP), 70% of budget revenues and 92% of total exports in Azerbaijan for 2011. Export operations, which are the main components of the GDP, still include high dependence on raw oil, natural gas and oil products.

Until now, the Government of Azerbaijan has signed 33 Production Sharing Agreements (PSA) with foreign oil & gas companies and generated approximately 70 bln. USD in revenues, from which 34.3 bln. USD has been accumulated in The State Oil Fund of Azerbaijan.

Azerbaijan has a great chance to demonstrate an effective and transparent model of governance of the petroleum sector and finally to build up sustainable development of the economy.



In order to set up this desirable model of governance, it is necessary to put on the agenda a value chain approach in petroleum sector management in Azerbaijan, which is a comprehensive integrated approach to developing extractive industries.

The Value Chain approach was launched by World Bank in 2009 and professionally developed by Revenue Watch Institute (RWI) experts.

Taking into account the fact that Azerbaijan has already earned a significant amount of petroleum revenue and actually faces global challenges on how to manage oil & gas revenue and the petroleum sector itself predictably, this approach could be used to introduce comprehensiveness, a systematic character and predictability of management based on good governance principles.

### **Potential of Tourism in Regional Integration of Azerbaijan in Competitiveness Background**

Elchin AKBAROV

Competitiveness is considered to be the main factor for achieving the success in market economy. Because, the main goal of any commercial organization is to expand its business in market, to make it robust and in worst case to stay in a stable condition without growth. In order to achieve this goal, profit maximizing with high level of sales must be set as the main target and competitiveness is required here. Competitiveness is always in a fashion and of use by developing and developed countries. Developing countries need it to get a market share and developed countries need competitiveness as a new source of growth. Nowadays in line with the globalization, tourism has become as one of the key sphere of development of many countries and recognized as one of the main sources of jobs, wealth, welfare and income. Understanding and measurement of competitiveness in tourism is a major consideration and bearing this in mind this paper has been prepared in order to give an overview of tourism in Azerbaijan, its potential and role in regional integration in the background of some indicators for measuring competitiveness in tourism by OECD.

### **To What Extent Stock Returns are Driven by Mean and Volatility Spillovers Effect (EU, US&OIL)?**

Abdulla ALIKHANOV

The paper investigates the mean and volatility spillover effects from the U.S and EU stock markets as well as oil price market into national stock markets of eight European countries. The study finds strong indication of volatility spillover effects from the US-global, EU-regional, and the world factor oil towards individual stock markets. While both mean and volatility spillover transmissions from the U.S are found to be significant, E.U mean spillover effects are negligible. To evaluate the magnitude of volatility spillovers, the variance ratios are also computed and the results draw to attention that the individual emerging countries' stock returns are mostly influenced by the U.S volatility spillovers rather than EU or oil markets. Furthermore, I also implement asymmetric tests on stock returns of eight markets. The stock market returns of Hungary, Poland, Russia and Ukraine are found to respond asymmetrically to negative and positive shocks in the U.S stock returns. The weak evidence of asymmetric effects with respect to oil market shocks is found only in the case of Russia and the quantified variance ratios indicate that presence of oil market shocks are relatively higher for Russia. Moreover, a model with dummy variable confirms the effect of European Union enlargement on stock returns only for Romania. Finally, a

conditional model suggests that the spillover effects are partially explained by instrumental macroeconomic variables, out of which exchange rate fluctuations play a key role in explaining the spillover parameters rather than total trade to GDP ratios in most investigated countries.

### **Methodology for Calculating of "Comprehensive National Strength" Index of the Azerbaijan Republic**

Adalat ALIYEV

The transition of the Azerbaijan Republic from administrative-command economic system to a market-based one is the most difficult period of the independence of the country. In 1991, after the restoration of the independence, Azerbaijan Republic began to pursue an independent economic policy, creating a new economic system of market relations. Economic development in the period of independence can be divided into two periods. The first period is 1991-1995. These are the years of economic chaos and collapse. The second period began in 1996. These are the years of economic development of the economy and the formation of macro-economic stability. Rated among the CIS countries Azerbaijan is on the 5-th position after Russia, Kazakhstan, Ukraine and Belarus. On the production of GDP Azerbaijan is also on the 5-th position among the CIS countries. GDP is 51.509 million US dollars. The paper deals with the simplicity and ease of doing business, ranking of economic security, personal development, quality of life, the rating on globalization, public debt, balance the state budget in relation to GDP. The gold-currency reserves, government debt, the state of the credit of the banking system, financial and economic opportunities, scientific-technical, political and diplomatic options, currency and financial resources of Azerbaijan, a consensus on foreign policy, criteria and characteristics of participants in international relations, the ability to operate effectively in the international arena have been investigated. The calculation of the basic capacity, population, natural resources, economic opportunity, the defense forces, national morale, diplomacy and defense cooperation, military force, the index of economic freedom, diplomatic opportunities have been performed. According to the survey, "comprehensive national strength" index is defined and compared to the averaged index of national forces of developed countries, the results of which reflect the need for drawing up a new program of economic and national security. Achieving a high level of the "comprehensive national strength" index will be able the Republic of Azerbaijan successfully resolve the economic and financial, political, military and diplomatic issues in the context of globalization.

### **The Role Of High Techno-Parks in Ensuring Socio-Economic Development and their Efficient Management**

Alovsat ALIYEV, Rosa SHAHVERDIYEVA

The paper investigated the role and position of high techno-parks in ensuring socio-economic development, which is one of the priorities of socio-economic development. The main objectives, functions and features of the establishment of high-techno parks, as well as organization of the activity of the structural elements, which are the parking complex and their interactions were analyzed. The development, organization and management of high techno-parks were studied. The key features and functions of innovative structures' management were explained. The need for a comprehensive management system for the development of high-techno parks was emphasized and

the major problems were analyzed. In addition, the methods were proposed for the development of information systems supporting decision making in systematic and sustainable management of the parks.

### **Assessment of ICT Impact on the Formation and Development of Innovative Economy**

Alovsat ALIYEV, Aybeniz ALIYEVA

Issues related to characteristic features and formation issues of innovative economy are researched in this article. The role of ICT in development of new information economy is pointed out. Interrelation between distinctive features and their other traditional production factors of information and knowledge resources such as labor and capital are reviewed. Different approaches to evaluation of effect of ICT sector on economical development are researched. Effect of ICT on durable economical development, as well as increasing of Gross Domestic Product (GDP) and labor productivity are studied. Application specifications of economical-statistic methods and models related to the effect of informatization level to overall economical development are reviewed.

### **What Makes Oil Revenue Funds Effective**

Dina AZHGALIYEVA

This paper tests the effectiveness of oil revenue funds and their design in oil-producing countries. The empirical results, using monthly data of 27 oil-producing countries (19 with oil revenue funds and 8 without oil revenue funds) over the period from January 1957 to November 2010, show that oil revenue funds are effective in the stabilization of exchange rates. Additionally, in the theoretical model, it is found that funds that follow the expenditure-based accumulation rule can stabilize exchange rates better than funds that follow the revenue-based accumulation rule. However, in the empirical model it is found that funds that follow the revenue-based accumulation rule can stabilize real effective exchange rates better than funds that follow the expenditure-based accumulation rule.

### **A Social Exchange Approach to People's Participation in Sustainable Management of Water Resources Programs in Iran**

Reza BAGHERIAN, Majid SANAEI

The degree of popular participation in development programs is a major determinant of success or failure, but the factors which makes participation efforts successful still remain unknown, especially in Iran participation is quite a challenge for country with a long tradition of top-down management. Many studies have developed numerous and sometimes different views concerning to the dimensions of participation. This study was designed to analyze people participation in watershed management programs by using the framework of social exchange theory. An instrument consisting of 42 items was developed to measure the level of participation and social exchange factors. In order to achieve this goal, three WMPs were chosen in Hable-Rud basin in Iran. In these areas 200 respondents were selected randomly and data were gathered through personal interviews by using an administered questionnaire. Descriptive analysis, factor analysis, Pearson product moment correlation, and multiple regressions were employed to analyze the data. Results of study showed that level of people

participation in WMP was low, but social participation was relatively higher than economic and environmental participation. Pearson product moment correlation showed that there are significant relationships between exchange factors and level of participation ( $r = .58$ ). Multiple regression analysis discovered that exchange factors explained about 34 percent of variation in the level of participation. This study suggests that participation is quite a complex issue and research would benefit from a pluralistic approach that uses multiple levels and perspectives.

### **Optimal Transport and Trade Policy Under Bertrand Competition in the Presence of Restricted Geographical Condition**

Normizan BAKAR

An argument for a strategic trade intervention with Bertrand duopolists is reconsidered in a model which supposes the rivalry between a landlocked firm and a coastal firm in the third market. The government of the landlocked country has incentives investing and subsidizing in transport infrastructure and the coastal government has a possibility to impose a toll fee on the landlocked firm exports. Establishing the three-stage-game, this paper shows that the transportation infrastructure capital investment policies are negative for the coastal country and positive for the landlocked country. Furthermore, it demonstrates that the persecution policy, toll fees, is positive.

### **Determinants of Sector Holders' Bilateral Portfolio Investments**

Faruk BALLI, Hatice OZER BALLI, Syed Abul BASHER, Jiayuan GUO

In this paper, we investigate the determinants of the sectors' foreign bilateral portfolio allocation. We disaggregate source countries' equity and debt foreign holdings according to the sector holders' investments; financial companies, non-financial companies, households, and government. In general, we observe that sector holders have similar patterns when they allocate their foreign bond portfolio abroad but for equity portfolio allocations, we have observed distinctive patterns among sector holders. Financial companies do not consider cultural and geographical proximities on foreign equity portfolio allocations. Non-financial companies and households take into account the cultural and geographical proximities on selecting market destinations. More importantly, Euro equity bias exists among non-financial companies and households' decisions whereas there is no Euro equity bias on the financial companies's foreign equity holdings. Applying a two stage Least squares model reveal accurate estimations for the return and risk diversification variables. We show that for financial companies and insurance companies, risk diversification is highly important, whereas for non-financial companies and households, the return motivation is considered more on selecting the foreign investment markets. For the government sector, we observe very unique patterns in the allocations of foreign portfolios; an insignificant relationship between bilateral trade volume and asset allocation and cultural and geographical proximity display little or no impact on government sector's decisions on allocating foreign portfolio in different markets.

## **Socio-Demographic Determinants of the Support for Turkey's Justice and Development Party**

Cem BASLEVENT

Using district-level census data for the province of Istanbul, we identify the determinants of the support for the Justice and Development Party (AKP) which has been in power in Turkey since 2002. Socio-demographic indicators such as the gender gap in education and the mean age, that are expected to proxy for social conservatism and the fertility rate, respectively, perform remarkably well as predictors of the party's vote share. The econometric findings are in line with the hypothesis that the AKP has benefited from the existing living conditions of the urban population, especially in peripheral metropolitan areas, and has been particularly successful in identifying the worldviews and addressing the needs of conservative voters many of whom are first or second generation migrants.

## **Farm Level Effects of Trade Liberalization Between Central Asia Countries under Climate Change**

Ihtiyor BOBOJONOV, Aden AW-HASSAN

There were several regional trade agreements made amongst Central Asian countries during the transition period. However, the implementation of these agreements remains very restricted which causes limited exchange and flow of agricultural commodities between the countries. The market imperfections caused by state policies, poor market infrastructure and trade restrictions remain the main challenge for small scale producers in Central Asia. This study analyses input and output price differentiations between the countries and discusses the main factors causing those price differences. Furthermore, the paper examines the impact of easing those trade barriers on farm level welfare, especially under different climate change scenarios. Therefore, the paper aims at filling in the gap of knowledge that exists between effects of trade barriers on farm gate prices and farmers' welfare in Central Asia.

The farm level input-output prices and household consumption patterns are analyzed using the data obtained from farm surveys conducted in Kazakhstan, Uzbekistan, Kyrgyzstan and Tajikistan. Changes in expenditure under trade liberalization among Central Asian countries are estimated. Per capita expenditure changes are estimated for alternative market conditions. The impact of climate change on farm utilities is analyzed using an integrated modeling tool which incorporates the climate change module and crop growth simulation model in the expected utility framework.

The results show significant differences in farm gate prices of many agricultural commodities. Salient differences were also found between the energy and fertilizer prices among these countries. Political disputes between some Central Asian countries are explained to be the main challenge for restricted trade between the countries. Liberalization of trade may create favorable economic conditions for many regions in Central Asian countries. However, potential gains from market integration are very region and country specific. The integrated model results show that easing commodity exchange between the countries may improve the adaptive capacity of the small scale producers especially in Uzbekistan and Tajikistan under different climate change scenarios.

## **Role of Micro Enterprise in the Socio-Economic Development of Women a Case Study of Rural Balochistan**

Shakira BUKHARI

The subject of 'women development' has not received due attention in development research on Pakistan. The pace of women development is very slow in the country. The socio-economic profile of women is at its lowest ebb both at national and provincial levels. Their participation in the socio-economic activities is almost negligible especially in the rural areas. Their effective involvement in development process is highly emphasized in all circles concerned about development. There is a growing realization that sustainable development cannot take place without the active role of women. In this regard, micro enterprise operated by the women coming from the low-income classes has been emerging a strong phenomenon to fight against poverty and gender discrimination. These women are seen by some as the spear-headers of a new social order in which legitimate opportunities for economic betterment are not denied to any one on account of gender and poverty. A study based mainly on primary data was conducted to analyze the role of micro enterprise in the empowerment of women in rural Balochistan. The findings of the study show that their involvement in micro enterprises have not only contributed substantially to the total household income leading to the proper physical and social development of the family but has also resulted in elevation of women's social status in the community.

## **A Feasibility Assessment for Supporting Business Complementarities between European Union Member States, Turkey, and the Pilot countries (Egypt, Tunisia and Palestine) – Global Business Bridges Initiative**

Esen ÇAĞLAR

The Global Business Bridges Initiative ('the GBB Initiative') is jointly coordinated by the European Union Delegation to Turkey, Turkish Ministry of Economy and the Union of Chambers and Commodity Exchanges of Turkey (TOBB) and aims to trigger business synergies from EU and Turkey and to jointly venture in neighboring markets. Building and fostering trilateral business linkages are at the heart of this effort. The modus operandi of the Initiative entails trilateral matchmaking events that bring together companies from EU Member States, Turkey and third countries. The first phase of the Initiative took place in 2013 and selected pilot countries are Egypt, Tunisia and Palestine. At later stages, based on the success of the first round of trilateral matchmaking events in pilot countries, the initiative can be replicated in countries such as Azerbaijan, Kazakhstan, Iraq, Libya, Algeria and Morocco.

The study aims to assess the feasibility of the GBB Initiative. First objective is to identify the feasible economic areas, which would maximize complementarities between EU, Turkish and pilot country' SMEs to form trilateral business linkages. Second objective is to provide information regarding the general economic context in the pilot countries, along with specific information on the identified sectors and their institutional underpinnings. Last objective is to suggest measures to enhance the overall feasibility of the Initiative.

## **Relationship Between Energy Consumption, CO2 Emissions and Income in Iran** Fatemeh FATHI, Farnaz POURZAND

Concerned with the problem of increasing environmental degradation, it is important to examine the nature of the relationship between the level of economic activity or income and environmental quality indicators. Unlike studies that have examined the presence of the Environmental Kuznets Curve (EKC), the aim of the paper is to explore the causal relationship between pollutant emissions (CO<sub>2</sub>), energy consumption, GDP, fixed capital formation and active labor force for Iran' economy using unit root test, Vector Auto Regression (VAR) and Granger causality techniques. The causality results support the argument that energy consumption and GDP exert a causal influence on CO<sub>2</sub> emissions over the period 1976- 2012. On the other hand, the response period of pollution to energy consumption in Iran is shorter than in other countries. The variance decomposition also shows that a significant part of the forecast error variance of CO<sub>2</sub> was explained by the share of energy consumption. Thus, it is possible to control the pollution in the short run by decreasing the energy consumption based on pricing or fuel rationing policies in Iran.

## **Globalization of Economy and Tax Base Erosion**

Imran GARAYEV, Akif MUSAYEV

The economic globalization, the expansion of the economic activities of international companies, their operation in the states with various tax systems and tax rates in recent periods have created new opportunities in manipulation operations for tax evasion purposes through income transfers. The income transfer from high tax rate states to low tax rate states causes the tax base erosion, reduction of budget revenues which leads to the new threats to economic security. There are various reasons for the escalation of these problems. The fast growth of digital economy, development of the role of different types of intangible assets, enhancement of e-commerce operations, appearance of new economic segments have generated a number of complicated problems in international world. One part of these problems is due to the incomplete development of tax legislation in the area of transfer pricing, and the other part is due to the conventions that were founded in the 20-30th years of XX century in the field of double taxation and which don't meet the requirements of the globalized economy.

The development of the role of Azerbaijan in the international economic relations and its integration to world economy requires the investigation of a number of significant problems related to the analysis of socio-economic behaviour of transnational companies and their taxation. The reasons of taxable base erosion, existing problems in the area of transfer pricing and their solution methods were analyzed in the article taking into account the processes of modern economic globalization.

## **Export Performance of Transition Economies**

Jalal GAYTARANOV, Lewell F. GUNTER

This study reports the results from the estimation of an export determination model for former Soviet Union and Eastern European transition countries, for 2005-2011. We present model results from a sample of 28 transition countries and results after excluding five resource rich countries from our sample. We found that closer proximity to Europe had a positive impact on exports from countries and that Foreign Direct Investment (FDI) had larger impacts on exports of resource rich countries. We also

concluded that internal trade-related infrastructure of port quality and technological advancement play important roles in exports of transition economies.

### **Globalization and Socio-Economic Development: Progress or Regress**

Seymur GULIYEV, Rasim ABUTALIBOV

Globalization has been developing since 1980 and it was an important reason of some changings and development in not only world economy, but also our daily life. There are some reasons affected on the development of globalization. To exemplify, ending of cold war with the collapsing of Union of Soviet Socialist Republics, acceleration of information technologies and communications with the development of contemporary technologies, declining costs and even increasing saved capital, new demands and other factors let globalization develop.

Economic and social issues and political movements happened in the world in recent years were one of the essential factors of re-actualization of globalization and integration. Some experts point out that, 2008 great "Financial Crisis" having negative impacts on economic and social life was an important result of globalization. On the other hand, "Arabic Spring", the political movement is another considerable result of globalization. For sure, globalization and integration can directly or indirectly effect such situations. Before starting to analyze the association between globalization and countries' economies, implementation, regulation and supervision of Globalization in a country and world should be considered.

In our modern life, Globalization can be mainly observed in investment and financial markets. The Republic of Azerbaijan is also one of the participants of globalization process. After gaining its independence in 1991, some essential activities and reforms were needed to be done in order to integrate to the world economy. Other newly independent countries have also been under positive and negative impacts of globalization. Mainly, the effects of globalization on social-economic development will be discussed in this article.

### **A Macroeconometric Model for Making Effective Policy Decisions in the Republic of Azerbaijan**

Fakhri HASANOV

We developed a macroeconometric model with the objective of analyzing and forecasting the effects of various domestic policy measures and external shocks, particularly changes in oil price, world income on the Azerbaijani economy. It consists of 13 stochastic equations and 13 identities and covers the real, monetary, fiscal and external sectors of the Azerbaijan economy. The General to Specific Strategy is applied to the quarterly data over the period of 2000-2010 in the framework of Cointegration and Error Correction Modeling. This is publically available the first econometric model of the Azerbaijani economy that its stochastic equations are the error correction equations which provide information about the long-run equilibrium and short-run dynamics between the variables as well as speed of adjustment from the latter to the former. This information would be useful for the decision makers in increasing an effectiveness of the policy measures in the Azerbaijani economy.



## **Prospects of use of Renewable Energy Resources and Energy-Efficient Technologies for Heating Supply in Azerbaijan and Kyrgyzstan**

Yashar HASANOV, Mirzaliyev

The article provides results on assessment of potential for use of renewable sources of energy in Kyrgyzstan and Azerbaijan as well as use of this potential in supply of heating mainly in the regions of the country. It draws on data on solar energy, use of biomass, wind energy and small hydro stations.

It offers analyses of industrial production capacity, development hydro-power through rehabilitation and construction of small HES, prospects of use of solar radiation, nature of expansion and intensity of wind speed, as well as analysis of prospects of use of biogas installations for improvement of heating supply.

The article highlights technological aspects of applying heating pumps for reformation of heating energy into a low-pressure source of heat, such as heat of earth or soil, underground thermal waters of outside air. It shows thermodynamic processes and laws that take place in the work of heating pumps as well as mechanical processes happening inside the compressors in compressed heating pumps.

It looks into main components applied in heating pumps, while providing their description and functional use. Heating pumps are classified in several versions according to functions of their use as well as principles of their performance. As part of the given classifications, it offers principal and constructive schemes of various types of heating pumps, while proposing their technical characteristics.

It also presents some refrigerants used in heating pumps, while outlining their main characteristics. Main low-capacity sources of energy for heating pumps are also presented; their application framework as well as power characteristics are elaborated. Systems of heating and hot water supply through heating pumps are presented. It also provides description of combined solar-heating pump device.

## **The Methodological Approach for Reduction of Commercial Losses of Electricity and their Recording in the Economic Cooperation Organization Countries**

Hikmat HASANOV

In this article was examined the current situation related to the recording of commercial losses of electricity power in the Republic of Azerbaijan and in the Commonwealth of Independent States and compared with the experience of other developed in this field countries. Contradictory aspects of the legal and regulatory documents of the available recording were disclosed and the methodology for the recording of commercial losses of electricity power was developed. At the same time, characteristics of application of the proposed methodological approach to Economic Cooperation Organization (ECO) countries were investigated.

On the basis of proposed methodological approach a number of assessments were conducted and with the given results a number of suggestions and recommendations, related to commercial losses of electricity and their recording were given for the number of member countries of the ECO.

## **Standardized Baseline Setting Methodology for Energy Related Projects in the International Climate Change Policy**

Haruo IMAI, Jiro AKITA, Hidenori NIIZAWA

After five years of Kyoto Protocol, now it is the time to review its impact and possible improvement, although KP itself in a sense suffers from a decline in the number of countries accepting emission quota. One notable feature of KP was the introduction of baseline-credit mechanism called the Clean Development Mechanism (CDM) to assist nations to reduce emissions within the assigned amount. There were several mistakes pointed out in the design of this mechanism, and among them is the dominance of non-energy related projects in the supply of the credits.

Now, the reform of CDM is proposed by the CDM-EB (executive board) and still the scheme developed by the UN for CDM is considered a valuable infrastructure which can be shared by many alternative mechanisms as well as regional agreement which make use of offset schemes.

However, among the proposed reform is the standardization of baselines which seems to contain several potential problems. In this paper, we shall examine several problems in this proposal taking the instances of projects which improve the emissions from a coal-fired power plant as discussed in Hayashi and Michelowa (2012). Among others, the proposal attempts to bind together several project options from energy efficiency project like the use of supercritical technology, to fuel switch project like a switch to LNG, and ultimately to the renewable energy. Mixing these together, the proposal sets the baseline and additionality criterion at a certain percentage point of the cumulative distribution. We shall point out several issues spotted in this proposal and try to find a better option.

Based on these observations, we examine the method to strike a balance between transaction costs and environmental integrity.

## **Azerbaijan: a Strategic Actor in the Regional Energy Chessboard**

Fabio INDEO

The presence in its territory of huge oil and gas reserves and its geographic-territorial location as a kind of 'energy bridge' between Caspian energy resources and European markets represent two main geopolitical factors which have enhanced the strategic relevance of Azerbaijan in the regional and international scenario.

These conditions have attracted several energy projects aimed to cross Azeri republic or to use Azeri oil and gas reserves, through pipelines and LNG transport options: the most famous is the EU-backed Southern Gas Corridor (which includes pipeline projects like Nabucco, TAP, ITGI, White Stream) among others like AGRI or the recent Trans-Anatolia Gas Pipeline Project which stress the rising importance of this Caucasian republic.

Starting from the analysis and comparison of the Azerbaijan and EU energy diversification strategy goals, the aim of this paper is to evaluate if Azerbaijan could play both roles energy supplier and energy hub in the 'East-West' corridor in the next years and which geopolitical, strategic and economic gains could obtain considering following issues:

- Azerbaijan is a strategic key partner for EU in order to achieve its energy security strategy focused on the diversification of export routes;

- Azerbaijan could be a relevant geopolitical partner in the Russian energy strategy aimed to preserve the EU dependency from Russian gas hindering the realization of the Southern Corridor;
- Azerbaijan is the obliged route for Central Asian states (mainly Kazakhstan and Turkmenistan) which aimed to deliver their oil and gas exports towards Western and European markets: as a matter of fact, the precondition for a full implementation of the Southern Corridor is the Turkmen-Azeri appeasement

Nevertheless, the concrete achievement of the Azeri geopolitical ambition to become a strategic energy supplier and transit country depends on the solution of regional hindrances, such as the obliged Georgian export route, the unsolved Caspian legal status, relations with Turkmenistan to realize the Trans Caspian energy corridor.

### **Fuzzy Model of the Factors Affecting Selection of Non-Oil Export**

Aynura ISMAYILOVA

With 20-year history of independence, the Republic of Azerbaijan possesses abundant oil and gas resources. Starting from 1994, as a result of massive inflow of foreign investments into the oil and gas industry, annual oil and gas production in Azerbaijan have reached 50 mln. tons and 26 bln. cubic meters, respectively, which, in turn resulted in substantial windfall of funds flowing to Azerbaijan. To eliminate dependence on these revenues and use the funds efficiently, diversification and increasing export potential of the non-oil sector has been identified as the main priority of the economic policy. A substantial portion of accumulated revenues are directed at upgrading of infrastructure, regional development and enhancing of human capital as one of the key factors of boosting non-oil exports, while attracting foreign investments along with domestic investments into these sectors. Nevertheless, there are some problems remaining in the non-oil exports, and oil and oil products continue to have a great share in exports. This situation necessitates, along with the measures taken currently, the measuring of impact of factors reflecting the need to boost the non-oil export potential based on various criteria and developing of formed procedures for that purpose.

### **Problems Arising from the Functioning of Industrial Parks**

Narmina ISMAYILOVA

Due to the fact that Russia is a neighboring country with similar economy and with an existing experience in the functioning of industrial parks, for Azerbaijan as the country in which the scope of industrial parks is being created, it would be useful to learn from the problems encountered in the operation of industrial parks in order to further taking into account.

### **Evidence of Electricity Theft from Electric Utilities In Pakistan**

Faisal JAMIL, Eatzaz AHMAD

Electricity theft is common in many countries and energy worth billions of dollars is stolen annually from electricity grids. The problem has socioeconomic, political, environmental and technical roots, but the solution is generally sought solely through technical measures. This paper empirically investigates the effects of various economic and technical factors in explaining the theft from electric utilities in Pakistan. We employed annual panel data for empirical analysis taken from nine electricity

distribution companies for the period 1988-2010. The study estimates the Fixed Effects models through the least squares dummy variable technique and Generalized Method of Moments and the Random Effects model. Our results indicate that per capita income has significant negative and electricity price positive effect on electricity theft with sufficiently high coefficient values. However, the probability of detection does not perform consistently in combating electricity theft in all the models showing poor deterrence. The impact of penalty i.e. fine on conviction however, depresses electricity theft. The results from different models are robust and suggest that the issues in supply and demand for electricity are inter-twined. The findings may also be applicable in other developing countries where hefty amounts of revenues are lost due to electricity theft.

### **Bio-Energy, the Future of Bio-Fuels and the Effects of Agriculture In Turkey** Sevket KALANLAR, A. Ahmet YÜCER, Muhammet DEMİRTAŞ

Due to the increasing oil prices in Turkey, the fuel released with legal regulations, as the supply of fuel and diesel oil from 2013 to domestic agricultural products produced in the gradually bio-fuel blending mandates. Accordingly; the supply of gasoline as fuel types on the market; 2% in 2013, 2014 at least 3% extra for bio-ethanol produced domestic agricultural products is required. Diesel oil; at least 1% in 2014, at least 2% in 2015 and at least 3% in 2016 is produced by domestic agricultural products extra mandates to bio-diesel.

The results of the analysis conducted in this context study, costs of policy, import requirement, minimum space requirements adhering to the criteria.

Study on bio-fuel raw materials as wheat, corn, sugar beets; sunflower, rapeseed, safflower and soybean is taken into account. 34,5% of the fat in sunflower, soybean 18.2%, 44% of the Canola. Contains of ethanol ratio; 40% in corn, 34% wheat, Sugar beets 11% was accepted.

The analysis of bio-energy in Turkey; the need to meet the demand for diesel fuel in 2014 0.169 million tons, 0.351 million tons in 2015, 0,546 million tons in 2016, 0.565 million tons in 2017, 0.583 million tons in 2018, 0.600 million tons in 2019, 2,071 million tons in 2020, have been identified.

In Turkey; to meet the demand for fuels product needs 0.144 million tons in 2014, 0.139 million tons in 2015, 0.133 million tons in 2016, 0.127 million tons in 2017, 0.121 million tons in 2018, 0.115 million tons in 2019, 0.363 million tons in 2020 have been identified.

The current oilseeds pattern in Turkey and production capacity, the targeted rate of bio-diesel fuel-mixture is quite inadequate to meet the quantity demanded. This demand breaks the food security. Because current agricultural structure and costs within the framework of a single product to meet this demand the impossible.

According to the results of the analysis of bio-ethanol; the current crop pattern in Turkey and production capacity from 2013 the rate of bio-ethanol fuel-mixture of targeted demanded quantity is sufficient on its own to meet the bio-energy.

In this context the areas of cultivation of agricultural products needed to meet these quantities are determined. Current agricultural policy tools and threads in the current situation are discussed in the context of the future in bio-fuels in Turkey.

## **Applications for Food Safety in Istanbul Level of Recognition by Consumers**

Sevket KALANLAR, A. Ahmet YÜCER, Muhammet DEMİRTAŞ

Food production, ensuring the safety and reliability of the basic tasks of Ministry of Food Agriculture and Livestock (MFAL). To perform this task, the necessary measures have been taken by MFAL in order to protect the health of consumers and the public. However, insufficient knowledge of the policies and measures taken by the doubts and concerns about a number of consumers lead to the reliability of the food.

The aim of this study demographic characteristics of consumers, to identify the relationship between living standards and food shopping habits, determine the level of awareness by the MFAL of measures taken to ensure food safety and to develop recommendations in this context.

Research is the largest city in Turkey and 13.7 million people live in Istanbul, made in the first quarter of 2013. Proportional sampling method was used in this study. Making process of sampling margin of error of 1.4% and the 95% confidence interval studied. In addition to the unknown probability value of the subject on the values of p and q are considered to be 0.5.

2106 as a result of the calculations according to these data, the sample size was determined as t. Chi-square analysis of the data, Visual Relationship analysis (TIA), and logistic regression analyzes were used.

Consumers are average age 38.32, college graduates 46.3%, family population 3.4, number of children 2.6, the average family income 2.495 TL/month, average food expenditure 610 TL/month,

Consumers are the most purchase from supermarkets that red meat (45.3%), chicken meat (56.5%), milk (70%), dairy products (74.8%) while they purchase fresh fruit and vegetables from district market (47.3%), while food most of their attention to freshness and expiration date, reliable information for the food they receive a large proportion of TV and the internet have been identified.

MFAL for public health policies, bread, salt and bran rates and arrangements for the school milk program and school canteens located right by consumers and supported. In some applications (increasing the amount of control, establishment of ALO Food Line and implementation arrangements for the sale of pesticides) and are no longer seen by consumers largely underreported.

## **Global Technological Cooperation, Confronting Energy Challenge;ITER Project** Aliakbar KIANI

New global changes bring opportunities and problems at the same time. Enhancement in information and communications technology facilitated globalization, but threats like global pollution, resources limitations, terrorism, and minorities rights are of concern. We have to use those instruments to deal with other difficulties in the current and future life of humankind. Additionally, transformations in the international structure, renovations in governments' functions, and the evolution of some key concepts like security have widely commuted our approach in this framework. Continuous decades of individual efforts toward development and competition and conflict with others are our current unsuccessful experiences. Modern communities (like the EU) setting up new tactics, fulfill their desire for progress and welfare in cooperation with others. Such universal and regional (not necessarily geographical) agenda has established a global cooperation regime. Nowadays, the important role of energy in the development

process is clear. At the same time, energy and related issues have been one of the main challenges in the world. But the ITER Project is a real and amazing example of an evolution in the global arena. What began in 1985, with premier agreement between Soviet Union and the USA, over 35 years, after long-term efforts by politicians and technologists, has reached today's stage. What is important for us about the ITER Project, beyond disputes on its benefits or damages or even feasibility, is its achievement in international peace and development, and presenting a model for cooperation in place of conflict.

### **Economywide Effects of ECO Regional Integration in a Standard GE Closure (A GTAP Model Approach)**

Abdollah MAHMOODI

This study assesses the impact of ECO regional integration on some important economic variables in Eco member countries. The role of regional trade agreements in rising of exports and imports, and improving of welfare and many other economic variables of regional economies is the debate of many economists. Empirical literature does not address this issue for ECO. This paper uses global trade analysis project (GTAP) modeling approach to simulate cut of trade barriers between ECO members. In a standard GE closure, using a multi-region, multi-commodity GTAP modeling, simulation results show that, trade policy reform improved ECO members' economic performance, by means of greater exports, imports and output, lower import prices, higher endowment demand, and higher consumption, utility and welfare. Decomposition of welfare changes, demonstrated that impacts of trade policy has different effects on ECO members' welfare components.

### **Assessment of Institutional Quality in Resource Rich Caspian Basin Countries**

Jeyhun MAMMADOV, Ingilab AHMADOV, Kenan ASLANLI

Natural resource dependence is believed to have potential impact on institutional development, and there is growing consensus in the academic literature that institutional weakness is central to the explanation of the negative effects of resource booms. Generally, the quality of institutional framework and natural resource dependence interact mutually. Natural resources rents can damage institutions by removing incentives to conduct reforms and even to establish a well-functioning bureaucracy. Also, weak institutional quality is the ultimate cause for a disadvantageous management framework of natural resources and process of converting revenue flows into economic development. This paper examines the connection between institutional quality and resource dependence in resource-rich Caspian Basin countries (Azerbaijan, Kazakhstan, Russia, Turkmenistan) with transition economies. The analysis for the total natural resources rents suggests that, in aggregate, revenues on total natural resources have a negative impact on government effectiveness.

### **Tourism as the Main Factor of Socio-Economic Development of Regions in Azerbaijan**

Rufat MAMMADOV

After World War II tourism industry grew rapidly. First attempts were centralized on mass tourism but as the industry developed the profits grew rapidly. New forms of

tourism occurred. In this respect, the economic and social effects of tourism showed that this industry is one of the main industries after oil sector. Because from the socio-economic point of view the development of tourism in the country leads to reduction of unemployment, improvement of infrastructure, development of communication technologies, increase in nation's welfare, interaction of cultural values. Together with those benefits thanks to tourism industry the positive image of the country is formulated in the world. Under this positive image it lies political and economical stability.

Taking into consideration all these factors, Azerbaijan Government is also developing in this respect. In general, Azerbaijan is one of rare countries in the world possessing 9 climatic zones out of 11, at the same time, her tourism industry grew 22% in 2012 in comparison with the previous year. All these factors give the opportunity to develop tourism and receive benefits from it.

It is not by chance Azerbaijan took effective policy in tourism. The regions in Azerbaijan have great opportunities for the development of ecotourism, mountainous tourism, religious tourism, sport tourism, medical tourism, recreational tourism, winter tourism, and sea, sand, sun tourism.

The purpose of this article is to show the importance of tourism industry, indicate the current situation of tourism in Azerbaijan, show the current situation in the regions, the current policies and strategies for tourism, and in the conclusion to give proposals for future development of tourism. For this purpose, world literature in tourism will be analyzed, statistical information of Azerbaijan and World Tourism Organization will be used.

### **Identifying Demand-Supply Ratio in the Labor Market of Azerbaijan: Informational Aspects**

Masuma MAMMADOVA

Currently, issues of planning the development of staff capacity in line with the demand in the labor market and bringing supply of various specialists in terms of both quantity and quality in conformity with demand of sectors of national economy as well as regionally are quite relevant. Continuously evolving economic situation, fierce competition in the labor market, rapid changes of technology entailing expedient aging of knowledge lead to changes in the content of professions and specializations, and necessitate new requirements for structure and quality of manpower as well as its competitiveness.

Official sources of information allow to analyze largely some quantitative aspects of demand and supply. However, the main difficulty in reconciling demand and supply in the labor market nowadays is caused by high level of dynamism and diversification in requirements of specific enterprises (employers) on labor resources.

The report analyzes sources of information provision in the sphere of identification of demand-supply ratio in the labor market of Azerbaijan, and points to problems in determining real state of and reconciling demand for and supply of labor.

### **Development Inclinations of the Human Potential in the CIS Countries**

Farhad MIKAYILOV

This article has investigated the trend of human development in the Azerbaijan Republic. It was accordingly analyze indices subgroups affecting human development, and compared the average for the countries of the Caucasus, the CIS and the world.

It was also summarized the factors affecting human development and to develop proposals and recommendations.

### **Unlocking Caspian Gas Potential: Azerbaijan's Vital Role in European Energy Supply Diversification**

Nigar MURADKHANLI

The energy sector is the most dynamically developing strategic industries of the economy. Energy security was the priority after two oil crises in the 1970s, resulting in industrialised countries diversifying energy sources and non-OPEC areas increasing production. Europe as a whole is a major importer of natural gas. As Europe's natural gas production has declined in recent years, its dependence on imported natural gas has increased. The EU member states are the world's largest energy importer, importing about 55% of their energy supply—approximately 84% of their oil and 64% of their natural gas. European Commission forecasts that the EU will import over 80% of its natural gas needs by 2030.

### **Azerbaijan 2020: New Directions of the Economic Policy**

Adalat MURADOV

Focusing attention on issues still to be resolved in Azerbaijan's economy, "Azerbaijan 2020: Outlook for the Future" Development Concept, adopted on December 29, 2012, defined the development vector of the whole country by 2020. The main strategic view of the concept is to take account of the current opportunities and resources and attain a stage characterized by sustainable economic growth and high social welfare, effective state management and supremacy of the law, the full ensuring of all human rights and freedoms and the active status of the civil society in the country's public life. In 2020, Azerbaijan is expected to be an economically and politically developed and competitive country where the population's incomes are high, unemployment is minimum, human capital is highly developed, the environment is health and protected, every citizen has broad opportunities.

This is the first time the Concept has established the basic outlines of a number of new directions in Azerbaijan's socio-economic policy until the year 2020, as well as the country's "economic development after oil".

Firstly, the country's economy will be transformed into the high value added economy. Secondly, the export-oriented economic model was taken as a base. In other words, the import-oriented strategy will be substituted by the export-oriented strategy.

Thirdly, taking into account the competitive advantages of each region, the distinguishing feature of economic policy to be implemented in the upcoming period, will be the creation of the regional development centers.

Fourthly, the concept is expected to aim of transformation of the country's economy into the efficient economy and transition it to the phase characterized by a predominance of innovations.

Innovative business development, scientific product and technology development and application of scientific innovation for the industrial parks and zones will be created.

Fifthly, this concept is also designed to improve the use mechanism of the oil and gas revenues. The strategy of gradual replacement of the revenues proceeded from the sale of hydrocarbons with the income earned from the investment of those funds will be implemented.



Sixthly, this concept put forward a new approach to very interesting social issues. In 2013-2020, the share of the funding for education in GDP will reach the appropriate indicator in developed countries.

Seventhly, the issue of poverty within the framework of the concept is assessed at the level of the concept of “multi-factor poverty” in line with modern approaches to the human development concept.

At the same time, it should be noted that the principle of the continuity of economic policy was taken as a basis and the concept was designed to continue the important policy measures undertaken in previous years.

### **Exploring Public-Private Partnership in Preschool Education Provision as a Contributor to Socio-Economic Development**

Aynur NABIYEVA, Ulviyya MIKAYILOVA Vitaly RADSKY Aynur NABIYEVA

Equitable and quality education provision is widely recognized as an integral part of socio-economic development. Current theories propose different approaches for explaining the impact of education, and of early-childhood education in particular, on economic development. Despite opposition to the idea of assigning returns (especially monetary returns) to distinct periods in a child’s development, a substantial body of literature supports the correlation between educational interventions and individual and national productivity. For example, Heckman (2006) uses economic model analysis to link investments on different age groups to skill formation later in life. He demonstrates the relationship between education and economic success at later stages of the life cycle, and shows that the return to investment at earlier stages of development, particularly during preschool years, has the highest rate of return. Over the last decade, this return on investment- based analysis of educational investment has become increasingly influential with policymakers throughout the world.

Drawing from a small-scale pilot project launched and implemented by the Center for Innovations in Education (CIE) in the Shamkir region of Azerbaijan, this paper analyzes the potential of public-private partnerships (PPP) in preschool education and social support provision as a model contributing to accessibility and affordability of these services, in addition to rejuvenating employability of a largely unemployed population of preschool professionals. The project focuses on supporting families with young children through community-based preschool services and improving the quality of primary education.

### **The Study of Employers as a Way to Get Additional Information about Labour Market Needs**

Akima OROZALIEVA

This research paper dedicates to problems of labor market’s research in order to gathering a reliable data on its condition. Obtained information promotes a detailed situational analysis on labor market and creates a basis for work out the measures for reducing the unemployment in a country. Furthermore, the paper represents the outcomes of employers research survey conducted on a country level.

## **Economic Cooperation Organization Member Countries Economic Development, the Importance of Assessing Technoparks**

Yahya ÖZDEMİR

Advanced technologies in the world, especially in the last quarter century of rapid change, radical innovation were required to compete in important decisions, triggered by the national network of cooperation structures is a very significant changes in participates in the regional country or new technology generation and transfer systems to be released; starting from the most basic research on the effect of knowledge production, commercialization, distribution of the total well-being of society is an important dating "shining knowledge value chain". This important change, has become the main formative element of the economies. Recent advances in the knowledge economy and the resulting new strategic theories, knowledge, technology transfer and increased mobility at the long distances, the concept of regional development is a brand new technological cooperation aims and information focusing on the transformation processes of growth of the economies of developed nations are experiencing today, which is the most important technological innovation in the vision of the economic development advanced plays an important role, evolving processes trigger in all aspects of the right to readmost threats and opportunities that might be the best analysis, by passing the appropriate policies for countries in their visions, and entrusted a vital importance.

In this context, Azerbaijan, Turkey, Afghanistan, Iran, Kazakhstan, Kyrgyzstan, Pakistan, Tajikistan, Turkmenistan and Uzbekistan in addition to research, technology development and production partner countries ' Innovation structures sharing with R&D Center in technoparks, thanks to the advanced technology and the production of these technoparks produced this advanced technology, technology to provide application process so that it can be imported, and the country's socio-economic and technical ways by its proponents, to serve together in the development of the total synergies "of the economic cooperation organization" will have an important place in the world economy and will create a strategic vision in this geography perception is of great importance.

## **Effect of Boric Acid Content on the Structural and Optical Properties of ZnO Films Prepared by Spray Pyrolysis Technique**

Mustafa ÖZTAS, Zehra KAYA

Boron doped ZnO films were prepared by spray pyrolysis technique at 450 °C substrate temperature, which is a low cost and large area technique to be well-suited for the manufacture of solar cells, using boric acid (H<sub>3</sub>BO<sub>3</sub>) as dopant source, and their properties were investigated as a function of doping concentration. X-ray analysis showed that the films were polycrystalline fitting well with a hexagonal structure and have preferred orientation in (002) direction. And optical band gap of the undoped and B-doped ZnO films were found to vary from 3.46 to 3.29 eV. The changes observed in the energy band gap and structural properties of the films related to the boric acid concentration are discussed in detail.

### **Impact of Economic Liberalization on Intra-Industry Trade: A case Study of ECO** Saeed RASEKHI, Mustafa Esmailnia MANSOUR, Saleh GOLTABAR, Elham RASOULIAN

Economic liberalization is one of the most important factors affecting on trade, especially intra-industry trade. This paper has investigated the impact of economic liberalization components on intra industry trade according to theoretical and empirical framework. The hypothesis is economic liberalization has a positive effect on intra-industry trade. For testing this hypothesis, we have used a panel data model for ECO during period 2001-2011. Based on the results, the hypothesis is verified. Based on the results of the study, we recommend that the ECO member countries should move toward a greater integration meanwhile, economic liberalization efforts should be considered.

### **Assessment of Economic Development Level on Regions in the Countries that are Member Countries of Economic Cooperation Organization**

Matanat RASULOVA, Elnur RUSTAMOV

In modern period, provision of sustainable development of national economy and improvement of the quality of people's social life is one of the most important tasks standing in front of all states. Developing countries should accelerate the development of the production areas through the efficient use of existing labor resources, natural and economic potential of the regions in order to comprehensively develop from economic point of view and resolve the problem of poverty by improving the living standards of the population.

The aim is to assess the level of socio-economic development of ECO member states - Tajikistan, Uzbekistan, Kyrgyzstan, Kazakhstan, Turkmenistan, Pakistan, Afghanistan, Turkey, Iran and Azerbaijan, mutually compare them and take advantage from one another's experience in perspective.

Methodology. Diversification coefficient is used for the assessment of socio-economic development level of country regions in research work. Diversification coefficient is used for the assessment of difference of economy or status of field structure, diversification of product. Diversification of product – is transition to production output that has a wide range of nomenclature, more profiled than production structure that is one –way, mostly based on one product. Diversification of product, being one of the forms of competition in modern market economy, expresses the modification of the same product in important amount in the production.

### **Bargaining Power, Energy Security and Networks: an Applied Game Theory Approach**

Roberto ROSON, Franz HUBERT

Costs and benefits associated with a distribution network (e.g., gas pipelines, water irrigation) are shared by agents connected by the network. Therefore, economic incentives to join or to expand a network depend on how the network surplus is being distributed, which in turn depends on a variety of factors: position of each agent (e.g., a country) in a specific network, its reliability in the cooperation scheme (e.g., geopolitical stability), existence of market distortions and availability of outside options (e.g., alternative energy sources). This study is aimed at presenting a game theory

methodology that can be applied to real world cases, having the potential to shed light on several political economy issues.

The methodology is presented and illustrated with application to a fictitious network structure. The method is based on a two-stage process: first, a network optimization model is used to generate payoff values under different coalitions and network structures; a second model is subsequently employed to identify cooperative game solutions. Any change in the network structure entails both a variation in the overall welfare level and in the distribution of surplus among agents, as it affects their relative bargaining power. Therefore, expected costs and benefits, at the aggregate as well as at the individual level, can be compared to assess the economic viability of any investment in network infrastructure. A number of model variants and extensions are also considered: changing demand, exogenous instability factors, market distortions, externalities and outside options.

### **Development Inclinations of the Human Potential in the CIS Countries**

Qanimat SAFAROV

This article has investigated the trend of human development in the Azerbaijan Republic. It was accordingly analyze indices subgroups affecting human development, and compared the average for the countries of the Caucasus, the CIS and the world. It was also summarized the factors affecting human development and to develop proposals and recommendations.

### **Application of Marketing and Innovations in Social and Economic Development of the Region**

Fuad SAMEDOV, Akif FATULLAYEV, Irade ABDURRAKHMANOVA, Mushfiq ALIYEV

Important aspect of any business and furthermore innovative, marketing is. For the innovative companies which are guided by creation of concrete goods and services for the market, correctly organized market researches gain paramount value. In market economy ability to sell the product and knowledge of the market are of great value, than well executed scientific research. Cases when results of perspective scientific work didn't get on the market are known, and weaker development started being duplicated in mass scale, making considerable profit for her founders. More qualified management team which well knows the market and capable to agree with the investor was engaged in advance of such development.

As market researches have to be executed by the businessman when opening the innovative company, and the market cost of such services is very essential, the question of their carrying out often becomes "stumbling block" in creation of small enterprise. If the budget of the businessman doesn't allow to conduct necessary researches in full, it is possible to use receptions so-called (guerrilla marketing-low budget ways of advertizing and the marketing, allowing effectively to advance the goods or service, to attract new clients and to increase the profit, without putting or nearly without investing money. ) to obtain more or less authentic data on the market. As a rule, the accuracy of such forecasts – about 50-70% that is quite acceptable for a stage of creation of the new innovative project.

The second way of decrease in initial costs for marketing – to employ in the innovative company of the marketing specialist. This expert has to be well a sign with practice of

market researches for an assessment of market appeal of innovative idea and organize their carrying out in the company in necessary volume. Besides, the businessman creating the new innovative enterprise, can receive the necessary help with carrying out market researches in business incubator. After necessary data on the market will be received, it is possible to predict approximately the volume of future production and cost of production (service), using including materials and the practices described above. The businessman should plan carefully economy of future business, i.e. to make the business plan. As the business plan belongs to the documents developed in the course of planning, it should be noted a number of features of planning at the small innovative enterprise. They consist that the majority of standard indicators of the planning applied at the industrial enterprises, in this case can't be applied. First, in the first year of emergence of the small innovative enterprise it has no economic history, and the majority of planned indicators is based on indicators of last year, and even several last years. Secondly, even when the innovative enterprise will manage to hold on in the market one or two of the year, the economic statistics saved up in it can be applied to internal planning only with big reservations. The matter is that in the innovative enterprise the volume of made production and its quality significantly depend on personal factors: from specific irreplaceable employees, circumstances, etc. Therefore use of former indicators for planning of activity of the innovative company in the future in such situation, at least, will be inexact. In the first year of work of the innovative company it is best of all to plan its activity on the basis of expert estimates and as basic indicators to enter amount of works on research and development or if sales, sales volume in the market are already assumed.

It should be noted that the small innovative enterprise (especially again created) has to concentrate on the organizations of the most innovative process and on carrying out market researches. The innovative company can develop the business plan by means of the involved specialists consultants or the specialized companies. Anybody for the company won't organize innovative business. Creation of the small innovative enterprise comes to the end with its state registration after which it becomes primary economic link and gets the status of the legal entity. For the state registration it is better to charge preparation of documents to the expert. However before these initiators of formation of the small innovative enterprise it is necessary to accept a number of important decisions which will be reflected in constituent documents. It is necessary to make decisions on the following questions:

- 1 . definition of structure of founders of the enterprise;
- 2 . establishment of the size of authorized capital;
- 3 . determination of the size of a share contribution of founders in authorized capital;
- 4 . definition of the name of the small innovative enterprise as legal entity.

The success of education and functioning of the small innovative enterprise are in no small measure connected with as far as the team of initiators of the project realizes itself in an external environment, as much as possible using factors of support of innovative business. It is possible to refer communication with the scientific organizations, use of opportunities of territorial innovative infrastructure, system of privileges to them for small business.

## **Analyzing and Valuing of the Existing Situation of Export Multiplication in the Azerbaijan Republic**

Elchin SULEYMANOV

In this article, the export multiplicity of Azerbaijan Republic has been analyzed during 1995-2009. Firstly, the relationship between GDP on CPI has been estimated and it found as a positive and meaningful. Secondly, the effect of GDP on Net export has been estimated, where these two findings allow us to estimate the export multiplicity of Azerbaijan Republic. The export multiplicity of Azerbaijan Republic found as a 0.9, where it emphasize that effect of GDP on net export is meaningful and strong with including the effect of real effective exchange rate on net export.

## **Financial Reform and Liberalization in Iran and Comparison with Two ECO Members: Pakistan and Turkey**

Anoshirvan TAGHIPOUR

The aim of this paper is to examine and construct a financial liberalization (FL) index for Iran and compared with two ECO members (Turkey and Pakistan) employing the principal component method (PCM) and using the annual data of 40 years (1973 to 2013). This index is specifically helpful in monitoring the pace of liberalization and evaluating the impact of the policy on various aspects of the economy.

The constructed index shows that the financial liberalization process in Iran speeded up during the period of 1990 to 2009.

Comparing the FI index for Iran with Turkey and Pakistan shows that Iran and Pakistan both started financial reform since the early 1990s but Turkey started since the early 1980s. The figure of FL for Turkey reached to 5 out of 8 but for Iran and Pakistan was 3.5

## **Climate Change, Wheat Production and Food Security: a Case of Pakistan**

Anum TARIQ, Nazia TABASAM, Muhammad ASHFAQ

The objective of the present study is to determine the impact of climate change on food production of wheat and its per capita availability. Wheat production was taken as dependent variable whereas area, maximum temperature, minimum temperature and rainfall were taken as independent variables. Results revealed that in irrigated region, increase of maximum temperature of January and November has negative effect the wheat production where the minimum temperature of November and March gave positive effect on the wheat production. In rain-fed region, maximum temperature of January reduced the wheat production where maximum temperature of December, minimum temperature of January, February and November has increased the wheat production. Rainfall in February has negative effect on wheat production in irrigated region and rainfall in the month of March and October has negative and positive effect on wheat production in rain-fed region. Per capita availability of wheat by change in the temperature scenario will decrease by 199 kg/annum to 136 kg/annum from 2012 to 2050 and per capita wheat by change in the rainfall scenario will decrease the availability by 199 kg/annum to 124 kg/annum from 2012 to 2050. More investment should be on research and development programs. According to the change in the patterns of climate, cultivation routines should be adjusted. There is dire need to produce new heat and drought resistant seeds of wheat especially for rain-fed region.

### **Principal Features of Building Social Accounts Matrix and Improving Statistical Database for ECO Countries**

Vilayat VALIYEV, Malik MEHDIYEV, Arzu SULEYMANOV, Elnur ALEKBEROV, Rauf MUSAYEV, Elvira NAGOIBAEVA, Natalya ZAKHAROVA

With common borders the population, total area and GDP (PPP-based) of ECO member states are estimated as 416 million persons, 7.9 million m<sup>2</sup>, and US\$2.7 trillion respectively (2010 data). Although heterogenous in the extent, there is economic development, overall, with serious energy and transport-transit relations among countries that is reflected in growing trade turnover year-by-year. However, there are still rather unused resources and capacity in such areas of cooperation among countries as exchange of energy, transport services, agricultural and industrial goods, use of opportunities for tourism, promoting investment and innovation processes and other areas. Certainly, maximum and optimal use of these resources calls for availability of analytical means capable of accounting for relations both within member states and among them.

### **The Impact of Iranian Targeted Subsidy Plan on the Comparative Advantage of Dairy Farms**

Ali YOUSEFI, Parisa KARBASI Amir-mozafar AMINI

Production of animal protein has a major role in the human nutrition and health and a large share of economic value-added in agricultural sector. The Iran government implemented the Subsidy Reform Plan (SRP) on December 18, 2010 as the biggest surgery to the nation's economy in half a century in order to replace the subsidies on bread and energy (80% of total) with targeted social assistance. Given the importance of dairy industry, it is essential to determine the positive and negative impact of SRP. The aim of this study is to analysis the temporal effect of SRP on the comparative advantage of dairy farms in 2009 and 2011. Data was collected from a survey of 65 members of Isfahan Industrial Dairy Farms Cooperation through face-to-face interviews based on a structured questionnaire. The comparative advantage of dairy farms has been analyzed in the Policy Analysis Matrix (PAM) framework by calculation the ratios of domestic resource cost (DRC), social cost benefit (SCB), nominal protection coefficient of the product (NPCO, NPCI) and effective protection coefficient (EPC). The results indicate that after SRP, the government introduced the new milk price distortion in order to support the consumers, the nominal protection coefficient on tradable inputs (NPCI) has been decreased and farmers pays indirect tax. Moreover, the dairy farms still have the comparative advantage of production, but the DRC ratio has been increased. In order to improve the dairy farm profitability and the farmer's motivation, it is important to removal of the output price distortions and enhancing farmers' access to input markets.

### **Dynamics of the Major Indicators of Energy Security in the Context of the Sustainable Economic Development of the Azerbaijan Republic**

Nurali YUSIFBEYLI, Nasibov

At the present energy consumption is increasing worldwide. It is caused due to high living standards in the developed countries on the one hand and on the other hand the growth of energy-intensive industries in the mentioned countries. Generated peculiarities request particular pretense to energy security, playing key role of

economy and national security system. Despite the fact that energy security was initially focused on the oil supplies security, the complexity of growing energy systems requires detail study of energy security at the level of every energy branch sector.

This paper dedicates particular macroeconomic indicators, its status nowadays and prediction in the context of software for power grid development. The same time energy security system considered as well where electricity aspects studied mutually both external and national grid risks.

The vector of energy security is formed taking into account actual and predicted values of environmental indicators for each stage of development. Indicators of energy security foregrounded based on historical and current values of the energy security indicators and values compared with their limitation.

Vector energy security defined for three precondition status – stable, prior to stable and crisis condition. In the context of sustainable economic development of the AR the recommendations to enhance energy security are pointed out.



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**SECOND BAKU FORUM of ECONOMIC THINK-TANKS  
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STATES – 2014  
&  
SECOND INTERNATIONAL CONFERENCE  
on ENERGY, REGIONAL INTEGRATION and SOCIO-  
ECONOMIC DEVELOPMENT – ECO 2014**

***Honoring the 50<sup>th</sup> anniversary of the Institute for Scientific-  
Research on Economic Reforms,  
1964-2014***

The Institute for Scientific Research on Economic Reforms of the Ministry of Economic Development was launched as a Scientific Economic Research Institute under the Azerbaijan SSR State Planning Committee on October 2, 1964. The Institute has undergone a fulfilling path in the past 50 years contributing both scientifically and practically to implementation of economic reforms during the former Soviet period as well as after the country gained the independence. In addition, the human cadres developed by the Institute have had a distinguished practical impact in the leading state agencies as well as business entities.

October 1-3, 2014  
Baku, AZERBAIJAN

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## ECONOMIC COOPERATION ORGANIZATION

### ECONOMY JOURNAL

The purpose of the ECO Academic Journal is to publish high quality peer-reviewed applied policy research by ECO member states that has significance for the socio-economic development of a particular member state or the whole region. The target audience of the ECO Journal are academic circles as well as policymakers, practitioners and professionals of economic development as well as students.

The Journal is published twice a year for the first two years of operation. Starting from 2015, the journal will be published on a quarterly basis.

1<sup>st</sup> Meeting of the ECO Economy Journal Editorial Board was held on the 8<sup>th</sup> of November 2012 in Baku, Republic of Azerbaijan.

**2<sup>nd</sup> Meeting of the ECO Economy Journal Editorial Board is planned to take place on the 6<sup>th</sup> of December 2013, in Baku, Republic of Azerbaijan.**

For details please visit [www.ecosecretariat.org](http://www.ecosecretariat.org) and [www.ier.az](http://www.ier.az)





## Ministry of Economic Development of Azerbaijan Republic



# GENERAL EQUILIBRIUM MODEL OF THE REPUBLIC OF AZERBAIJAN

## What is AZMOD?

AZMOD is a powerful and state-of-the-art dynamic general equilibrium model for the Azerbaijan economy, built by a joint team of IETI (Institute for Scientific Research on Economic Reforms) of the Ministry of Economic Development and ECOMOD, the global leader in economic modelling.

In addition to the macroeconomic structure, AZMOD provides sector-specific results for the most important sectors of the economy.

Using AZMOD, policymakers can assess the impact of various policy measures on the economy as a whole and on the different sectors. The model also incorporates exports and imports by product and can be used for trade policy analysis.

AZMOD is a powerful policy-support system. The model is implemented in a user-friendly interface. End-users without a technical background in policy modelling can efficiently utilize the model, run simulations, and extract results in tables and graphs, and efficiently interpret the results.

AZMOD is destined to become a long-term, flexible tool to contribute to economic policy analysis at the sectoral, and macro levels in Azerbaijan. The model will be continuously maintained, updated, improved, and further developed.

## What AZMOD can be used for?

AZMOD can be used for impact assessment, scenario analysis and strategic planning for a large number of economic issues policymakers have to deal with, such as:

- **Impacts of oil price changes**
- **Tax policies**
- **Labour market issues**
- **Trade policies**

- **Government expenditures**
- **Industrial policies**
- **Investment policies**
- **Development policies**
- **Real estate**
- **Energy and environmental issues.**

## Why do we need a model?

Government's missions require strong analytical capabilities in order to monitor the economy, assess the impacts of alternative measures and scenarios, run forecasts and projections. Timely and reliable information is a key element in the policymaking process.

It is impossible to evaluate the impacts of policy changes or of internal and external shocks on the economy without a reliable and consistent model. Only a state-of-the-art model can take into account the complex and dynamic interactions among and between the economic agents and the markets.

Many policy measures have very compound and dynamic economy-wide effects. Only a state-of-the-art model can take into account the complex interactions in the economy.

Models help us in monitoring and analysing policies, as well as forecasting their impacts. Models also help us to understand complex issues and to take better decisions.

Models such as AZMOD are utilized by all the major leading institutions and governments in the world.

## Evidence-Based Decisions

The world economic environment has been changing rapidly under globalisation and the global financial and economic crisis, marked by intense competition, uncertainties, innovation, far-reaching disruptions, crisis, tech-

nological changes, and new institutional arrangements.

In such a dynamic, uncertain, and complex environment, policymakers and the business community need to monitor very closely the economic developments not only at the national and macro level, but also at the sectoral, regional, and international levels in order to define, adjust and implement their vision and strategies.

The AZMOD model is a powerful tool that can be used in all these areas to provide rigorous analysis for the decision-makers. Public and business decisions need indeed thorough and evidence-based scenario planning, impact assessment, forecasting, projections, and policy analysis.

## Economic Sectors in AZMOD

1. **Agriculture, hunting and forestry**
2. **Fish and other fish products**
3. **Mining industry production**
4. **Processing industry**
5. **Electrical energy, gas and water**
6. **Construction works**
7. **Trade services**
8. **Hotel and restaurant services**
9. **Transport, post and telecommunications**
10. **Financial intermediation, insurance and pension services**
11. **Services related to real estate, renting and other business services**
12. **Public administration and defense, compulsory social insurance services**
13. **Education services**
14. **Health and social services**
15. **Utility and other services**





# EcoMod2014

20<sup>th</sup> EcoMod Conference on Economic Modeling  
Bali, Indonesia  
July 16-18, 2014

The goal of the conference is to promote the exchange of ideas among economists conducting quantitative analysis for policy and decision making in the public and private sector. It will cover all areas of applied modeling in economics and finance.

The conference is co-organized and hosted by the Central Bank of Indonesia.

Important Dates and Deadlines:

**JANUARY 31, 2014:** Deadline for submissions of the abstracts.

**MAY 1, 2014:** Deadline for submission of the full paper.

**For details please visit [www.ecomod.net](http://www.ecomod.net)**



# EcoMod Modeling School

**January 2014 - Singapore**

**March 2014 - Washington DC**

**July 2014 - Prague**

The following courses will be offered:

- Practical General Equilibrium Modeling using GAMS
- Advanced Techniques in General Equilibrium Modeling using GAMS
- Financial General Equilibrium Modeling using GAMS
- Dynamic Monetary and Financial General Equilibrium Modeling
- Overlapping Generations General Equilibrium Modeling using GAMS
- Environmental CGE Modeling with GAMS
- Microsimulation CGE Modeling
- Introduction to Macroeconometric Modeling using EVIEWS
- Modeling and Forecasting Time Series Using EViews
- Macroeconometric Modeling using TROLL
- Global VAR modeling using the GVAR Toolbox 1.0
- Modeling for Public Finance Issues
- Dynamic Stochastic General Equilibrium (DSGE) Modeling Using the GIMF Model for Policy Analysis

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## NOTES



## NOTES





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## NOTES



## NOTES





## NOTES



## NOTES



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