

ABSTRACTS

1. **Afia Malik.** Crude Oil Price, Monetary Policy and Output: The Case of Pakistan. 425–436.

This paper has analysed the impact of rising crude oil prices on output. Crude oil prices and real output are found to be strongly related, and this relationship has a bell-shape. That is, when crude oil prices are below the critical level (i.e., 22 \$/bbl), the relationship between crude oil prices and real output is positive; whereas when the crude oil price rises and exceeds that critical level the relationship becomes negative. Moreover, high debt-GDP ratio, high deficit spending, and high real effective exchange rate would have a negative impact on output. While the existence of foreign exchange reserves and capital investment would cause output to rise.

JEL classification: E52, Q43

Keywords: Oil Prices, Output, Pakistan, Macroeconomy

2. **Muhammad Arshad Khan and Usman Ahmad.** Energy Demand in Pakistan: A Disaggregate Analysis . 437–455.

This study examines the demand for energy at disaggregate level (gas, electricity and coal) for Pakistan over the period 1972-2007. Over main results suggest that electricity and coal consumption responds positively to changes in real income per capita and negatively to changes in domestic price level. The gas consumption responds negatively to real income and price changes in the short-run, however, in the long-run real income exerts positive effect on gas consumption, while domestic price remains insignificant. Furthermore, in the short-run the average elasticities of price and real income for gas consumption (in absolute terms) are greater than that of electricity and coal consumption. The differences in elasticities of each component of energy have significant policy implications for income and revenue generation.

JEL classification: Q41, Q42, C50

Keywords: Energy Demand, Disaggregate Analysis, Cointegration

3. **Muhammad Nasir, Muhammad Salman Tariq, and Ankasha Arif.** Residential Demand for Electricity in Pakistan. 457–467.

For about a year now, Pakistan is facing the worst energy crisis of her history. If on one hand, the increase in the oil prices at the world level is severely affecting the common masses, on the other hand, the shortage of electricity is creating havoc in the country. Beside others, one important reason that is advocated for this shortage is the rise in electricity demand due to increase in production as well as rise in household income. Furthermore, it is believed that increasing the unit price of electricity will reduce the electricity demand. That is why the unit prices of electricity vary with different range of

unit usage. This motivates us to calculate price elasticity as well. Hence, using time series data from 1979 to 2006, we estimated ARDL model to investigate income and price elasticities of electricity demand. Our results show that electricity demand is price inelastic in both short run and long run. Moreover, income elasticity is almost unitary in short run as well as in long run. In addition, household size has a strong positive impact on electricity demand in Pakistan.

JEL classification: Q41, Q43

Keywords: Energy Crises, Income Elasticity, Price Elasticity, ARDL Model, Residential Demand

4. **Muhammad Shahbaz, Khalil Ahmad, and A. R. Chaudhary.** Economic Growth and Its Determinants in Pakistan. 471–486.

This paper aims to investigate the impact of macroeconomic variables on economic growth after Structural Adjustment Programme (SAP) in Pakistan. In doing so, study utilises the quarterly time series data from 1991Q1 to 2007Q4. Advanced Autoregressive Distributed Lag Model (ARDL) approach has been employed for co-integration and error correction model (ECM) for short-run results in the case of Pakistan. Empirical investigations indicate that credit to private sector (financial development), foreign direct investment and inflow of remittances correlate positively with economic growth in the long run. High inflation rate and trade-openness slow down the speed of growth rate in short as well as long run.

JEL classification: O1, C22

Keywords: Growth, ARDL Cointegration

5. **Naeem Akram, Ihtsham ul Haq Padda, and Mohammad Khan.** The Long Term Impact of Health on Economic Growth in Pakistan. 487–500.

The paper investigates the impacts of different health indicators on economic growth in Pakistan. Cointegration and Error Correction techniques have been applied on the time series data of Pakistan for the period of 1972–2006. We find that per capita GDP is positively influenced by health indicators in the long run and health indicators cause per capita GDP. However, in short run the health indicators fail to put significant impact on per capita GDP. It reveals that health indicators have a long run impact on economic growth. It also suggests that impact of health is only a long run phenomenon and in the short run there is no significant relationship exists between health variables and economic growth. The major policy implication of the study is that if we desire high levels of per capita income, we can achieve it by increasing and improving stock of health human capital, especially when current stocks are at lower end. Moreover, study also points out a rather diminutive role of public health expenditure in determining the per capita GDP.

JEL classification: I12, O15, C22

Keywords: Health Human Capital; Economic Growth; Cointegration, Error Correction

6. Arshad Hasan and Zafar Mueen Nasir. Macroeconomic Factors and Equity Prices: An Empirical Investigation by Using ARDL Approach. 501–513.

This study examines the relationship between equity prices and macroeconomic variables such as inflation, industrial production, oil prices, short term interest rate, exchange rates, foreign portfolio investment, and money supply for the period 6/98 to 6/2008 by employing bounds testing procedure proposed by Pesaran, *et al.* (2001). Autoregressive distributed lag (ARDL) approach has been applied as yields consistent estimates of the long-run coefficients that are asymptotically normal irrespective of whether the underlying regressors are $I(0)$ or $I(1)$. Data has been tested for econometric problems like serial correlation, functional form, normality, heteroscedasticity and unit root by using LM test, Ramsey Reset test, skewness and kurtosis test, white test and ADF Test, and Phillip Parren Test respectively but no problem has been observed. Results of the study reveal that industrial production, oil prices and inflation are not statistically significant in determining equity prices in long run while interest rates, exchange rates and money supply have significant long run effect on equity prices. The error correction model (ECM) based upon ARDL approach confirms that changes in industrial production, oil prices and inflation are not statistically significantly in short run while changes in interest rates, exchange rates, and money supply have significant short term effect. However, foreign portfolio investment has significant short term effect but no long term effect. The tests suggest that adjustment process is quite fast and model is structurally stable. This study facilitates the investors in taking effective investment decisions by estimating the future direction of equity prices using expected trends in exchange rates, money supply and interest rate. Similarly, study suggest to the architects of monetary policy to be careful in revision of interest rates as capital market responds negatively to such decisions. The study also suggest that macroeconomic policies should be designed keeping in view the response of the capital market because efficient market hypothesis indicates that capital markets respond to new information.

JEL classification: E31,G12

Keywords: Macroeconomic Variables, Multifactor Model, Pakistan, ARDL, Error Correction Model

7. Imtiaz Ahmad and Abdul Qayyum. Dynamic Modeling of Private Investment in the Agricultural Sector of Pakistan. 517–530.

The study attempts an empirical assessment of the effects of macroeconomic instability and public expenditures on private fixed investment in agriculture. We estimated the specified private fixed investment model. First applying ADF test for unit root analysis on individual series, and then examining cointegration relationship between private fixed investment in agriculture and its determinants using Johansen (1988) method. The stable short-run dynamic function for private fixed investment in agriculture is estimated. The result confirmed that public development expenditures enhance the private investment in agriculture sector. Macroeconomic instability and uncertainty depresses private investment for agriculture by creating uncertain current and future environment.

- 8. Muhammad Ali, Syed Arifullah, and Manzoor Hussain Memon.** Edible Oil Deficit and Its Impact on Food Expenditure in Pakistan. 531–546.

This study is an attempt to analyze the impact of Edible Oil Deficit on Food Expenditure in Pakistan for the period 1971–2008. Edible oil deficit is one of the major concerns for the policy-makers in Pakistan. Despite of having agriculture based economy; Pakistan is unable to fulfil her domestic demand of edible oil by local production. This situation forces the government to import edible oil and oil seeds from other countries. This import not only increases our balance of payment deficit but also it negatively affects the ability to finance the external debt repayments.

Autoregressive Distributed Lag model has been used to analyse the long run relationship amongst the variables. Other important determinants of food expenditure along with edible oil deficit were also used to check for their collective long run impact. It was found that long run negative relationship exists between edible oil deficit and food expenditure and hence the result derives the policy implication that there is a need to boost up the efforts in the agriculture sector to steadily increase the local production of oil seeds in the country. The relationship between the per capita GDP and food expenditure is found to be positive and significant with elasticity of 0.261 suggesting that 1 percent increase in per capita GDP will cause food expenditure to increase by 0.26 percent. The relationship between food subsidy and food expenditure is found to be insignificant suggesting that due to improper targeting and consumer's perception about quality and accessibility of subsidised food, Government's food support programmes are not effective.

JEL classification: I31, Q18, Q11, E23, D20, E00

Keywords: Edible Oil, Production, Imports, Trade Deficit, Balance of Payments, International Trade, Oilseed Crops, Agriculture, Pakistan, Edible Oil Deficit, Demand Function, Food, Inflation, Food Inflation, Household Expenditure.

- 9. Shahzad Sharif, M. Siddique Javed, Azhar Abbas, and Sarfraz Hassan.** Impact of WTO's Trade Liberalisation on Selected Food Crops in Pakistan. 547–563.

WTO has major implications for almost all the sectors of economy but agriculture sector is the one which is more prone to the implementation of its agreements, particularly the Agreement on Agriculture (AoA). The study intended to evaluate the impact of WTO on domestic market and farm-level prices, production and consumption of major food commodities like wheat and rice and ultimately their impact on the producer's and consumer's surpluses. The farm level impact was also evaluated to chalk out the eventual position at farm level with the purpose to identify necessary policies and actions to cope with the new world situation. The study tries to provide a useful guide to the likely impacts of agricultural trade liberalisation. It was found that openness of the economy would affect the domestic demand, supply and consumption along with affecting the producer and consumer surpluses. It was estimated that increased prices would have increased production of wheat which would have generated a gain of producer's surplus of Rs 10,682 million. On the other hand due to increased wholesale

price of wheat, the domestic demand of wheat would have declined and caused a loss to consumer surplus of Rs 12,557 million. Similarly, the increased production of rice would have generated a gain of producer's surplus of Rs 3,708 million. However, due to increase in the wholesale price of rice, its domestic demand would have declined thus causing a loss to consumers' surplus. Overall the impact of the increase in the international price of wheat would have resulted in a net loss to Pakistan of Rs 1,875 million during 2004-05 while in case of rice it would have resulted in a gain of Rs 1,215 million in 2004-05.

JEL classification: F13, F14, Q17

Keywords: Trade Liberalisation, Food Crops, Export, Consumer Surplus, Comparative Advantage, Free Trade.

10. Laura Giurca Vasilescu. Agricultural Development in the European Union: Drivers, Challenges and Perspectives. 565–580.

The agricultural and food sector of the EU has shown great resilience and adaptability over the last decades to a changing technological, economic and social environment. This adjustment took place within a supportive policy setting which contributed to alter the pace of this long-term process. Whereas the agri-food sector still represents today an important component of the EU economy, it has also shown critical importance for the environment and landscape in contributing over the centuries to creating and maintaining a variety of valuable semi-natural habitats and in continuing today to shape the majority of EU's landscapes.

Although a growing number of rural areas are likely to become increasingly driven by factors outside agriculture, many rural areas (in particular, those which are depopulated or dependent on farming) are expected to face particular challenges as regards economic and social sustainability.

The outlook for EU agricultural markets over the next years appears fairly favourable, most notably for the arable crops and dairy sectors. However, these projections are particularly sensitive to critical assumptions regarding the economic environment, policy developments (notably for trade and biofuels) and remain subject to some uncertainties (e.g., potential impact of climate change). These positive market perspectives together with future demographic trends, macro-economic patterns and environmental conditions will have important implications for the medium-term prospects of EU rural areas.

11. Zafar Iqbal. Impact of Global Financial Crisis on IDB Member Countries: The Case of Gulf Cooperation Council and Sub-Saharan Africa. 583–601.

2008 was a challenging year for the Islamic Development Bank (IDB) Group as well as its member countries because of unprecedented crises (food, energy, financial and economic crises). In particular, the ongoing global financial and economic crisis is source of concern for the IDB Group because of the magnitude of its impact on member countries. The banking sector faced unexpected challenges in terms of business growth, profitability, assets quality and liquidity, especially in the Gulf Cooperation Council (GCC) region. The year also witnessed steep fall in the stock markets in GCC and Sub-

Saharan Africa (SSA) regions. 2009 is also expected to be another challenging year as the global financial meltdown is causing rising unemployment and pushing more people into the poverty trap. IDB member countries may face a sizable decline in foreign capital inflows both from public and private sources. Due to weakening global economy, economic growth is to decelerate in both GCC and SSA regions. The current account surplus in GCC region is to squeeze, while in SSA region it is likely to turn into deficit. These trends portend a setback for member countries, especially in SSA region in achieving the millennium development goals (MDGs). However, the GCC region is relatively well placed to weather the ongoing financial crisis due to huge oil surpluses accumulated during the last few years, lower public debt levels, and more than one trillion sovereign wealth funds, which have cushioned the adverse impacts on investment plans in the region. In response to these crises, IDB Group has continued to enhance its development assistance and taken a number of special initiatives to help member countries mitigate the adverse impacts of these crises on their socio-economic development. However, economic recovery in member countries in the coming years will critically depend upon the deepness of the economic recession and their policy actions to revive their economies through effective socio-economic reforms. The instruments of Islamic finance can be considered a possible cure for the ailing global financial markets.

JEL classification: E65, F36, F43, N10, O11, O53, O55

Keywords: Global Financial Crisis, IDB Member Countries, Gulf Cooperation Council, Sub-Saharan Africa

12. Akmal Hussain. Institutional Imperatives of Poverty Reduction. 605–630.

13. Naheed Zia Khan. Instinctive Behaviour, Producer Surplus, and Corporate Social Responsibility. 631–642.

This paper addresses a phenomenon that cuts across many disciplines of the formal tradition of learning. Out of numerous multifaceted academic disciplines involved in the argument, psychology, economics and business management stand out, as reflected in the title of the study. The research on the topic is carried out by adopting an inductive approach involving intangible aspects of psychology and tangible parameters of sociology centred around the disciplines of economics and business. The author maintains that the phenomenon of Corporate Social Responsibility (CSR) represents a challenge of finding the resolution to the paradox of selfish and altruistic human motives. It is argued that quality of that resolution will be determined by the quality of positive laws of sociology and the quality of intrapersonal regulation to help appreciate social responsibility in the presence of opportunities for maximising self-interest. The review of the literature on CSR underpins factors of international political economy responsible for promotion of the phenomenon in North and South during the last century and in the new millennium respectively. The findings lead to the conclusion that rhetoric of CSR in countries like Pakistan merits the analysis of both its motives and fall out within a North-South divide.

JEL classification: L20

Keywords: Social Responsibility, Instinctive Behaviour, Positive Law, Ethical Behaviour, Stockholders, Technical Barriers to Trade.

- 14. Attiya Y. Javid and Robina Iqbal.** Ownership Concentration, Corporate Governance and Firm Performance: Evidence from Pakistan. 643–659.

The study investigates the determinants of ownership concentration, the effect of ownership concentration on the firm's performance with the sample of sixty representative firms from different manufacturing sectors of the Pakistan's economy during 2003 to 2008. The results suggest that firms where ownership is concentrated they do not adopt better governance practices and disclose less, however board composition has positive and significant role. The firm specific factors affect the concentration of ownership more, the more investment opportunities provides greater incentives for ownership concentration, however, size has opposite effect and leads to diverse ownership to get wider access to funds and share ownership. The results reveal that in Pakistan corporations have more concentration of ownership which is the response of weak legal environment. The concentration of ownership by top five block-holders seems to have positive effect on firms' profitability and performance measures. The family, foreign and director ownership also has positive affect on firm performance, however firm performance is not effected by financial institutions' ownership. The broad implication that emerges from this study is that ownership concentration is an endogenous response of poor legal protection of the investors and seems to have significant effect on firm performance. It requires implementation of corporate governance reforms at most at par with real sector and financial sector reforms.

JEL classification: G3 F3

Keywords: Ownership Concentration, Corporate Governance, Firm Performance, Panel Data

- 15. M. Idrees Khawaja and Sajawal Khan.** Pass-through of Change in Policy Interest Rate to Market Rates. 661–674.

This paper examines the pass through of the change in policy interest rate of the central bank of Pakistan to market interest rates. The market rates examined include KIBOR, six month deposit rate and weighted average lending rate. More or less complete pass-through of the change in policy rate to KIBOR is observed within one month. However, the magnitude of change in policy rate to deposit and lending rate is not only low but is slow as well. The pass-through to the weighted average lending rate is 47 percent and occurs with a lag of one to one and half year. The pass-through to the deposit rate is only 16 percent and occurs with a lag of one year. The asymmetry between the magnitude of pass-through to lending and deposit rates has served to increase the interest margin of the banks. The slow pass-through to the lending and deposit rate put limits on the effectiveness of interest rate as a policy tool. The pass-through, and hence the effectiveness of monetary policy will increase if all the lending and deposit rates are floating in nature and are quoted as KIBOR-plus and KIBOR-minus respectively.

- 16. Abdul Raheman, Talat Afza, Abdul Qayyum, and Mahmood Ahmed Bodla.** Estimating Total Factor Productivity and Its Components: Evidence from Major Manufacturing Industries of Pakistan. 677–694.

This paper estimates the trend in total factor productivity growth for eleven major manufacturing sub-sectors/industries listed on Karachi Stock Exchange. 1998 to 2007 Malmquist total factor productivity growth indices have been calculated using non-parametric Data Envelopment Analysis which also shows TFP growth sources including efficiency change and technical change. The results of this study are showing a mixed trend for all manufacturing sub-sectors/industries in terms of TFP, technical efficiency change and technological change. Cement and Oil and Gas marketing sectors depict a relatively stable position. Most of the manufacturing industries have gained, in terms of technical efficiency but the technical change is putting a negative affect on the productivity growth except for a few industries.

JEL classification: L6, G1, G3

Keywords: Data Envelopment Analysis, Manufacturing Sector, Malmquist Productivity Index, Total Factor Productivity, Technical Efficiency Change, Technical or Technological Change, Pakistan.

17. **Naseem Akhtar, Nadia Zakir, and Ejaz Ghani.** Changing Revealed Comparative Advantage: A Case Study of Footwear Industry of Pakistan. 695–709.

The study looks at the issues facing the footwear industry regarding its competitiveness in the global perspective and its potential for growth. The methodology of Revealed Comparative Advantage (RCA) is used to analyse the comparative advantage at 2-digit and 4-digit levels of industrial classification. The paper highlights the problems faced by the footwear industry and identifies the role of entrepreneurship for the progress of the industry. The analysis shows that in recent years, specifically the period from 2003–06, the footwear industry has moved from disadvantage (as compared with China and India) position to comparative advantage. The study indicates that there is potential for higher growth of the industry and it can become a source of export earnings. The study suggests that in the rapidly changing global economic environment and in the face of increasing cost of doing business in Pakistan, there is a need to strengthen the competitiveness of the footwear industry in Pakistan.

JEL classification: L67

Keywords: Revealed Comparative Advantage, Footwear, Pakistan.

18. **Kanwal Zahra, Parvez Azim, and Afzal Mahmood.** Telecommunication Infrastructure Development and Economic Growth: A Panel Data Approach. 711–726.

The present study empirically investigate the dynamic relationship between telecommunication infrastructure and economic growth, using data from twenty-four low income, middle income and high income countries for a 18 years period, from 1985–2003. With a panel data set, this study uses dynamic fixed effect and random effect models for estimation, which allows us to test the relationship between country's economic growth with initial economic condition, fixed investment, population growth, government consumption as well as telecommunication infrastructure. The results show that telecommunication is both statistically significant and positively correlated to the real GDP per capita of these countries included in the study. The results are robust even

after controlling for investment, population growth, past level of GDP per capita and lagged growth. The results further indicate that the telecommunication investment is subject to increasing returns, suggesting thereby that countries gain more and more with the increase in telecommunication investment. The second test, Granger's causality test confirms the causal relationship between telecommunication infrastructure and economic growth, but the relationship is significant from telecommunication to GDP per capita side but insignificant on GDP per capita to telecommunication development side.

JEL classification: F43, O14,

Keywords: Telecommunication Growth, Panel Data, Fixed and Random Effect, Granger Causality

- 19. Amina Tabassum and M. Tariq Majeed.** Economic Growth and Income Inequality Relationship: Role of Credit Market Imperfection. 727–743.

This paper examines the empirical relationship between economic growth and income inequality both at aggregate and regional level using more comparable data set for 69 developing countries over the period 1965–2003. The study identifies credit market imperfection in low-income developing countries as the likely reason for a strong negative relationship between income inequality and economic growth. While in short run the relationship between growth and income inequality might be positive but over time more income inequalities reduces economic growth. Moreover, this paper finds evidence that more physical and human capital investment, openness to trade and higher government spending have statistically significant impact on enhancing economic growth and reducing inequality.

Keywords: Economic Growth, Income Inequality, Poverty, Credit Market Imperfection, Trade Openness

- 20. Qazi Masood Ahmed and Akhtar Lodhi.** Provincial Finance Commission: Options for Fiscal Transfers. 747–762.

The Provincial Finance Commissions were constituted in all four provinces of Pakistan in 2001. The Commissions were asked to formulate a formula for the distribution of resources among the districts in their respective province to ensure smooth functioning of the local governments and to minimise the poverty and income inequalities among the districts. This paper analyse to what extent the existing development transfers are based on the existing level of deprivation in the districts by looking at the Rank Correlation between them. This paper also runs different simulations to suggest different options for the provincial governments to improve the distribution formulas.

- 21. Attiya Y. Javid, Umaima Arif, and Abdul Sattar.** Testing the Fiscal Theory of Price Level in Case of Pakistan. 763–778.

The study tests the fiscal theory of price determination for Pakistan's economy for the period 1970 to 2007. The evidence is less clear cut to infer that authorities are following a certain type of regime fiscal dominant or monetary dominant during the sample period. The liabilities responses negatively to the innovation in surpluses, that

is in the subsequent period the liabilities decreases in face of increase in surplus. This characterises monetary dominant regime, the events that give rise to surplus innovation are likely to persist causing the rise in the future surpluses and surpluses pay-off some of the debt causing the fall in the liabilities. By analysing the behaviour of nominal GDP, an innovation in surplus reduces nominal income and decreases the level of debt in the subsequent periods, this analysis also confirms the Ricardian analysis. On the other hand, the study finds that, as predicted by the fiscal theory of price determination, the occurrence of wealth effects of changes in nominal public debt may pass through to prices by increasing inflation variability in case of Pakistan. The implication that comes out of this study is that nominal public liabilities, as reflected either in money growth or in nominal public debt, matter for price stability in case of Pakistan. The authorities may be following different regimes for different time periods during the 1970-2007.

JEL classification: E52, E62, E63, E31

Keywords: Fiscal Theory of Price Level, VAR, Fiscal Policy, Monetary Policy

- 22. Faheem Jehangir Khan and Musleh ud Din.** Attitude Towards Civil Service of Pakistan: A Perception Survey. 779–790.

Amid growing concerns on the popularity of the civil service among the students, the study reports the findings of a perception survey of enrolled university students. Contrary to common perceptions, the results suggest that the civil service still retains its allure among the potential entrants. Those who prefer the civil service as a career are more concerned with job security than those who prefer a job in the private sector. The Foreign Service of Pakistan appears to be the most favourite group whereas the Accounts Group is the least preferred. The District Management Group (DMG) seems to no longer enjoy a coveted position due perhaps to the implementation of the devolution plan which has stripped the group of its power and privileges.

JEL classification: H83, J24, M51

Keywords: Students, Civil Service, Public Choice, Job Search, Employment Decision

- 23. Shahid Ali, Somia Irum, and Asghar Ali.** Whether Fiscal Stance or Monetary Policy is Effective for Economic Growth in Case of South Asian Countries? 791–799.

The relative significance of fiscal and monetary policy has been one of the most unsettled issues in economics. Relevant literature shows that the study of the effectiveness of monetary and fiscal policy is equivalent to the study of the relative efficacy of Keynesian economics and monetarism. This study investigates the relative effectiveness of both types of policies in the context of modern panel data analysis in case of *South Asian Countries* during the period from 1990 to 2007 to test the Monetarist and Keynesian claims, and to find out that whether the policy instruments have a significant relationship with economic growth. *Im, Pesaran, and Shin* and *Levin, Lin, and Chu* tests have been used to investigate the order of integration. For long run and short

run relationship we utilised the advance Autoregressive Distributed Lag Model *ARDL* a co-integration (panel) test and *ECM* (Error Correction Method) respectively.

JEL classification: E62, E52, C33.

Keywords: Fiscal Policy, Monetary Policy, Panel Co-integration

- 24. Paul A. Dorosh.** Regional Trade and Food Price Stabilisation in South Asia: Policy Responses to the 2007-08 World Price Shocks. 803–813.

World price shocks and disruptions in international cereal trade in 2007 and 2008 caused considerable anxiety and hardship for food importing countries throughout the world. In South Asia, Pakistan, Afghanistan, Bangladesh and India were all affected by these movements in international prices, though the effects on domestic prices in each case was mitigated or exacerbated by each country's own trade policies, as well as the trade policies of its neighbours.

This paper reviews domestic and international trade policies in South Asia in recent years and argues that liberalised international trade still provides the best mechanism for stabilising prices and food supplies in most years. Nonetheless, appropriate contingency policies still are needed for years in which international prices are extraordinarily high. More explicit commitments to cereal trade liberalisation within South Asia would also promote region-wide food security and help avoid a repetition of export supply disruptions by India that contributed to sharp rises in food prices in Bangladesh, and similar restrictions by Pakistan that contributed to food price increases in Afghanistan.

JEL classification: Q18, Q17, O24

Keywords: Food Security, Price Stabilisation, Trade Policy, Food Stocks, South Asia

- 25. M. E. Tusneem.** Food Security in a Changing Climate. 815–816.

- 26. Zakir Hussain and Waqar Akram.** Persistent Food Insecurity from Policy Failures in Pakistan. 817–834.

The observable fact was known to be hunger in the 1980s but now terminology has been shifted to insecurity. Improving the household food security is an issue of supreme importance in millions of people in the world who are suffering from persistent hunger and malnutrition and those who are at risk of doing such in the future. Many developing countries are making efforts to improve this situation but they are facing budgetary and resource constraints. Achieving a sufficient food supply and making it sustainable remains a global challenge. Indus agriculture system in Pakistan has experienced a Green Revolution and is striving for yellow and blue revolutions. However, it could have not done far better due to inconsistent and incompatible agriculture policies. Wheat, rice and maize are the dominant food crops in Pakistan. Several programmes and policies have attempted to increase the productivity of these crops and help consumers against better access to food.

Wheat is the staple food for Pakistan and due to its erratic production food security becomes insecure; however, if wheat production is coupled with rice and maize Pakistan is a food secure country. The policy paper has reviewed issues confronting the food security equation of the country. The paper highlights the determinants of the food security and policy issues. The lopsided government food and agriculture policies are the main cause of persistent food insecurity in the country.

Keywords: Food Insecurity, Economics Access, Poverty and Terms of Trade

- 27. Ather Maqssod Ahmed and Asma Hyder.** Sticky Floors and Occupational Segregation: Evidence from Pakistan. 837–849.

The paper uses the micro data from nationwide Pakistan Labour Force Survey 2005-06 to examine the hypothesis of glass ceilings and sticky floors, both in public and private sectors. The study explores the conditional gender wage distributions at different quantiles—a subject that so far has not attracted much attention in Pakistan. The results support that the gender wage differentials monotonically increase as one moves towards the bottom floor of the conditional wage distribution, i.e., the evidence validates the sticky floor hypothesis. The second sub-theme of the paper has been to investigate those factors that encourage occupational segregation in the labour market. For this purpose, an index of occupational segregation has been calculated for each of the occupational group. The value of Duncan's D (Duncan Gender Occupational Dissimilarity Index) suggests that 40 percent employees (both men and women) have to change their jobs for an identical male and female labour force distributions. As a final result it has been established that the female participation has been very low, particularly in high paid occupational categories like managers, legislators and senior officials.

JEL classification: J16, J31, J62

Keywords: Gender Discrimination, Wage Differentials, Occupation Segregation

- 28. Rashida Haq and Uzma Zia.** Dimensions of Well-being and the Millennium Development Goals. 851–876.

Well-being and happiness, individually and collectively, is a main indicator of a good life. This paper attempts to implement empirically some of the multidimensional concepts of human well-being by using data from the 'Pakistan Living Standards Measurement Survey' 2006-07. Objective well-being index and subjective well-being index are constructed to study regional disparities in the quality of life. The results reveal that most of the top ranked districts are located in the province of Punjab which tends to indicate that Punjab is ahead of other provinces in terms of objective well-being. Sindh and NWFP districts are dominated in the category of lower medium well-being category. At the lower end of the distribution districts of Balochistan emerged in lowest category of well-being. It is observed that Punjab have highest share of population in top category of well-being while population of Balochistan gets major share in lowest category of well-being. It is important to note that those districts which have higher achievements in hard facts of well-being, acquire less subjective well-being in term of satisfaction. Districts of Balochistan, with least developed indicators, perception about the quality of life is

evident in their lowest level of satisfaction. Since the underlying premise of the MDGs is still the concept of human development, so priorities is needed to concentrate on least developed districts for achieving the MDGs by 2015.

JEL classification: I31, I32, D19, D78

Keywords: Well-being, Objective, Subjective, Measurement, Quality of Life

29. Sonia Ahmad and Ahmed Gulzar. Inter-city Variation in Prices. 877–892.

In this paper we have constructed a relative cost of living index for 32 cities/towns of Pakistan using latest available prices to understand the extent of current differences in cost of living across cities and also to compare changes in relative cost of living since 1999 [Pasha and Pasha (2002)]. The index values reveal significant differences in cost of living across Pakistan and especially across provinces with prices significantly higher in Balochistan (overall) and NWFP (for wheat). When regressed against various explanatory variables, the variation in cost of living appears to be determined by the population in cubic form (reaching a minimum for a city size of 2.1 million) and the provincial affiliation of cities. The index also reveals that relative to 1999, the economy as a whole appears to have become *less* integrated as the difference in prices across cities is much greater than in 1999. However, cities in Sindh due to their close proximity to the port have become less expensive because of the increased share of imports in consumption. The findings of this paper have very important implications for public policy with respect to transfer payments to relieve poverty, urban development, inter-provincial trade and transport and allocation of development funds among provinces.

JEL classification: R, R1, R11

Keywords: Regional Economics Measurement, Regional Economic Activity, Growth, Development, and Changes

30. Tamkinat Rauf and M. Wasif Siddiq. Price-setting for Residential Water: Estimation of Water Demand in Lahore. 893–905.

The Water and Sewerage Agency (WASA) of Lahore is facing soaring demand and rising costs. But while massive investments are made to augment supply, tariffs remain low and are not adjusted in line with growing expenses. This has resulted not only in heavy and increasingly unsustainable reliance on loans and subsidies, but also in consumers undervaluing the resource, resulting in its inefficient utilisation. In this scenario, water tariffs badly need to be reformed.

This study explores the potential of a pricing policy to regulate residential water demand in order to achieve the objectives of cost recovery, efficient water use, and equitable allocation of water resources. To this end, a demand function is estimated using household level data about water consumption and socio-economic characteristics of 156 households supplied by WASA, Lahore, for the period 2004–2006.

Under block-rate tariffs the price variable is endogenously determined and a system of simultaneous equations emerges, solved here using two-stage least squares method. The estimated model explains 57 percent variation in water demand.

The study finds water demand to be inelastic to price and, considering WASA's exceedingly low tariffs, recommends up to 50 percent increase in the current tariff structure. Further computations show that a 50 percent increase will not endanger lifeline water supply. However, tariff increases may not be felt uniformly across all income groups, and absence of income data remains a limitation of this study. The study also recommends linking the non-volumetric part of tariffs to wealth-determined variables, such as property value and income.

Keywords: Water Demand; Price-setting

- 31. Amara Amjad Hashmi, Maqbool H. Sial, and Maaida Hussain Hashmi.** Trends and Determinants of Rural Poverty: A Logistic Regression Analysis of Selected Districts of Punjab. 909–924.

Poverty is widespread in the rural areas, where the people are in a state of human deprivation with regard to incomes, clothing, housing, health care, education, sanitary facilities and human rights. Nearly 61 percent of the country's populations live in rural areas. In Pakistan poverty has been increased in rural areas and is higher than urban areas. Of the total rural population 65 percent are directly or indirectly linked with agriculture sector. In Pakistan more than 44.8 percent people generate their income from agriculture sector, and the higher rate of increase in poverty in the rural areas has provoked debate on growth and productivity trends in the agriculture sector. Therefore, it is the need of the hour to determine such factors which affect the poverty status of a rural household. Utilising unique IFPRI (International Food Policy Research Institute) panel data together with sub-sample of PRHS (Pakistan Rural Household Survey) for two districts of Punjab (Attock and Faisalabad) the present study aim at analysing and estimating the rural poverty trends and determinants of rural poverty from the late 1980s to 2002. The data was analysed by using binary logistic model and head count measure. The results show that the chance of a household tripping to poverty increased due to increase in household size, dependency ratio, while, education, value of livestock, remittances and farming decreased the likelihood of being a poor. Moreover, the socio-economic opportunities as represented by the availability of infrastructure in the residential region also play a significant role in the level of poverty faced by a household. This study makes a modest contribution by attempting to analyse the need for focusing on anti-poverty policies, which can nip the evil in the bud.

JEL classification: O18, I 32

Keywords: Rural Poverty, Poverty Trends, Agriculture Growth, Determinants

- 32. Abdul Jalil Khan.** Is There Any Role of Technological Inputs? A District-wise Analysis of Output Differential in Crop Sector. 925–946.

An investigation is performed to analyse the impact of technological inputs accompanied with traditional inputs over different periods of time on the output differential of four major crops including Wheat, Rice, Cotton and Sugarcane. Data related to different districts of the Punjab province have been used to conduct the

study. A multivariate statistical analysis is applied for this purpose, in which principal component (factor) analyses is carried out as a first step to reduce the dimensionalities in the data and to obtain the ranking of districts in two phases of time i.e., 1971-75 and 2001-05. Further analysis is made by developing indices on the basis of few selected top and low ranked districts four each; along with one more district as a special case due to pronounced improvement in its ranking. Technological inputs showed consistency and significant contribution towards crop output over the time with some district wise differentials.

JEL classification: O18, Q16, R34

Keywords: Technological Inputs, Crop Output, Index, District

- 33. Syeda Rizwana Shah, Aqsa Tabassam Bukhari, Amara Amjad Hashmi, and Sofia Anwer.** Determination of Credit Programme Participation and Socioeconomic Characteristics of Beneficiaries: Evidence from Sargodha. 947–959.

In Pakistan about 65 percent population live in rural areas. The rural credit markets are segmented and imperfect. Micro-credit is considered as a valuable technique to deal with imperfections of credit markets. In this study, we analysed rural credit market of District Sargodha, Pakistan to study the socio economic characteristics of the beneficiaries and identify the determinants of participation in credit programme in the year 2004-2005. To analyse characteristic the descriptive analysis was used. For identifying the factors affecting household access to credit and participation in programme, a binary Logistic regression model was employed. Results of both analyses showed that at household level, participation in credit programme was significantly related to household characteristics, where participants were indifferent to increase in rate of interest. More than 80 percent loan came from informal sector but the probability of participation significantly increased if there existed any formal financial institution.

- 34. Adnan Haider Bukhari and Safdar Ullah Khan.** A Small Open Economy DSGE Model for Pakistan. 963–1008.

This paper estimates a small open economy Dynamic Stochastic General Equilibrium (DSGE) model for Pakistan using Bayesian simulation approach. Model setup is based on new Keynesian framework, characterised by nominal rigidity in prices with habit formation in household's consumption. The core objective is to study whether an estimated small open economy DSGE model provides a realistic behavior about the structure Pakistan economy with fully articulated description of the monetary policy transmission mechanism vis-à-vis domestic firm's price setting behavior. To do so, we analyse the impulse responses of key macro variables; domestic inflation, imported inflation, output, consumption, interest rate, exchange rate, term of trade to different structural/exogenous shocks. From several interesting results, few are; (a) high inflation in Pakistan do not hit domestic consumption significantly; (b) Central bank of Pakistan responds to high inflation by increasing the policy rate by 100 to 200 bps; (c) exchange rate appreciates in both the cases of high domestic and imported inflation; (d) tight monetary policy stance helps to curb domestic inflation as well as imported inflation but appreciates exchange rate significantly (f) pass through of exchange rate to domestic inflation is very low; finally parameter value of domestic price stickiness

shows that around 24 percent domestic firms do not re-optimize their prices which implies averaged price contract is about two quarters.

JEL classifications: E32, E47, E52, F37, F47

Keywords: New-Keynesian Economics, Open Economy DSGE Models, Nominal Rigidities, Monetary Policy, Transmission Mechanism, Bayesian Approach

35. **Khalid Rahman.** Pakistan's Energy Security Challenge: Some Observations and Thoughts. 1011–1017.
36. **N. A. Zuberi.** Private Power Generation—Opportunities and Challenges. 1019–1027.
37. **Raza Hameed.** Demand and Supply Issue (2008-2009). 1029–1033.