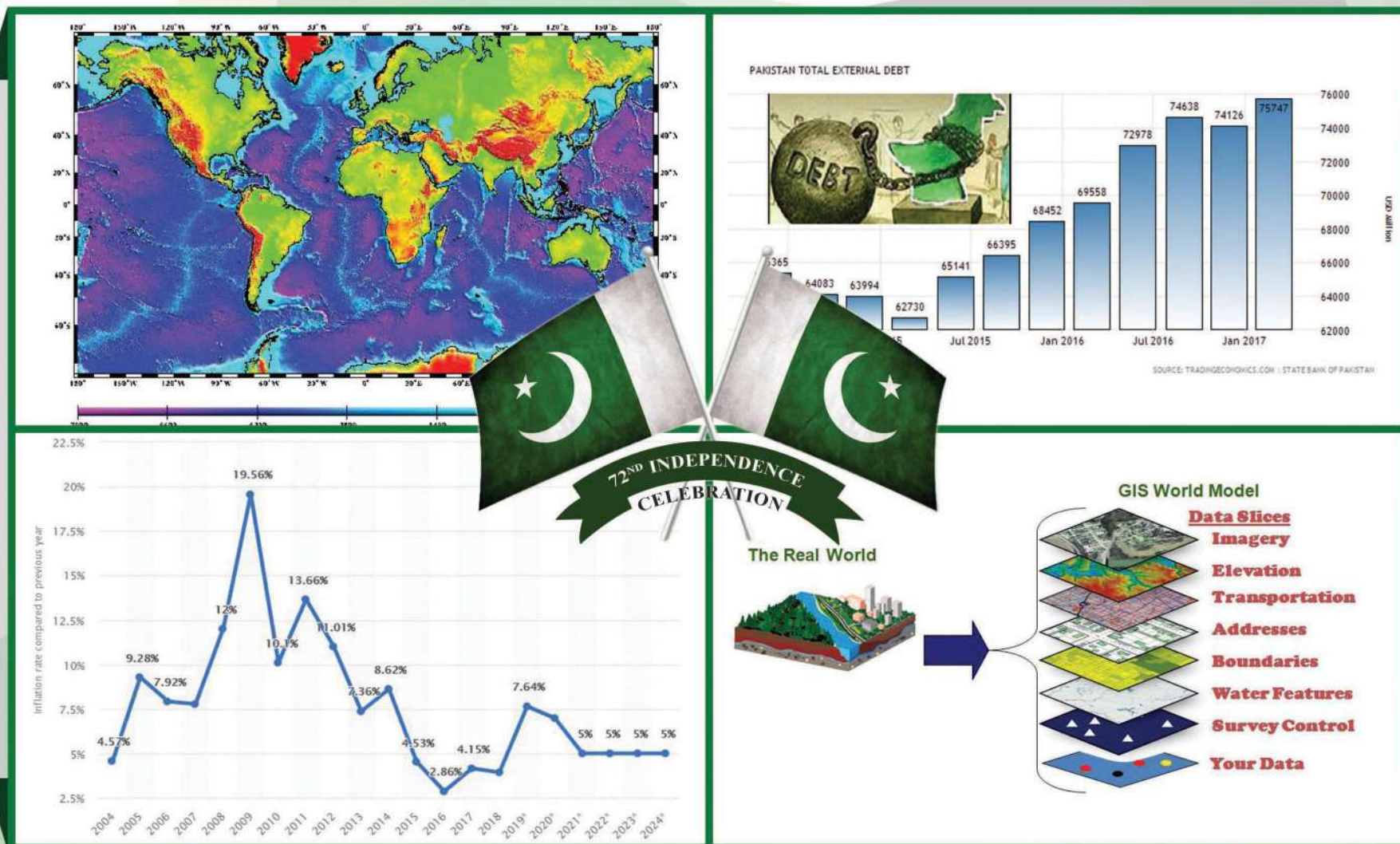




Issue # 15

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Policies, Strategies & Learning along with thought for tomorrow



“Dr. Abida Hafeez, First PhD of the Applied Economics Research Centre, University of Karachi ”

APPLIED ECONOMICS RESEARCH CENTRE
UNIVERSITY OF KARACHI

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Editor's Message



DR. ASGHAR ALI
Editor, AERC Voice
University of Karachi

Greeting Readers;

I am so excited to announce that Applied Economics Research Centre (AERC) is hosting yet another international conference in November 2019. The theme of the conference is "The Economy of New Pakistan: Emerging Challenges, Prospects for Change and Road to Prosperity (TENPECPCRP)" which is to be held on November, 19-20, 2019 in Islamabad. The core objective of this conference is to explore the possible challenges, failures and achievements the newly appointed government has to face in order to bring about the CHANGE. Naya (New) Pakistan is a dream message not only of hope but of a promise by the Prime Minister for the deprived, the dispossessed, the discriminated and for the people of Pakistan in general. Through this event AERC aims to create evidence-based awareness about past, present and future development trajectories of Pakistan. In the process of such awareness creation, the institution intends to contribute to local-context-relevant customization of development and growth agendas and corresponding financing strategies. The conference will provide an ideal forum for discussions among the national and international renowned academics, researchers, practitioners, policy makers and scholars. I also want to extend my earnest condolence to the bereaved family of Prof. Dr. Ajmal Khan, Vice Chancellor University of Karachi on his sudden death, may Allah Subhan wa Tallah grant him higher place hereafter. I would also like to take this opportunity to congratulate and wish luck to Prof. Dr. Khalid Iraqi for accepting the charge as acting Vice Chancellor University of Karachi. Heartiest congratulations to Prof. Dr. Samina Khalil on the reappointment as the Director, I am certain that under her leadership the Applied Economics Research Centre will continue to grow.

Happy reading ahead, I hope you find the pages followed by useful and interesting. I look forward to receive your feedback at aercvoice@aerc.edu.pk.

Editorial Team



Ms. Narjis Khatoon
Co-Editor, AERC Voice



Ms. Javaria
Sub-Editor, AERC Voice



Syed Muhammad Waqas
Webmaster, AERC

Director's Message



PROF. DR. SAMINA KHALIL **Director, Applied Economics Research Centre** **University of Karachi**

It's time for me to thank Allah SWT for granting yet another opportunity of three more years of Directorship of the AERC, University of Karachi, and pledge to serve the institution with the utmost commitment.

Reflecting on decades of serving any institution, it is but natural that not only after leaving the institution that one really appreciates the feeling of having belonged to the organization but this general feeling of 'Belonging' and sense of ownership is so necessary for our happiness while we are still part of it, working for it and earning our livelihood. But here we now tend to take it so much for granted, whether we are a part of faculty, administration or students, we sometime forget that what we give to our institution is worth giving. Therefore we have to give our best at all times and do nothing to harm the reputation of the institution.

While looking forward to very productive and illuminating future of the AERC, University of Karachi, I yearn that we at the AERC should establish our institute in our hearts and in our minds as something of which we can really be proud of.

“ Some people believe and develop a plan;
Some people doubt, never think that they can;
Some people face hurdles and give it their best;
Some people back down when faced with a test.

We all have a choice, we all have a say;
We are spectators in life, or we get in and play;
Whichever we choose, how we handle life's game;
The choices are ours, no one else is to blame.

”

I congratulate the entire editorial team for their hard work and dedication that has resulted in the publication of this issue of AERC Voice.



Vice Chancellor's Message



PROF. DR. KHALID MAHMOOD IRAQI **Vice Chancellor** **University of Karachi**

Pakistan's economy is going through a very challenging phase these days for various geo-political reasons at international and national levels. There are several economic parameters requiring significant improvement. The continuous and uneven growth of population is proving a barrier in the way of setting up a balanced economy. Fiscal objectives and sources of income need drastic measures for which the government is making all possible efforts. Extending the scope of tax collection is an important step the government is paying attention to at the moment. Research in the area of economy can help any government settle its fiscal challenges.

It is a point of satisfaction that the Applied Economic Research Center (AERC) of the University of Karachi is producing quality researchers who are engaged in serving at provincial and national levels. The centre is promoting education and research in the field of economic through imparting knowledge in mornings as well as evening sessions.

I hope the center will keep doing well under supervision of its Director, Prof. Dr. Samina Khalil and the cooperation of its academic and administrative staff.



Prof. Dr. Khalid Iraqi - Vice Chancellor, University of Karachi's Profile

Prof. Dr. Khalid Iraqi, Acting Vice Chancellor University of Karachi completed his masters in political science in 1989 and later secured his PhD. in 2006 in Public Administration. He specializes in public policy, development studies and public relations.

Prof. Dr. Khalid Iraqi started his teaching career as a cooperative lecture from Department of Political Science in 1989 and appointed as a lecture in 1990 and served Department of Public Administration and Political Science later became assistant professor in 1998 and professor in 2009.

At the University of Karachi, Prof. Iraqi served at various keen positions, including Dean, Faculty of Management and Administrative Sciences, Director of Admissions, Adviser to Vice Chancellor on campus security affairs and students' adviser.

Prof. Khalid was also attached as a visiting faculty at Hamdard University, University of Balochistan, Quetta; University of Management and Technology, Lahore; Pakistan Study Centre, University of Sindh, and NED University.

Prof. Dr. Khalid Iraqi is also the co-author of a book and has over 40 research papers and articles to his credit.

Obituary



PROF. DR. AJMAL KHAN
Former Vice Chancellor
University of Karachi

إِنَّا لِلّٰهِ وَإِنَّا إِلَيْهِ رَاجِعُونَ

Vice Chancellor University of Karachi, Prof. Dr. Muhammad Ajmal Khan passed away on Saturday May 04, 2019. Prof. Dr. Muhammad Ajmal Khan was a noted Pakistani Botanist, his teaching and research career spans over 44 years. For his outstanding services in plant sciences, he had received numerous prestigious local and international awards including Presidential Award of Sitara-e-Imtiaz in 2008. He had also received Fellowship of Fulbright Academy of Sciences and The World Innovation Foundation, Switzerland in 2006, HEC-Distinguished National Professor and Honor Professor, Shijiazhuang Institute for Agriculture Modernization, PR China in 2005, Fellow Third World Academy of Science in 2003, Fellow Pakistan Academy of Science and Presidential Award of the Pride of Performance in August in 2001. Dr. Khan was also given the status of Meritorious Professor. He had also received title of Distinguished Scientist of the year 2008 in Botany as well as Fellow of the Islamic World Academy of Sciences (IAS), Fellow of Academy of Sciences for the Developing World (TWAS), Fellow, Pakistan Academy of Sciences, Distinguished Visiting Professor, King Saud University, KSA and Qatar Shell Professorial Chair in Sustainable Development, Qatar University.

Prof. Khan was rated among top five biologists among the Islamic countries by COMSTECH. He was given the status of Honour Professor (Adjunct Professor), Shijiazhuang Institute for Agricultural Modernization, Hebei, China. He was the recipient of Ohio University Teaching Assistantship (1980-1984); National Science Foundation, USA postdoctoral fellowship at Brigham Young University, USA (1984-1985); DAAD study visit to University of Munster, Germany (1994); Fulbright visiting scholar, Ohio University, USA (1995-1996) and Adjunct Professorship in the Brigham Young University, USA (1996-1997).

Our condolences go out to the bereaved family and children, friends and colleagues. We pray that Allah Almighty grant them the fortitude to bear this irreplaceable loss. May Allah Almighty grant eternal peace to the departed soul and may grant him higher place hereafter.



NO FREE LUNCH!

One year of Economic Performance of the present government

by: Prof. Dr. Samina Khalil

Overview; Successes and Failures

PTI government has rightly pointed out that the present economic situation is an outcome of poor economic policies and management of the past governments. These governments have repeatedly baulked at taking the bold and corrective measures when they were needed, putting at risk country's economic sustainability. According to a recent World Bank report, with sound economic policies, Pakistan economy could reach US\$ 2 trillion by 2047. What is required is formulating and implementing these policies. Policies which liberate economy from the clutches of vested interest groups and self-serving politicians are fundamentally for the good of the country and its people.

In my opinion, the PTI government took immediate remedial measures to slow down the unsustainable current account deficits and shore up external finances. These measures have started to yield results and country's external vulnerability has receded in the last one year. During the last one year the government planning was focused on narrowing the three fundamental gaps in the taxation system which are right steps to strengthen the economy. Complete overhaul of the government's fiscal apparatus so as to lower the revenue-expenditure gap. The tax system is being streamlined. As a first step, tax policy and tax administration functions have been separated so as to remove the apparent conflict of interest in tax collection. Tax policy is being designed to be fair, equitable and productive. The revenue and fairness objectives are pursued by expanding the tax base, reducing tax exemptions and through more efficient tax administration. Tax administration is being strengthened by allowing it access to third-party data and modern tools to identify and collect tax from tax defaulters. Some developments have eased the pressure. A drastic reduction in current account deficit down to USD 14b from USD 20b in the past 11 months has been a relief at a time when external financing requirements have sky rocketed due to substantial rise in imports. At least this government will not need to finance its current account deficit through external debt, as done by previous governments. However, the country's debt obligations – having risen due to commercial borrowings from international banks – have become the single largest liability requiring external financing. The total debt volume is significantly over USD 12b after accounting for loans worth USD 7b received thus far from UAE, China and Saudi Arabia. Managing timely repayment of this piling debt alongside the hefty current account deficit will be a challenge for the incumbent political team.

IMF loan deal, tax revenue collection measures, and the effectiveness of the budget tax measures.

The government recently agreed on the IMF loan program last month and announced plans to slash civil expenditures and freeze military spending while promising to substantially raise revenues to stem a yawning fiscal deficit, and pledging to collect 5.5 trillion rupees (\$36 billion) in taxes. Discontent is still simmering in the country following repeated devaluations of the rupee, soaring inflation, and increasing utility costs, while tax collection has been a long-standing challenge for authorities. Pakistan is facing a challenging economic environment, with lackluster growth, elevated inflation, high indebtedness and a weak external position," the result of a "legacy" of uneven policies. Despite rising deficits, Pakistan's tax revenue was only 13% of its GDP in 2018. During the current fiscal year, the country has seen a decline in its revenues while expenditures have increased, resulting in a half-year fiscal deficit of 2.7% of GDP, the highest since 2010-11. According to the World Bank's Ease of Doing Business Report, Pakistan ranks 136th out of 190 economies who have taken measures to support the investment and give boost manufacturing. To improve this ranking and draw more investment, Pakistan should ease customs laws and regulations, improve the security of the country, and rebrand and boost its international image as a desirable destination for tourism and industry alike – a goal the current government

is set to pursue as it eases its visa policies, including its introduction of e-visas. It should also encourage domestic investment through more flexible tax policies, particularly targeting small and medium-sized enterprises (SMEs). Such measures would reposition Pakistan on the international stage as stable, competitive ground for foreign investment.

Will we witness further devaluation?

The rupee's nominal depreciation in 2018 of 33pc should deliver a good part of the needed real depreciation, though probably not all of it. Pakistan's non-US trading partners' and other competitors' currencies have also depreciated against the US dollar in 2018 (by 5pc and 18pc respectively, in median terms). There's no reason why a similar, more flexible exchange rate regime, anchored in a basket of trading partner currencies (rather than a single currency), should not work well. However, a more flexible regime will bring its own imperatives. With a more volatile currency, the private sector will need access to better instruments to hedge foreign exchange risk. The government would be well advised to develop futures and forward options that financial institutions and traders can access at reasonable cost.

Will the govt be able to deliver its promises of housing, jobs etc ?

One cannot deny the observation made by the World Bank that weak governance is responsible for the fiscal deficit. Pakistan's poorly regulated financial system facilitates tax evasion, which contributes significantly to the growth of the fiscal deficit. Having inherited this economic crisis from the previous government, the PTI government has an enormous task ahead: steer Pakistan's struggling economy out of a macroeconomic crisis by fostering economic development. To make a significant impact on the current account deficit, Pakistan needs to ensure an investment-friendly environment that attracts more foreign direct investment (FDI), instead of relying heavily on foreign aid. Promoting manufacturing by creating a more investment-friendly environment, broadening its tax base, and encouraging innovation and modernization in export-led industries are just some of the most urgent measures the government can take to address the growing fiscal and current account deficit. Pakistan must take advantage of this moment of hard-won reprieve by building a truly stable and sustainable economy before it once again finds itself digging its own economic grave – and that of its people. Structural reforms are measures targeted to remove inefficiencies in the economic structure to optimize resource allocation and increase productivity and employment. Such reforms can include widening the tax net, reducing wasteful government expenditures on inefficient state owned enterprises or administrative set-ups, protecting domestic industries, devaluing currency to boost exports, etc. However, for these reforms to be successful, the political economy has to support and create an environment geared towards their success.

(Published in the "Global Village Space" issue of August 2019)

Credit Activity and Growth Performance: Evidence from Panel Data

BY: SADAF MAJEED &

DR. SYED FAIZAN IFTIKHAR



This study analyzes the real impact of enterprise credit and household credit separately on economic growth for a selected group of 36 developed and developing countries. Since most of the available literature on growth and finance show contrast in the economic theory and does not distinguish between the household credit and enterprise credit when it measures the relationship between credit growth and economic growth respectively. The unbalanced panel data for the group of 36 countries is used over the period 2000 to 2016. The empirical results show that by using the full sample, enterprise credit is positively associated with economic growth but household credit tends to hamper the economic growth. However, individual analysis of developed and developing countries shows that the financial sector provide considerable growth to support its role in terms of credit to enterprise in developing countries. In contrast, the enterprise credit seems to have no role in promoting economic growth of the developed economies, which may be due to their financial crisis. However, investment is quite significant for both developed and developing countries, which indicate that investment has the potential to accelerate economic growth. The evidence also suggests that a more sophisticated enterprise credit policy should be designed in both developed and developing countries to promote economic growth in the long-run.

Reappointment of the Director, Applied Economics Research Centre



The Syndicate of the University of Karachi, under the chair of Vice Chancellor, University of Karachi Prof. Dr. Khalid Iraqi in its meeting on June 29, 2019 appointed Prof. Dr. Samina Khalil as Director Applied Economics Research Centre for the next three years. Prof. Khalil was already serving the Centre as Director of the Centre from the past three years. As Director of the AERC, Prof. Samina has envisioned the Institute as part of a vital strategy to invest in emerging research fields in applied economics and social sciences that may defy today's traditional academic classification. We extend our warmest congratulations to Prof. Dr. Samina Khalil on her second tenure as Director AERC; we are certain that Prof. Khalil will continue to play her role in strengthening the institution.

Director's Activity: Participation in an International Conference CAREC Think Tanks Development Forum (CTTDF)

The Central Asia Regional Economic Cooperation (CAREC) Institute (CI) is a knowledge institution which was established to enhance the quality of the Central Asia Regional Economic Cooperation (CAREC) Program, initiated by ADB, through knowledge generation and capacity building towards the goal of accelerating economic growth in the CAREC region. Besides the Asian Development Bank (ADB), CAREC program is supported by five development partners that include, European Bank for Reconstruction and Development (EBRD) International Monetary Fund (IMF), Islamic Development Bank (IDB), United Nations Development Program (UNDP) and the World Bank.

Annual think tanks development forum is a flagship event of the CI that serves as a platform for think tanks, universities, government, and development partners to deliberate upon key policy issues facing the region.

Prof. Dr. Samina Khalil was invited to participate in the fourth CAREC Think Tanks Development Forum (CTTDF) organized by the CAREC Institute in cooperation with the **Asian Development Bank (ADB)**, Regional Knowledge Sharing Initiative (RKSI) and International Economics and Finance Institute (IEFE) of the Ministry of Finance of the **People's Republic of China (PRC)** on 27-28 August 2019 with a theme of **"Trading for Shared Prosperity"** in one of the ancient cities and starting points of the Silk Road, Xian, Shaanxi Province, the PRC.

The forum participants discussed regional integration, trade as a means of achieving the United Nations **Sustainable Development Goals (SDG)**, ongoing trade disputes, standardizing logistics along the Silk Road, technological interventions, e-commerce and their impacts on the regional economy.



First PhD degree holder of the Applied Economics Research Centre, KU



Applied Economics Research Centre likes to congratulate its first PhD. Dr. Abida Hafeez on successful completion of Doctorate of Philosophy (PhD.) in Applied Economics. The completed defence of the thesis is a noteworthy milestone in the history of the Applied Economics Research Centre – Ms. Abida Hafeez is the first candidate to graduate with a PhD in Applied Economics, from the Centre after the inaugural of the PhD program in 2015. Ms. Abida Hafeez completed her doctorate in “Institutional Development and Stochastic Behaviour of Common Stock Prices in Pakistan” under the supervision of Prof. Dr. Muhammad Nishat and has been awarded the degree for the same on July 30, 2019 by

Advanced Studies & Research Board (ASRB), University of Karachi. Dr. Hafeez has numerous publications in journals of international repute and has presented research articles on various themes in national and international conferences. Dr. Abida also has the teaching experience at postgraduate level and has been selected as Gazatted Officer by the Government of Punjab. Dr. Abida Hafeez acquired her M.Sc (Economics) from Bahauddin Zakariya University (BZU), Multan and M.Phil. from the Applied Economics research Centre, Karachi. Prof. Dr. Samina Khalil, Director Applied Economics Research Centre congratulated Dr. Abida Hafeez on achieving a milestone and prayed for her successful professional life ahead. AERC wishes Dr. Abida Hafeez all the best for future endeavors!



Presentation of Tariq Hassan Memorial Medals

PhD. Position Holders

Applied Economics Research Centre proudly presents token of appreciation to its high achievers of PhD batch 2017 for successfully completing their coursework (part I) in pursuit of doctorate degree. Prof. Dr. Samina Khalil, Director Applied Economics Research Centre appreciated the scholars for their hard work and presented them gold, silver and bronze medal in the memory of Tariq Hassan (late) and certificate of appreciation to the position holders.



Ms. Munazah Nazeer
3.67
1st Position
Gold Medalist



Ms. Hamna Nasir
3.50
2nd Position
Silver Medalist



Ms. Humera Sultana
3.29
3rd Position
Bronze Medalist

M.Phil. Position Holders

Applied Economics Research Centre started its first M.A.S. / M. Phil program batch back in the year 1977 and has since then continues to successfully launch the program every year. Batch 2018-19 successfully completed their coursework, part I as the partial fulfillment of their M. Phil. degree. A total number of 30 students enrolled in the session while only 20 students persuaded and completed first part of their degree. Following are the students who performed exceptionally well during the year and stood among top 3 students academically. Prof. Dr. Samina Khalil, Director presented gold, silver and bronze medal in the memory of Tariq Hassan (late) and certificate of appreciation to the position holders.



Ms. Farah Atiq
3.73
1st Position
Gold Medalist



Ms. Mariam Ishaque
3.70
2nd Position
Silver Medalist



Ms. Uzma Aftab
3.57
3rd Position
Bronze Medalist

Workshop

Geographic Information System (GIS) for Social Sciences

The Applied Economics Research Centre (AERC), University of Karachi, besides being the gateway for access to quality education thrives on organizing international conferences, publishes quality researches and organize short courses to benefit the academia, practitioners and its scholars. The major functions of the Centre are policy oriented Core/Academic Research, Contract Research for clients, post-graduate teaching and providing advisory services to the government. The Centre undertakes research on issues in applied economics with a focus on urban and regional economics, agriculture economics, human resource development, public finance, poverty, health and nutrition, industrial economics, trade, environment and gender issues. Research is based on primary data collection carried out by AERC through surveys and analysis of secondary data from published sources. With subsequent growth of the Centre, its activities have broadened to include advance training of economists from all parts of Pakistan.

AERC has organized 5-day training program on Geographic Information System (GIS) for Social Sciences in collaboration with Department of Geography, University of Karachi. The course helped the participants to learn how to transform their data on maps using GIS. It allowed the participants to interact and utilize their own datasets to drive meaningful results. The course also enabled the participants to explore a complete new horizon by transforming their social sciences data on 3D modules. The participants of the course included participants from Planning and Development Department (P&D), Government of Sindh, Faculty University of Karachi, Indus Hospital, SZABIST, Applied Economics Research Centre and Department of Geography.

Prof. Dr. Samina Khalil, Director Applied Economics Research Centre inaugurated the session and thanked all the instructors and mentors for their time in organizing this course. Prof. Dr. Saleem Shahzad, Registrar University of Karachi attended the closing ceremony of the GIS workshop and presented token of gratitude to all the mentors and 67 participants of the course. The instructors of the course includes Prof. Dr. Jamil Hasan Kazmi, Meritorious Professor Department of Geography, University of Karachi Dr. Saima Sheikh, Assistant Professor Department of Geography, University of Karachi, Dr. Anila Kauser, Assistant Professor Department of Geography, University of Karachi, Mr. Salam Moin and Ms. Maryam Zehra, Ms. Maha Zaidi and Ms. Anisa Zafar form Department of Geography, University of Karachi. While Ms. Narjis Khatoon, Coordinator of the Training Program / Workshops of the Applied Economics Research Centre efficiently organized and managed 5day long certification course at the Centre.



Applied Research in Multidisciplinary Economics and Multidimensional Wellbeing in Pakistan

Workshop Day-1: Divine Economics Philosophy and Multidimensional Wellbeing

The workshop on Applied Research in Multidisciplinary Economics and Multidimensional Wellbeing in Pakistan was organized by the Applied Economics Research Centre (AERC) Karachi University in collaboration with the School of Economics, Quaid-e-Azam University, Kashmir Institute of Economics, University of AJK and Higher Education Commission. The workshop was designed around the aim to develop a better and deeper understanding of Divine Economics both theoretically and empirically.

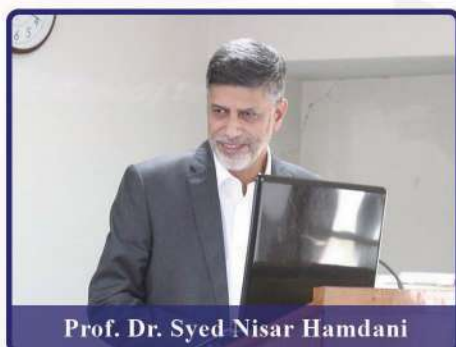
Divine Economics Framework is studied to provide an empirical basis of behavioral comparison between religious and non-religious households with regards to their economic and non-economic choices. The Divine Economics Framework is an effort to establish cross communication between the mainstream economists and faith-inspired economists by using an appropriate and universal methodological framework, which is sufficiently scientific, objective and broadly agreeable in academics. The Divine Economics Framework attempts to endogenize religious attributes which may potentially enable comparison of choices between religious and non-religious as well as less-religious and more religious households. However, reliance on stated preferences, overlap between religious and non-religious activities, inability to observe the motivation and intention behind choices and to judge the quality of religious activities are some of the challenges in the Divine Economics Framework. Divine Economics Framework can incorporate how faithful economic agents may use common property resources and public goods. It can also explore whether the faithful households differ in their choices with regards to biodiversity and negative externalities.



Prof. Dr. Samina Khalil

Prof. Dr. Samina Khalil, Director Applied Economics Research Centre welcomed the honorable guest speakers, Prof. Dr. Nisar Hamdani, Dr. Tariq Majeed, Dr. Imtiaz Subhani, Dr. Jamil Kazmi, Dr. Saima Sheikh, Dr. Miraj-ul-Haq and Mr. Ali Abdi to the workshop on Applied Research in Multidisciplinary Economics and Multidimensional Wellbeing in Pakistan. Dr. Samina Khalil also acknowledged efforts of Dr. Asghar Ali, Assistant Professor Applied Economics Research Centre, University of Karachi for successfully coordinating the 3-day workshop. While speaking on the subject Prof. Khalil said that the multidisciplinary economists should be at home in their own discipline and meet the high international standards of economic teaching and research that the discipline has developed, but at the same time they should be able to recognize the limits of economics and be willing to open up new horizons by following

new, discipline-transcending paths on which new insights into the analysis and solutions of economic problems can be found in collaboration with representatives of other disciplines. As a result of this search, economic methods and theories may have to be developed in such a way that they take insights from other disciplines into account. They may even have to be replaced by methods and theories that have been developed by other disciplines. Prof. Samina further added that the Divine Economics Framework which is an effort to establish cross-communication between the mainstream economists and faith-inspired economists by using an appropriate and universal methodological framework, which is sufficiently scientific, objective and broadly agreeable in academics. The Divine Economics Framework attempts to endogenize religious attributes which may potentially enable comparison of choices between religious and non-religious as well as less-religious and more religious households.



Prof. Dr. Syed Nisar Hamdani

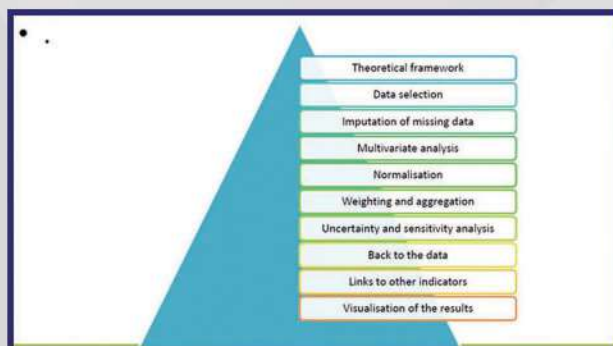
The pioneer of Divine Economics Prof. Dr. Syed Nisar Hamdani highlighted the issues in conventional economics and the gap to be filled by divine economics. Prof. Hamdani explained that over the years the Divine religions believers are growing in number. The conventional economics does not capture religiosity in its analysis, therefore for substantial majority who follows some religion the concept of Divine Economics is much needed. Divine Economics is taken as the study of human allocation decisions taken under divine principals to maximize the stream of wellbeing in current and perceived life hereafter. Dr. Hamdani further added that individual responds to economic variables such as prices, wages, income, etc. under conventional economics while in natural economy, individual responds to economic, social, religious and other variables such as prices, wages, income religiosity, etc. Highlighting about the difference in analytical approach he said that in conventional economics analysis moves around individual while in divine economics analysis is holistic, integrated and ecological. He said that Multidimensional Poverty Index of Alkire may be appropriate for Western Lifestyle but is least representative of faith driven societies whose everything else including social and cultural construct depends on faith respective patterns. This deficiency is covered by Multidimensional Divine Wellbeing Index 2018 which is appropriate for countries having strong religious context. While concluding his lecture he said that the beliefs like reward and punishment in life after death are found to have considerable economic consequences for decision making behavior. Since the individual is assumed rational, the empirically observed pattern of more religious people confirms that, the religious people perceive their expected stream of benefits does not terminate at the time of death; because they believe in some afterlife consumption promised by the religion, hence allocate their time and resources according to the religious prescriptions resulting thereby a systematically different economic behavior.



Dr. Tariq Majeed

Dr. Tariq Majeed, Associate Professor Quaid-i-Azam University explained the empirical applications of new multi-dimensional Divine Wellbeing Index using data collected through nationwide 'Divine Economics Survey-2017'. Dr. Majeed discussed the pros and cons of constructing the Composite Indicators Index (CI), he said that CI can summarize complex, multi-dimensional realities with a view to supporting decision makers and reduce the visible size of a set of indicators without dropping the underlying information base while it can also sometimes send misleading policy messages if poorly constructed or misinterpreted. He said it is important to follow the stages which include developing theatrical framework, selecting appropriate data, filling the missing gap, normalization of data, assigning weights and useful visualization of results to construct a reliable composite indicator. Dr. Majeed for the

ease of the audience constructed the composite index in front of the audience with the aid of the STATA and Divine Economics Survey data of 2017 following all the key steps mentioned. He generated deep interest among participants to explore human realities of economic behaviors in Divine Economics Framework.





The last session of the day included Econometric Modeling for Divine Economics by Dr. Imtiaz Subhani, Director General ORIC, Ilma University Karachi. Dr. Subhanidiscussed the preliminary econometric modeling procedure for faith-based data set under time series econometrics approach.

Workshop Day-2: Core Economics Missing Dots, Empirics, Data visualization, Survey Series and Publications



The Day 02 of the Workshop included different sessions to give the participants clarity about the emerging discipline of Divine Economics. The first session of the day was on Economic Modeling in Divine Framework by Dr. Miraj-ul-Haq Assistant Professor International Islamic University. Dr. Miraj in his lecture explained how Divine Economics is different from conventional economics, he said that conventional economics failed to capture the role of religiosity and values in economy while Divine economics takes both the attributes in the account. Dr. Haq further said that the rational consumer in conventional economics only thinks about himself while in divine economics he takes the decisions keeping in mind the others which may include his family, his community and environment he is part of. In Divine economics constraints not only limited to prices, income, and utility but also on Takveen[تكوين] because the concern of the subject is not only life on earth but also on the life in the afterworld. Dr. Miraj emphasized that the Divine Economics hypothesizes that the objective of efficiency among workers of Muslim as well as other faith-based societies may be achieved with increasing divine attributes among the workers. The Divine Economics Framework concluded that more religious people are less time poor and that other things held equal, the people with higher religious values are likely to pay more for safe and clean water. Dr. Miraj's lecture helped the participants to identify the missing dots and how those were filled by Divine Economics.



Dr. Jamil Hassan Kazmi, Meritorious Professor, and Dr. Saima Sheikh, Assistant Professor, Department of Geography, University of Karachi are also the part of the Divine Economics team. Dr. Kazmi and Dr. Shaikh presented the data visualization of Divine Economics Survey 2017 through GIS Technology. Dr. Jamil shared with the house that he and his team has used GeoSpatial Tools to develop maps to measure the wellbeing of different areas of Pakistan. Dr. Kazmi said wellbeing is not only related to human parameters but it is also measured through the combination of physical parameters; climate, environment and surroundings that tend to influence the wellbeing. Prior to DrJamil's lecture, Dr Hamdani dedicated the workshop day 2 to Dr. Kazmi for his tremendous contribution in data visualization for Divine Economics.



Mr. Ali Abidi from Quaid-i-Azam University explained the Divine Economics Survey series data set for multi-disciplinary economics starting from QAU-2000. The major surveys of later rounds were conducted in 2005, 2006 (assisted by Harvard University), 2009 (assisted by PIDE-Islamabad), 2013 (HEC Assisted), 2017 (jointly by QAU and UAJK assisted HEC with technical support from Department of Geography, Karachi University). Besides these major rounds of surveys, some thematic modules were conducted by individual research scholars from

time to time in last 19 years. Mr. Abidi discussed the questionnaires of all rounds. The questionnaire included different sections that cover the economics, social, religious, spiritual, ethical, demographic, institutional and other aspects of human multidimensionality. The last round covers all the seven domains and five dimensions of Divine Economic Model of human behavior. The five dimensions include; body-soul, self-others, life-afterlife, work-leisure, and now-future. The seven domains included; self, family, community, nation, humanity, environment (the nature), and a perceived Ultimate Reality. Ali Abidi also explained how the apparently non-observable variables were captured by using the knowledge from other sciences like psychology, anthropology, ethics, and medical sciences etc. He motivated the audience about writing Thesis, Conference Papers, Journal Publications and grant proposals in the field of Divine Economics and assured them that the Divine Economics team will extend their possible support to researchers. He also announce the Co-authorship and Data-sharing Policy for interested researchers.

How to maximize impact factor publications in Divine Economics

Maximization of impact factor publications was the theme of session by Dr. Imtiaz Subhani, Director General ORIC, Ilma University Karachi. He briefed about scientific writing on this newly emerged discipline in the reputable impact factor journals. Dr. Subhani said that it is important to look for a mechanism and not only for a phenomenon. Discussing the multi-dimensionality and inter-disciplinary nature of Divine Economics, Dr. Subhani explained how scholars can maximize their impact factor publications in this field by adding one or more well-designed functional experiments to increase the quality of a study. Dr. Imtiaz also emphasized upon addressing the same question with the help of additional disciplines. He suggested that using two or more methods in a study to explore the research questions helps in getting the work published in high ranking journals. He also shared useful hints and tips important to re-analyze the samples with a different or more complex methods and fancy technology for estimation.

Director AERC Address

Prof. Dr. Samina Khalil while concluding the 2nd Day sessions said that applied research in Multidisciplinary Economics and Multidimensional Wellbeing in Pakistan has been carried out by a team of very committed scholars under the dynamic leadership of Prof. Dr. Syed Nisar Hamdani. His team has conducted the workshop at AERC to disseminate and share the knowledge and information that was generated in past two decade. They proposed that they will share the vast scope of work and vacuum that can be filled by young researchers. Prof. Samina presented token of gratitude to the pioneer of Divine Economics Prof. Dr. Syed Nisar Hamdani and his entire team which included Dr. Tariq Majeed, Dr. Miraj-ul-Haq, Dr. JamilKazmi, Dr. ImtiazSubhani and Mr. Ali Abidi. She also admired the Divine Economics data visualization carried out by Dr. Jamil Hassan Kazmi and Dr. Saima Sheikh of Karachi University which is a strong method of spreading the faith-based inter-disciplinary results of economy surveys. She expressed her pleasure about the keen interest taken by faculty and research scholars in the new field. Dr. Khalil announced to establish a solid research base of Divine Economics in AERC. As a first step towards this direction, a special unit is being established which shall initiate collaboration with the other universities working in the new field.

Workshop Day-3

The third Day was dedicated to only those who registered themselves in Divine Economics field for future study / research. The success of the workshop was evident from excitement of scholars. In these sessions, 27 scholars got registered which was far high than expected by workshop organizers. Special focus group discussions were arranged where each mentor was surrounded by few scholars who shared the same area of interest as of the mentor. The mentors took their positions on separate desks each dealing with a specific filed. The thematic desks were attended by mentors Prof. Dr. Syed Nisar Hamdani, Dr. Miraj-Ul-Haq,



Dr. Tariq Majeed and Syed Ali Abidi respectively. Prof. Hamdani was heading the philosophical school of thought, Dr. Tariq discussed the empirical side of Divine Economics, Dr. Miraj-ul-Haq showed expertise in exercising difference between conventional and Divine Economics while Mr. Ali Abidi shared the data processing and designing the questionnaire for developing the Divine Economics Framework. The scholars asked questions relating to their personal researches and obtained guidance on certain modifications in their work where applicable.

Divine Wellbeing Calculator launched at AERC

Prof. Dr. Syed Nisar Hamdani, the pioneer of Divine Economics along with his team launched Divine Wellbeing Calculator (DWC) from the forum of Applied Economics Research Centre on the last day of the workshop. The DWC is exclusively designed to measure the level of human wellbeing of individuals who believe in some form of religion, spirituality and moral values. The DWC is based on a series of questions relating to the dimensions and domains of the Divine model as discussed above. The calculator would identify the areas of improvement and would lead the users to keep track of the changes in their life practices and behaviors. The formal application of Divine Wellbeing Calculator is being launched on Google Play Store.

Uplifting the AERC's Journal

Dr. Hamdani and his team also had a meeting with the Publication Wing of the AERC where they shared the latest software developed by UAJK-Kashmir Institute of Economics that offers systematic and smooth system of journal publication. The system possesses many features for easy submission, review process, copy-editing, production, distribution and feedbacks mechanism for all the stakeholders of paper publication process.

Prof. Dr. Syed Nisar Hamdani, being the Chairman of HEC subject-committee on Economics admired the efforts and remarkable follow up of Dr. Samina Khalil regarding the upgradation of AERC's research journal 'PJAE'. He also admired the dedicated publication team of AERC whose efforts facilitate the researchers within country and abroad to benefit from this economic research platform. He said that in nearly 200 universities of Pakistan, only a dozen or less number of economic journal editors are working so hard for providing such a valuable platform to economists for publishing their research.

Collaboration between KIE and AERC

Both the directors of their respective institutions [KIE and AERC] in their closing speeches of the 3rd Day of workshop committed to collaborate for larger benefits of faculty and students of respective institutions as well as making joint contribution for progress and prosperity of people of Pakistan.



Seminar Series

Data Driven Decisions

Mr. Syed Ali, President and Chief of Analytics at Analytics Led Intelligence, Washington D.C. visited the AERC on Wednesday October 10, 2018. While giving his talk he explained the crucial role of maintaining the data base and taking rational decisions in line with the given information. Mr. Ali explained that today the highly paid job in USA is of Data Scientists. He said that the most valuable asset now days is the data. Mr. Ali told the house that data-driven decision making (DDDM) involves making decisions that are backed up by hard data rather than making decisions that are intuitive or based on observation alone. As business technology has advanced exponentially in recent years, data-driven decision making has become a much more fundamental part of all sorts of industries, including important fields like medicine, transportation and equipment manufacturing.

Mr. Ali made the point that today, the top companies around the world use data to make decisions about their business. The reason they're leading the way is that they've gained a strategic advantage over their rivals simply by shifting their focus on data rather than relying on business acumen alone. Fewer top-performing companies (40%) than laggards base the majority of their business decisions on gut feel or experience (70%). In other words, more organizations that make data-driven decisions are at the top of their game than businesses whose decisions are driven by instinct. For taking targeted decisions it is firstly important to identify the objectives of firms or companies, second the key is to manage the multiple sources of data and identify which areas will bring the most benefit. Targeting data according to your business objectives will help keep the costs of data storage down, not to mention ensuring that you're gaining the most useful insights.

As the world entered the era of big data, the need for its storage also grew. It was the main challenge and concern for the enterprise industries until 2010. The main focus was on building framework and solutions to store data. Now when Hadoop and other frameworks have successfully solved the problem of storage, the focus has shifted to the processing of this data. Mr. Syed said that the data can be handy in designing targeted policy options in the targeted area. The data science has huge scope as it is the future of Artificial Intelligence (AI) for the world especially for the developing countries like Pakistan.

Concluding his talk Mr. Syed Ali emphasized on the need of smartly utilizing the available data for shaping the better future. In the end he said that it won't be wrong to say that the future belongs to the Data Scientists. It is predicted that by the end of the year 2018, there will be a need of around one million Data Scientists. More and more data will provide opportunities to drive key business decisions. It is soon going to change the way we look at the world deluged with data around us.



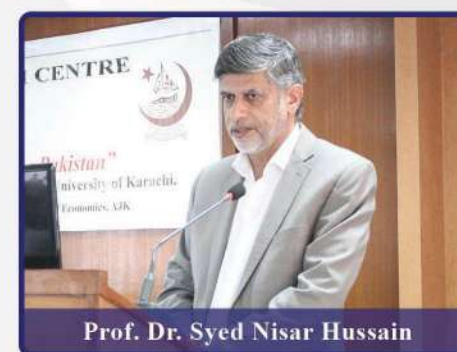
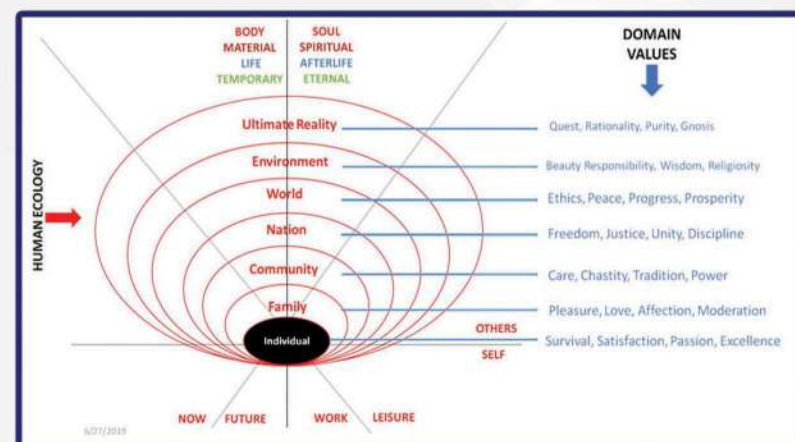
Multi-Dimensional Divine Wellbeing Index for Pakistan

Divine Economics is relatively a new sub-discipline in the field of economics which integrates religion, spirituality, ethics, values, and other natural attributes of humans in economic modeling. For a better and deeper understanding of the economy at any level, an interdisciplinary approach is needed. Economics does not offer a framework through which, the cause and effect may be analyzed under the perspective of religion, ethics and values in a holistic context prevailing in real society. The framework named as Divine Economics offers an overarching philosophy, systematic methodology and tools to investigate the interrelationships among economic process, outcomes and wellbeing in perspective of religion, spirituality, morality and human values. The Divine Economics provides theoretical, econometric and empirical models for studying economics in relation to religion and vice versa. An important contribution of the emerging discipline is the development of scales and indexes to measure the apparently non-measurable and non-observable variables.

In Pakistan the subject was initiated in 1999 as a PhD Dissertation in Economics at Quaid-i-Azam University, Islamabad. Prof. Dr. Syed Nisar Hussain Hamdani from University of Azad Jammu & Kashmir pioneered the discipline as his PhD [Economics] dissertation at Quaid-e-Azam University Islamabad. Some of the scholars who made pioneering contribution include; Prof. Dr. Eatzaz Ahmad as the first mentor from Quaid-i-Azam University, Dr. Mahmood Khalid from PIDE and Mr. Mirza Mohammad Shahzad from University of Karachi, Dr. Akhtar Hussain Shah from PIDE, Dr. Asghar Tashfeen from AIOU and others.

Prior to the current workshop, on March 18, 2019 Prof. Dr. Syed Nisar Hussain Hamdani shared his work on developing a multidimensional Divine Wellbeing Index for Pakistan and methods of its measurement, data collection, and analysis, at Applied Economics Research Centre. Dr. Hamdani explained that wellbeing is not a new concept it can be traced back to the time of Aristotle and other philosophers. He presented a review of literature that wellbeing has been studied long back in history. Dr. Hamdani said that the existing literature on measuring the wellbeing lacks micro foundations. The conventional wellbeing indexes includes education, health, living standard, environment, community, economy, allocation of time, governance and expected years of life, hence a number of factors which are integrated part of human life on earth such as religion, spirituality and values are either ignored or presented on the basis of observation, experience and data without a governing theory or philosophy of why there exists some relationship among these variables and economy. Usually, conventional economics treats the human being just as a material body while human being is a compound of both body and soul. The available wellbeing indices are mostly related to specific cultures or regions while religion is omitted altogether. The indices managed to capture only aspects of worldly life such as economic, social and demographic domains ignoring other real life domains and dimensions that have been included by Divine Economics models.

Dr. Hamdani share while sharing the facts about Pakistani society said that people here who follow some religion are 99.69% where Muslims are in absolute majority (96%). Therefore, new economic models are needed which may capture our specific national context especially and typical dynamics of religious behavior in allocation of resources. Explaining the dimensions of human physiology Dr. Hamdani explained that human is the composition of body and soul. While taking economic and allocation



decisions, he keeps in view seven domains that are, his ‘self’, family, community, nation, humanity, environment and a perceived ultimate reality. His perception about the ultimate reality gives shape to his perceptions about an afterlife as well where he may live in comfort or discomfort based upon his allocation decisions in worldly life. Dr. Hamdani further added that since the whole is more than some of its parts, and as per conventional theory, a rational agent prefers more to less, therefore on this basis it may be proposed that;

“Other things being equal, a rational agent will prefer a bundle of goods and services that is likely to be utility-bearing in both lives as compared to the bundle which gives utility only in worldly life or only in perceived afterlife”,

“Other things being equal, the agent with stronger belief in afterlife, is likely to have stable and higher level of wellbeing in most circumstances”.

Dr. Hamdani explained that the concept of an Ultimate Reality among followers of different religions is achieving the good afterlife. The followers of Divine religions believe to be rewarded in the form of heaven while Buddhists and Hindus emphasize on Nirvana i.e. escape from reincarnation. On the other hand, an atheist believes in finding the ultimate goal. Keeping in view the ultimate reality as perceived, any individual tends to make a rational decision considering the life outcomes of both lives. The decision making process involves a set of values which, for example, include; survival, satisfaction, passion, excellence, pleasure, love, affection, moderation, care, chastity, tradition, power, freedom, justice, unity, discipline, ethics, peace, progress, prosperity, beauty responsibility, wisdom, religiosity, quest, rationality, purity and gnosis etc. While concluding his session Prof. Dr. Syed Hamdani said that if the person would be able to make balance in his life and by taking decisions in consideration to body and soul, self and others, life and afterlife, leisure and work and past, present and future he would be able to live divinely pure life [حَيَاةً طَيِّبَةً] which would ultimately lead him towards the ultimate goal.



Civil Society Organizations-Contributions, Challenges and Trends

Non-Government Organization Resource Centre (NGORC) and Four Corners Group in collaboration with Applied Economics Research Centre organized the workshop on the theme “Civil Society Organizations-Contributions, Challenges and Trends” at the Centre on May 19, 2019. Non-governmental organizations (NGOs), labour leaders, faith-based organizations, religious leaders and other civil society representatives play a critical and diverse set of roles in societal development. In the last two decades these roles have shifted as the external environment for civil society has changed. Recently, a renewed focus on the essential contribution of civil society to a resilient global system alongside government and business has emerged. Civil society today includes an ever wider and more vibrant range of organized and unorganized groups, as new civil society actors blur the boundaries between sectors and experiment with new organizational forms, both online and off. Civil society actors are demonstrating their values as facilitators, conveners and innovators as well as service providers and advocates, while the private sector is playing an increasingly visible and effective role in tackling societal challenges.

Mr. Shadab Fariduddin, Managing Partner, NGO Resource Centre in his address said that the role of civil society in bringing change and raising organized voice against social evils and matters of social interest has never been documented previously. NGORC, project of Aga Khan Foundation took the initiative and documented achievements, trends and the challenges that are faced by NGOs and organized civil groups in Pakistan.



Mr. Shadab Fariduddin

Mr. Qadeer Baig, Director Community Engagement Centre and Global Health Directorate speaking about the practices of NGOs adopted by Government of Pakistan said that society can be broadly divided into three sectors; private sector, public sector and non-profit sector. He said that the Civil Society plays the role of buffer in connecting general public with State and private sector. He said that in general civil society is responsible for playing the role of civil advocacy and service delivery. In Pakistan civil society is playing crucial role in clearing the path where the space is suffocating for the public. Mr. Baig further added that among the other key roles played by civil society the major role is to clear the shrinking space and discuss about the rights of masses. While from the government side at times there is a lot of assistance in providing on crucial spaces while other times there is no coordination at all. Civil society negotiates with different agents and create space for the masses to breathe, anti-encroachment operation has slowed down, water supplied is made available, the lost children found their homes and many other ventures as a result of civil society negotiations.

Mr. Naveed Yosuf Butt from Pakistan Centre of Philanthropy discussed the issues and challenges faced by NGO in registration and regulation in Pakistan. In 2001 the study by Aga Khan Foundation showed that the volume of philanthropy is huge in Pakistan but its impact is insignificant, identifying the gap to channelize and regulate the donations made.

Mr. Muhammad Fazal Noor, Chairperson Department of Architecture, Sir Syed University of Engineering and Technology talked about how to push the civil society organizations to become social entrepreneurs. Mr. Noor said that institutions are not just the organizations it is the accepted way of doing things in the system. Institutions come into existing not by just the laws but also by the practices, norms and culture of the society. Our society is in the state of transformation and modernization today, seeking for change. Pakistan has a largest level of low income middle income class who has limited choices of bundle. They are constrained by the low level of education, exposure, skills, income and choices. He further added that as a nation also we are stuck in the place where we want so many things to happen in our good but don't want to work for it. The overview of the economy has changed over the time from being purely economical to financial economy. He said that the CSO are not being pushed, they are the part of the change that is taking place within the country and in the rest of the world.



Mr. Qadeer Baig



Mr. Naveed Yosuf Butt



Mr. Muhammad Fazal Noor



Prof. Dr. Samina Khalil



Best Practices for Peace Building at University Campuses

The office of Students Advisor under the patronage of the Vice Chancellor University of Karachi, Prof. Dr. Khalid Iraqi created official Students' Societies to promote positive student activities. The Students' Advisor Office, University of Karachi, and Inter University Consortium for Promotion of Social Sciences Pakistan (IUCPSS), jointly organized a seminar on *Best Practices for Peace Building at University Campuses* at the Applied Economics Research Centre, University of Karachi to maintain the balance in life of the students and to engage them in peace building activities.

Keeping in view the interest of all students, University of Karachi is officially heading six societies; Arts and Culture, Dialogues, Debates and Discussions, Sports Society, Theater and Drama Society, Civic and Social Responsibility Society, Music Society. In the event representative of each society discussed the achievements of the students under all societies' and the challenges they are facing.

The Chief Guest of the event was Dr. Muhammad Ali Shah, Vice Chancellor Quaid-i-Azam University while the session was chaired by Vice Chancellor University of Karachi, Prof. Dr. Khalid Iraqi. The panel of the discussion included Mr. Murtaza Noor, National Coordinator of the IUCPSS, Prof. Dr. Samina Khalil Director Applied Economics Research Centre, Prof. Dr. Akhtar Baloch Vice Chancellor Benazir Bhutto Shaheed University, Prof. Dr. Shabib ul Hassan Vice Chancellor Habib University, Dr. Waseem Qazi, Vice Chancellor Iqra University, Prof. Dr. Fateh Muhammad Burfat Vice Chancellor Sindh University, Prof. Dr. Tariq Rafi Vice Chancellor Jinnah Sindh Medical University, Dr. Aurangzeb Khan Vice Chancellor Sindh Benazir Bhutto Dewan University, Prof. Muhammad Mukhtar Rector Dadabhoy Institute of Higher Education, , Dr. Zahid Ali Syed Director Usman Institute of Technology and Dr. Daniel Wesley Lund, Dean Management Science Iqra University. The event was also attended by representatives of Shaheed Zulfikar Ali Bhutto University of Law and Newports Institute of Communications and Economics.



Prof. Dr. Khalid Iraqi



Prof. Dr. Samina Khalil



Student Research Corner

PhD Research



Institutional Development and Stochastic Behaviour of Common Stock Prices In Pakistan *(By: Dr. Abida Hafeez)*

This study investigates the impact of regulatory policy changes and institutional development on stochastic behavior of common stock prices in Pakistan between 2003 and 2016. Various financial econometric models are used to estimate and compare the risk premia during the period when the market was highly segmented and regulated with the period of regulatory and financial reforms. After institutional development and financial reforms, risk premia estimated through different asset pricing models, increased significantly during the period of reforms in Pakistan. The time-varying risk premium model provided evidence of a significant relation between risk and return. The volatility in returns increased after regulatory policies and financial reforms. Allowing the risk factor(s) to vary over time to capture the stochastic behavior of stock returns, the findings showed a significant relationship between risk and average return for most of the portfolios. The non-synchronous trading effect was evident during both reform and non-reform periods. The degree of persistence in volatility was higher during period of reform than the non-reform period. The risk premia for industry portfolios were higher during the reform period. Most of the industries showed evidence of the theoretical relation of risk and return during the reform period. The volatility in industry return was more pronounced during the period of reform. The impact of non-synchronous trading and the degree of persistence in volatility were significant during both the non-reform and reform periods. The relationship between return and volatility change was observed significant and negative which indicated leverage effect in industry portfolios. However, the leverage effect causing volatility was better explained during the non-reform period than that of reform period. In conclusion, the institutional development and financial reforms in Pakistan had a significant impact on the stochastic behavior of stock prices. In particular, the volatility in returns and risk premia had been higher and more predictable during the reform period. The findings of this study recommend coherent and sound policy implications for investors, portfolio managers and policy makers. On the whole, the results support the argument that like many emerging markets, liberalisation led to volatility in stock returns and higher risk premia in Pakistan.

M.Phil. Research



Microfinance: Viable Tool to Curb Terrorism *(By: Mr. Usama Ather)*

The underline assumption that forms the bases of his study is the Hadees that "Poverty can lead one to kufr". The study has served as a value addition in the field of counter terrorism strategies while presenting Micro-finance as a tool to alleviate poverty, illiteracy and unemployment that nurtures terrorism. The latitude of the study is limited to the Geography of Pakistan; the prevailing terrorism along with its causes and remedies is the continuous theme of the study. The study of terrorism has become centre of debate for the last 15 years with analysis of its origin, inference and consequences is amongst the hot topics of debate in the discipline of social sciences; many valuable studies in developed

and developing countries have been conducted to establish the relationship of terrorism with its root causes and remedies, but no conclusive evidence is available to use the remedial tool of Microfinance as a counter terrorism strategy in the context of Pakistan. The uniqueness of the study can be ascertained with a fact that the literature available on micro finance as a viable tool to alleviate poverty has not linked poverty and other social and non-social atrocities with terrorism.

Mainly the study revolves around two central objects, primarily the terrorism in Pakistan due to Poverty, and Secondly the Micro-Finance that has been used as a tool to address terrorism attacks done under the influence of Poverty. It is evident that terrorism has hurted the economy of Pakistan severely and poverty has nurtured it over the years, to justify the statement, Ordinary Least Square and 2SLS Methodologies have been used to redefine the relationship of Terrorism, Poverty and Microfinance. The results suggest that the link between poverty and terrorism is strong and Pakistan can become a safe, secure and economically viable state by taking more initiative in Micro Finance Sector. Additionally, by addressing the internal and external barriers of Micro Finance, its growth guarantees the rise in Per Capita Income of masses that will lead to decrease in Terrorism. The study concludes by addressing and introducing an innovative counter terrorism strategy for a safe, emerging and terror free Pakistan.



Inter-City Wage Dispersion in Metropolitan Cities of Pakistan: Does Cost of Living Matter? (By: Ms. Shumaila Hashim)

Research on wage dispersion rarely accounts for inter-city cost of living differences, owing to data restriction. Inter-city wage disparities are becoming an increasingly important issue in labour economics. The phenomenon of wage differences of a worker in different cities is of great concern in labour economics (DuMond et al. 1999). The growth and development of a country often lead to expansion of the general wage level. In the labour market with dynamic demand and supply, workers have different abilities and characteristics; different marginal level of production produced and hence obtains different wage level. This illustration raises the issue of wage dispersion among workers. Wage dispersion is an interesting phenomenon that has always been pronounced one of the significant areas of the economist's interest. Economists have found outstanding consistency in wage dispersion within, and between countries and wage, distribution determines inequalities in living standard and affects social and solidarity. This study investigates the contribution of the cost of living after controlling individual and job characteristics in Pakistan's metropolitan cities by using microeconomic data. The objective of this research is to find the wage disparities between high and low wage city with and without the cost of living within provinces. The present study used four waves of data from fourteen Pakistan's metropolitan cities which is taken from Pakistan Social and Living Standards Measurement Survey (PSLM) with Household Integrated Economic Survey (HIES) for the period of 2005, 2007, 2010 and 2013. The objective of this research is to estimate the wage of metropolitan cities of Pakistan with the cost of living. It has been determined by using Ordinary Least Square (OLS) method for each town and performed a comparison between the estimates of the year of 2005 with the year 2013. The results from OLS estimates show that there is a significant positive association between monthly wage and cost of living in large metropolitan cities. Moreover, Pool and pseudo-panel approach are also applied to examine the relationship between a worker's monthly wage and cost of living. By pooling four years of data, pool regression results highlighted the positive and significant relationship between monthly salary and cost of living while the pseudo-panel approach also reported the same connection. In addition to this, Oaxaca Blinder has been applied to examine mean wage differences between high and low wage cities within the province under with and without the cost of living. High wage dispersion is found in without cost of the living model in both regions Punjab and Sindh as compared to with cost of the living model. Results also revealed the existence of high wage dispersion is more in Punjab province as compare to Sindh province. Cost of living is also matters in wage dispersion in Pakistan's cities'; it should be considered while formulating for minimum wage policy. While, the monthly wage in different cities are different not across the province but also within the region, so the government must consider each city's wage dispersion and cost of living while formulating minimum wage.

Celebration of Independence Day 2019

The 72nd Independence Day of Pakistan was celebrated at the Applied Economics Research Centre, University of Karachi on August 20, 2019. The Independence Day was celebrated with traditional enthusiasm and zeal at the Centre. The function marked with recitation of the National Anthem of Pakistan with great fervor and passion.

The day started with the Director's presentation on the history of Pakistan and life of the father of the nation **Quaid-e-Azam Muhammad Ali Jinnah**. Dr. Samina Khalil reminded the audience of the great sacrifices our ancestors and martyrs made in achieving this piece of land 72 years ago. Dr. Khalil also motivated the scholars to bring the change and accountability from within themselves and their societies to observe the real change. She also expressed solidarity with Kashmir reeling from Indian repression. She also appreciated the students of M.Phil. batch 2019-20 for organizing and decorating the centre beautifully.

Batch 2019-20 organized Independence Day function at Centre's auditorium, the students performed different scripts, delivered speeches, sang national songs, arranged quiz and qawali. The function was interesting and engaging for the audience. Mr. Muhammad Affan Siddiqui and Ms. Seenab Naeem did hosting while Holy Verses were recited by Mr. Iqbal Hussain. Ms. Bisma Yonus recited naat and national songs were sang by Ms. Jawairia Ahmed, Ms. Bisma Yonus, Mr. Muhammad Affan Siddiqui, Mr. Qareem Akhtar, Ms. Ruqqaiya, Ms. Sara Muhammad, Mr. Sardar M. Ahsan and Mr. Immad and Mr. Mujtaba from M. Phil. batch 2017-18 and 2018-19 respectively. Skit on other hand was performed by Ms. Tayyaba, Ms. Uroosa Khan and Ms. Farah Khursheed while Mr. Qareem Akhter spoke on Pakistan and independence.

All the faculty members including Dr. Shahista Alam, Dr. Uzma Iram, Dr. Asghar, Mr. Roshan Ali Shah, Ms. Nargis Khatoon, Mr. Kamran Abbas admin staff along with students sang different National songs in the true spirit of the event. The day celebration ended with cake cutting ceremony by Dr. Samina Khalil, Director AERC along with the research and administrative staff of the Centre.

Everyone at the AERC celebrated 14th of August with zeal and enthusiasm to eulogize the hard work and immense sacrifices made by our ancestors for the glorious achievement of an independent nation. This day also revives the commitments and aspirations made on the Independence Day by us, be it students, faculty, admin staff everyone at AERC pledged to make a better Pakistan by changing themselves and their surroundings as a first step.

