



# PAKISTAN

## Strategy Support Program



**Pakistan Social Science Research Competitive Grants Program (CGP)**  
 Program under the Auspices of the Planning Commission of Pakistan

**Appendices for:**  
**Developing research and a research culture:**  
**Results from a pilot project in Pakistan**

Nadeem Ul Haque and David Orden  
 August 2017

**Appendix 1:**  
**2011-16 Members of the Research Advisory Committee (RAC)**

Chairman and Deputy Chairman
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**Dr. Nadeem Ul Haque** (RAC Chairman, 2011-2014) served as Deputy Chairman of the Planning Commission, Government of Pakistan. He has also held positions as a Division Chief at the International Monetary Fund (IMF) and as Vice Chancellor of the Pakistan Institute of Development Economics (PIDE).

**Professor Ahsan Iqbal** (RAC Chairman, 2014-15) is Minister of Planning, Development and Reforms and Deputy Chairman of the Planning Commission, Government of Pakistan. He is currently a Member of the National Assembly (MNA) and has been elected four times as an MNA from the constituency of Narowal. He has previously served as the Federal Education Minister and has a distinguished career in industry, academics, electoral politics, party leadership and national governance.

**Dr. David Orden** (RAC Deputy Chairman) is Senior Research Fellow in the Markets, Trade and Institutions Division of the International Food Policy Research Institute (IFPRI) and Professor, Virginia Polytechnic Institute and State University. He has been a Visiting Fellow at the University of New South Wales (Australia), Chairman of the International Agricultural Trade Research Consortium, and Visiting Professor at Stanford University.

Members
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**Dr. Nuzhat Ahmad** is Senior Research Fellow in the Development Strategies and Governance Division of the International Food Policy Research Institute (IFPRI) and former Director and Research Professor at the Applied Economics Research Centre (AERC), University of Karachi. She has also served on the Board of Directors of the Pakistan Poverty Alleviation Fund (PPAF).

**Dr. Imran Ali** is Professor of Business Policy at the Karachi School for Business and Leadership (KSBL) and former Professor at the Lahore University of Management Sciences (LUMS). He has served as the Jamil Nishtar Chair of Agribusiness at LUMS. He has also taught at the University of New South Wales and the University of Melbourne in Australia.

**Dr. Ryan Cardwell** (appointed January 2014) is Associate Professor, Department of Agricultural Economics, University of Manitoba, Canada. He is also an editorial board member of the Canadian Journal of Agricultural Economics and the President of the Canadian Council of the International Association of Agricultural Economists. His areas of research include food security, food policy, and international trade.

**Dr. Ali Cheema** is Associate Professor of Economics at the Lahore University of Management Sciences (LUMS) and Fellow of the Institute of Development and Economic Alternatives (IDEAS) and the Center of Economic Research, Pakistan (CERP). He has previous experience as a consultant to the Asian Development Bank, DFID, and the World Bank and has served on high level Provincial and Federal Government task forces and committees.

**Dr. Stephen Davies** is IFPRI Senior Research Fellow and Program Leader for the Pakistan Strategy Support Program (PSSP). He formerly served as chairman of the Department of Agricultural and Resource Economics, Colorado State University. His research on Pakistan has focused on agricultural policy, computable general equilibrium models, and water resources and he served as an economist on the Friends of Democratic Pakistan's Water Sector Task Force.

**Dr. Ariel Dinar** (appointed January 2014) is Professor of Environmental Economics and Policy, Department of Environmental Sciences and Director, Water Science and Policy Center, University of California, Riverside. He previously was an economist at the World Bank. His areas of research include water and environmental economics, climate change, cooperative game theory, and economics of extension.

**Dr. Akmal Hussain** is Distinguished Professor of Economics at Forman Christian College (A Chartered University), Lahore. He is also a Member, Governing Board, of the South Asia Centre for Policy Studies (SACEPS), and a Senior Fellow at the Pakistan Institute of Development Economics (PIDE). He has advised the Government on economic policy as Chairman, Working Group on Institutions for Development, Panel of Economists and as Chairman of the Working Group on Poverty Reduction for Pakistan's Tenth Five-Year Plan.

**Dr. Aliya H. Khan** (appointed January 2014) is Dean, Faculty of Social Sciences, and former Director, School of Economics, Quaid-i-Azam University, Islamabad. Prior to this she was a Professor in the Department of Economics at the University. Her areas of research include labor economics, human resource development, and macroeconomics. She completed her doctorate from the University of Illinois at Chicago.

**Dr. Iqrar Ahmad Khan** is Vice Chancellor and Professor of Horticulture at the University of Agriculture, Faisalabad. He was leader of a team, which established the Center of Agriculture Biochemistry and Biotechnology at the University, has secured many research and development projects and now holds overall responsibility for the university's development. Through his

leadership, he has brought the university's ranking into the top 100 colleges of agriculture worldwide.

**Dr. John Mellor** is President of John Mellor Associates, Inc. He was the founding Director General of the International Food Policy Research Institute (IFPRI). Previously, he was President of Abt Associates and Chief Economist at the United States Agency for International Development (USAID). Dr. Mellor has been widely recognized for his work exploring the relationship between rural development and sustained macroeconomic growth for poverty reduction.

**Dr. Nicholas Minot** is Senior Research Fellow in the Markets, Trade and Institutions Division of the International Food Policy Research Institute (IFPRI). Previously he taught at the University of Illinois in Urbana-Champaign. He has worked as a policy advisor in Zimbabwe and has conducted fieldwork in several countries including Ethiopia, Rwanda, and Vietnam.

**Dr. Margaret McMillan** is Associate Professor at Tufts University and Senior Research Fellow in the Development Strategies and Governance Division of the International Food Policy Research Institute (IFPRI). She has advised a variety of organizations include the Peace Corps, Lehman Brothers, USAID, UNDP, and the World Bank.

**Dr. Syed Nawab Haider Naqvi** is HEC Distinguished National Professor and Director General of the Federal Urdu University of Arts, Science and Technology. Previously, he was Director of the Pakistan Institute of Development Economics (PIDE), Senior Economic Advisor at the National Electric Power Regulatory Authority (NEPRA) and Rector of the Kausar University of Sciences.

**Dr. Abid Suleri** (appointed January 2014) is Director of the Sustainable Development Policy Institute (SDPI), Islamabad. He is also a Member of the Economic Advisory Council of the Government of Pakistan and a Member of the National Advisory Committee of the Planning Commission of Pakistan. He has previously held positions as a Member of Board of Management of Pakistan State Oil (PSO) and Chaired the Board Audit and Finance Committee of the PSO.

**Dr. Michael Trueblood** (*ex officio* member, 2014-15) is a Development Officer for USAID/Pakistan's Economic Growth and Agriculture Office. Previously, he was the Economic Director for USAID/Central Asian Republics, program economist for USAID/D. R. Congo and an economist at the Economic Research Service, USDA. In June 2015 he was replaced as *ex officio* member by Ms. Alefia Merchant.

**Dr. Michael Wyzan** (*ex officio* member, 2011-2013) is General Development Officer for the Economic Growth and Agriculture Office at USAID/Pakistan. Previously, he held positions at Bearing Point, at the International Institute for Applied Systems Analysis, US Department of Treasury, Stockholm School of Economics, US Department of State, Illinois State University, and Wake Forest University.

**Appendix 2:**  
**Topics of Projects Funded in Three Rounds, 2012-2014**  
(1<sup>st</sup> Round projects numbered 100-299; 2<sup>nd</sup> Round projects numbered 300-499; 3<sup>rd</sup> Round projects numbered 500-899)

**Fiscal Policy**

**Assessments of Public Investment**

**Public Investment Efficiency and Sectoral Economic Growth in Pakistan**

(ID No. 303) Dr. Qazi Masood Ahmed, [qmasood@iba.edu.pk](mailto:qmasood@iba.edu.pk), Institute of Business Administration, Karachi  
Investigates the impact of sectoral and aggregate public investments on growth in eight sectors

**Productivity and Growth: A Disaggregated Analysis for the Manufacturing Sector of Pakistan**

(ID No. 392) Ms. Fauzia Kamal, [fauzia\\_15@hotmail.com](mailto:fauzia_15@hotmail.com), Applied Economics Research Centre, University of Karachi

Investigates the sources of value added growth in Pakistan's large scale manufacturing sector

**Efficiency of Alternative Public Investments**

(ID No. 512) Dr. Qazi Masood Ahmed, [qmasood@iba.edu.pk](mailto:qmasood@iba.edu.pk), Institute of Business Administration, Karachi  
Assesses impacts of public physical and social investments on growth in eight sectors (extension of project 303)

**Regime Switches in Pakistan's Fiscal Policies**

(ID No. 596) Dr. Iftikhar Ahmad, [iftikhar@pide.org.pk](mailto:iftikhar@pide.org.pk), PIDE, Islamabad  
Assesses effects of government spending/taxes on growth and the trade balance

**Infrastructure Development and Economic Growth**

(ID No. 718) Dr. Samina Sabir, [samina.sabir78@gmail.com](mailto:samina.sabir78@gmail.com), University of Azad Jammu and Kashmir, Muzaffarabad

Assesses impacts of public physical and social investments on aggregate growth

**Macroeconomic Data**

**An Essay on Consumption Hypotheses**

(ID No. 279) Mr. Khalid Khan, [khalidkk82@yahoo.com](mailto:khalidkk82@yahoo.com), Lasbela University of Agriculture, Water and Marine Sciences, Quetta

Estimates short-run and long-run consumption functions for Pakistan

**Pakistan KLEMS Database and Productivity Measurement at the Industry Level**

(ID No. 631) Dr. Abid Aman Burki, [burki@lums.edu.pk](mailto:burki@lums.edu.pk), LUMS, Lahore

Creates internationally-consistent growth and productivity database for 14 industries

**Improved Estimates of Changes in Stocks/Inventories for National Accounts**

(ID No. 803) Mr. Zafar Ul Hassan, [hsa666@hotmail.com](mailto:hsa666@hotmail.com), Planning Commission of Pakistan, Islamabad  
Develops accurate and consistent estimates of changes in stocks

**Tax Policy**

**Tax Policy Research to Support a New Framework for Sustained Economic Growth of Pakistan**

(ID No. 255) Mr. Daniyal Aziz, [dax100@hotmail.com](mailto:dax100@hotmail.com), Governance Institutes Network International, Islamabad  
Assesses potential tax revenue gained from expanding and reforming current UIPT laws

### **Implementation of UIPT Reforms in Punjab**

(ID No. 824) Mr. Daniyal Aziz, [dax100@hotmail.com](mailto:dax100@hotmail.com), Governance Institutes Network International, Islamabad  
Examines possibilities and impediments to updating and reform of UIPT (extension of project 255)

## **Improved Governance**

### **Institutional Context**

#### **Estimating the Size and Operations of the Public Sector and its Impact on Wheat Markets in Pakistan: A Post-18th Constitutional Amendment Inquiry**

(ID No. 240) Dr. Vaqar Ahmed, [vahmed@gmail.com](mailto:vahmed@gmail.com), Sustainable Development Policy Institute, Islamabad  
Assesses the impact of public sector interventions on the wheat markets in Pakistan

#### **Religion, Land and Politics: Shrines and Literacy in Punjab, Pakistan**

(ID No. 263) Dr. Adeel Malik [adeel.malik@qeh.ox.ac.uk](mailto:adeel.malik@qeh.ox.ac.uk), (Ph.D. candidate, Mr. Rinchan Ali Mirza, [ali\\_mirza11@hotmail.com](mailto:ali_mirza11@hotmail.com)), University of Oxford, UK  
Examines the impact of historical religious shrines on regional development

#### **The First Constituent Assembly of Pakistan: An Institutional Economics Analysis**

(ID No. 437) Dr. Yaqoob Khan Bangash, [yaqoob.bangash@gmail.com](mailto:yaqoob.bangash@gmail.com), Forman Christian College, Lahore  
Examines the constitution making process in Pakistan's first constituent assembly

### **Project Evaluations**

#### *Disaster Relief*

#### **Aid Effectiveness in Poverty Alleviation in a Post-Conflict and Post-Disaster Setting: A Case Study of the Malakand Region**

(ID No. 363) Dr. Murad Ali, [ma\\_hardy1@yahoo.com](mailto:ma_hardy1@yahoo.com), University of Malakand  
Examines the effectiveness of aid allocation in Swat valley on the basis of the Paris Declaration

#### **Precarious Lives, Disrupted Bodies: Social Repair after Disaster in Northern Pakistan**

(ID No. 581) Mr. Omer Aijazi (Ph.D. candidate), [omer.aijazi@utoronto.ca](mailto:omer.aijazi@utoronto.ca), University of British Columbia, Vancouver  
Examines social repair after natural disasters and recovery strategies

#### *Education and Health*

#### **Essays on the Political Economic Consequences of Pakistan's Linguistically Fractured Educational System**

(ID No. 169) Dr. John Willoughby, [jwillou@american.edu](mailto:jwillou@american.edu), (Ph.D. candidate, Ms. Zehra Aftab, [aftab.zehra@gmail.com](mailto:aftab.zehra@gmail.com)), American University, Washington DC  
Examines the consequences of Pakistan's linguistically divided educational system

#### **Urban Open Spaces for Adolescent Girls**

(ID No. 365) Mr. Syed Ayub Qutub, [s.a.qutub@piedar.org](mailto:s.a.qutub@piedar.org), Pakistan Institute for Environment-Development Action Research, Islamabad, and Dr. Nomana Anjum, [anjums41@hotmail.com](mailto:anjums41@hotmail.com), Allama, Iqbal Open University  
Examines impediments to girls' access to urban open spaces, their preferences, and develops policy options

#### **Priming Rural Health Facilities for Optimal Service Delivery**

(ID No. 410) Dr. Musharraf Rasool Cyan, [musharraf.cyan@gmail.com](mailto:musharraf.cyan@gmail.com), Georgia State University, USA  
Conducts an intervention in health care facilities by implementing readiness protocols to demonstrate effectiveness

### **Food Utilization among Poor Households in Peri-Urban Areas of Punjab**

(ID No. 506) Dr. Muhammad Khalid Bashir, [khalid450@uaf.edu.pk](mailto:khalid450@uaf.edu.pk), UAF, Faisalabad  
Investigates consumption among peri-urban households with focus on nutrition and food safety

### **Financial Literacy Challenge and Empowerment**

(ID No. 523) Dr. Imran Ali, [imranali@ciitlahore.edu.pk](mailto:imranali@ciitlahore.edu.pk), COMSATS, Lahore  
Investigates strategies for raising family financial management of low-income women

### **Competition between Private and Public Schools in Rural Pakistan**

(ID No. 678) Dr. Muhammad Jehangir Khan, [jehangir@pide.org.pk](mailto:jehangir@pide.org.pk), PIDE, Islamabad  
Assesses alternatives for improving school quality and effects on attendance

### **Health Benefits of Urban Open Spaces for Adolescent Girls**

(ID No. 697) Dr. Nomana Anjum, [anjums41@hotmail.com](mailto:anjums41@hotmail.com), Allama, Iqbal Open University, and Dr. Syed Ayub Qutub, [s.a.qutub@piedar.org](mailto:s.a.qutub@piedar.org), Pakistan Institute for Environment-Development Action Research, Islamabad  
Assesses effects of open space access and outdoor recreation on health of adolescent girls (extension of project 365)

## *Public Service Administration*

### **Bureaucratic Performance and Local Public Service Delivery in Punjab**

(ID No. 323) Dr. Maryam Tanwir, [mt383@cam.ac.uk](mailto:mt383@cam.ac.uk), University of Cambridge, UK  
Investigates the status of bureaucratic performance evaluation in Punjab and recommends reforms

### **Dimensions of Corruption in Pakistan: A Qualitative and Quantitative Analysis Based on System Dynamics Modelling**

(ID No. 340) Dr. Eatnaz Ahmed, [dfss@qau.edu.pk](mailto:dfss@qau.edu.pk), Quaid-i-Azam University, Islamabad  
Assess the dimensions leading to corruption using a dynamic modeling approach

## *Transportation*

### **Urban Transportation and Access to Economic Opportunity: Lahore Metrobus**

(ID No. 667) Dr. Hadia Majid, [hadia.majid@lums.edu.pk](mailto:hadia.majid@lums.edu.pk), LUMS, Lahore  
Evaluates effects of Metrobus on labor mobility and earnings

## **Urban and Regional Development**

### **Agent-Based Modeling Simulations for Solving Pakistan's Urban Challenges**

(ID No. 168) Dr. Hilton Root, [hroot2@gmu.edu](mailto:hroot2@gmu.edu), (Ph.D. candidate, Mr. Ammar Anees Malik [amalik8@masonlive.gmu.edu](mailto:amalik8@masonlive.gmu.edu)), George Mason University, USA  
Creates a stylized, agent based model to investigate potential policy scenarios for improving urban productivity

### **Economic Growth and Protection of Life, Property and Contracts**

(ID No. 179) Dr. Shabib Haider Syed, [shabibhaidersyed@fccollege.edu.pk](mailto:shabibhaidersyed@fccollege.edu.pk), Forman Christian College, Lahore  
Assess the effects of poor institutions on economic growth, crime, terrorism and suicides

### **Batkhela (Malakand) Bazaar: A Catalyst for Socio-Economic and Political Change**

(ID No. 187) Dr. Muhammad Ayub Jan, [ayub@upesh.edu.pk](mailto:ayub@upesh.edu.pk), University of Peshawar  
Examines the emergence of Batkhela Bazaar and its role in social and political institutions

### **Integrating Rural-Urban Linkages for Regional Development in the Province of Sind: A Cluster Based Approach**

(ID No. 257) Mr. Noman Saeed, [ecomonomics@yahoo.com](mailto:ecomonomics@yahoo.com), Applied Economics Research Centre, University of Karachi

Assesses the contribution of medium, small and secondary cities can contribute to regional development

### **Livelihood Diversification in the Rural Economy in Punjab and Sindh**

(ID No. 769) Dr. Faisal Jamil, [fsljml@hotmail.com](mailto:fsljml@hotmail.com), NUST, Islamabad

Investigates farm, non-farm and remittance income strategies of rural households

## **Vibrant Markets**

### **Entrepreneurship**

#### **The Size and Nature of Informal Entrepreneurship in Pakistan and How to Tackle It**

(ID No. 179) Dr. Muhammad Shehryar Shahid, [mshehrayr@ucp.edu.pk](mailto:mshehrayr@ucp.edu.pk), University of Central Punjab, Lahore  
Investigates the degree of informality of entrepreneurs and the reasons influencing it

#### **Exploring Determinants of Entrepreneurial Behaviour in Disadvantaged Areas of Kyber Pakhtunkhwa**

(ID No. 327) Dr. Ali Muhammad Mohmand, [dralimohmand@gmail.com](mailto:dralimohmand@gmail.com), University of Peshawar  
Investigates the factors leading to entrepreneurial behavior in disadvantaged FATA

#### **Remittances and Entrepreneurship: Evidence from the Pakistan Remittance Initiative**

(ID No. 408) Dr. Javaeria A. Qureshi, [javaeria@uic.edu](mailto:javaeria@uic.edu), University of Illinois-Chicago, USA  
Examines the PRI's impact on remittance flows to Pakistan and their impact on entrepreneurship

#### **Determinants of Expansion of Micro and Small Firms and the State of Entrepreneurship**

(ID No. 418) Dr. Idrees Khawaja, [idreeskhawaja@pide.org.pk](mailto:idreeskhawaja@pide.org.pk), PIDE, Islamabad  
Examines the characteristics of micro and small entrepreneurs and the reason for their expansion

### **Financial Markets**

#### **Developing a Vibrant Financial System and Bond Market through Market Disciplines and Regulatory Policies**

(ID No. 379) Dr. Syed Kumail Abbas Rizvi, [skrizavi@yahoo.com](mailto:skrizavi@yahoo.com), Synergistic Financial Advisors, Lahore  
Examines the role of market discipline in enabling the development of Pakistan's financial system

#### **Developing a Vibrant Financial System and Bond Market**

(ID No. 720) Dr. Syed Kumail Abbas Rizvi, [skrizavi@yahoo.com](mailto:skrizavi@yahoo.com), Synergistic Financial Advisors, Lahore  
Further investigates market discipline on banking sector and potential for bond market development (extension of project 379)

### **International Trade**

#### **Pakistan's Potential Trade and 'Behind the Border' Constraints**

(ID No. 338) Dr. Adil Khan Miankhel, [adilmiankhel@hotmail.com](mailto:adilmiankhel@hotmail.com), Competition Commission of Pakistan, Islamabad

Explores the constraints to trade in Pakistan caused by behind the border institutional and political factors

#### **Channelizing Pakistan-Afghanistan Informal Trade into Formal Channels**

(ID No. 556) Dr. Adil Khan Miankhel, [adilmiankhel@gmail.com](mailto:adilmiankhel@gmail.com), Embassy of Pakistan, Kazakhstan  
Examines informal and formal trade and possible preferential trade arrangements (extension of project 338)

## Labor Markets

### **An Assessment of Skill Gaps Among University Graduates for Employability and Performance in Industries Situated in the Gujrat-Sialkot-Gujranwala Industrial Cluster**

(ID No. 152) Dr. Atif Ali Jaffri, [atif.ali@uog.edu.pk](mailto:atif.ali@uog.edu.pk), University of Gujrat, Hafiz Hayat Campus  
Assesses the perceived skill gaps between graduates and their employed positions in GSG industrial cluster

### **Estimating Labor Market Skill Mismatch in Selected Professions**

(ID No. 344) Dr. Pervez Zamurrad Janjua, [pzjanjua@hotmail.com](mailto:pzjanjua@hotmail.com), International Islamic University, Islamabad  
Estimates the skill mismatch in university graduates in Pakistan based on vacancy fill rates and lag times

### **Socio-Economic and Health Status of Female Cotton Pickers**

(ID No. 554) Dr. Muhammad Abubakkar, [knnike@yahoo.com](mailto:knnike@yahoo.com), UAF, Sub Campus Vehari  
Investigates health and economic status of women cotton pickers

### **Child Labour in the Urban Informal Sector**

(ID No. 591) Dr. Ambreen Fatima, [amber\\_aerc@yahoo.com](mailto:amber_aerc@yahoo.com), Applied Economics Research Centre, University of Karachi  
Assesses supply and demand determinants of child labour

### **Employment in the Textile Sectors**

(ID No. 601) Dr. Muhammad Khan, [mkhan@ciitlahore.edu.pk](mailto:mkhan@ciitlahore.edu.pk), COMSATS, Lahore  
Evaluates workplace safety and health status of women workers in cotton-textile industries

## Management

### **Corporate Governance Index: A Measure of Corporate Governance Practices in Pakistan**

(ID No. 409) Dr. Aneel Salman, [aneelsalman@yahoo.com](mailto:aneelsalman@yahoo.com), Center for Policy and Management, Islamabad  
Constructs and index of corporate governance in Pakistan to assess compliance levels

### **Dynamic Behavior of Corporate Investment in Pakistan**

(ID No. 519) Dr. Adnan Haider, [ahaider@iba.edu.pk](mailto:ahaider@iba.edu.pk), Institute of Business Administration, Karachi  
Investigates micro-level/balance sheet determinants of KSE-Listed firm investment

### **High-Level Human Resource Management to Enhance Firm Performance**

(ID No. 520) Dr. Mansoor Ahmad, [mansoor\\_ahmad@comsats.edu.pk](mailto:mansoor_ahmad@comsats.edu.pk), COMSATS, Islamabad  
Investigates effects of large-firm HR management on absenteeism and other indicators

### **Strategic Human Resource Management Practices for Medium Enterprises**

(ID No. 526) Dr. Naveed Ur Rehman, [dr.naveed@iqra.edu.pk](mailto:dr.naveed@iqra.edu.pk), Iqra University, Karachi  
Investigates effects of medium-firm HR management on performance

### **Effects of Corporate Governance on Earnings Management Practices**

(ID No. 635) Bilal Hafeez, [bilal.hafeez@nu.edu.pk](mailto:bilal.hafeez@nu.edu.pk), National University of Computer and Emerging Sciences, Islamabad  
Investigates effects of corporate governance and audit regulation on firm performance

### **Social Compliance Audits in the Textile and Garments Sector**

(ID No. 778) Dr. Muhammad Faraz, [farazm2001@yahoo.com](mailto:farazm2001@yahoo.com), Bahria University, Karachi  
Investigates labor practices that affect social compliance export requirements



## Value Added in Agriculture

### **Analyses of Selected Heavy Metals and Aflatoxin M1 in Milk for Human Consumption in Jhang City, Pakistan**

(ID No. 102) Dr. Muhammad Younus, [younusrana@uvas.edu.pk](mailto:younusrana@uvas.edu.pk), College of Veterinary and Animal Sciences, Jhang  
Assesses the amount of various harmful contaminants in the milk for commercial sale in Jhang City shops

### **Collection and Marketing of High Value Medicinal and Aromatic Plants from District Swat, Pakistan**

(ID No. 104) Dr. Hassan Sher, [hassan.botony@gmail.com](mailto:hassan.botony@gmail.com), University of Swat  
Examines the collection of MAPs in Swat Valley, their marketing chains, and potential livelihood benefits

### **Effects of Livestock Diseases on Dairy Production and Incomes in District Faisalabad, Punjab, Pakistan**

(ID No. 150) Dr. Muhammad Ashfaq, [ashfaq9@hotmail.com](mailto:ashfaq9@hotmail.com), UAF, Faisalabad  
Estimates the prevalence of livestock diseases and their economic impact on productivity and incomes

### **DNA Barcoding and Biochemical Profiling of Medicinal Plants of Northern and Desert Areas of Pakistan: Improving Socio-economic Standard of the People of these Regions**

(ID No. 167) Dr. Amer Jamil, [amerjamil@yahoo.com](mailto:amerjamil@yahoo.com), UAF, Faisalabad  
Constructs DNA and biochemical profile database of MAPs and examines their socio-economic importance

### **What Determines Farmers' Response towards Adopting New Technology in KPK?**

(ID No. 242) Dr. Shahnaz Akhtar, [drshahnazakhtar@aup.edu.pk](mailto:drshahnazakhtar@aup.edu.pk), University of Agriculture, Peshawar  
Investigates social and economic factors affecting farmers adoption of new technology in KPK

### **Comparative Advantage and Policy Analysis of KPK Agriculture**

(ID No. 426) Dr. Noor P. Khan, [profnoorkhan@yahoo.com](mailto:profnoorkhan@yahoo.com), University of Agriculture, Peshawar  
Investigates sources of comparative advantage at the farm level in KPK

### **The Role of Milk Collection Contracts in Improving Production and Marketing in Irrigated Punjab**

(ID No. 465) Dr. Muhammad Qasim, [m\\_qasim@yahoo.com](mailto:m_qasim@yahoo.com), Pakistan Agricultural Research Council, Ayub Agricultural Research Institute, Faisalabad  
Examines the impact of collection contracts on the productivity and outputs of milk producers

### **Agricultural Markets and Agrarian Change in Pakistani Punjab**

(ID No. 473) Mr. Muhammad Ali Jan (Ph.D. candidate), [muhhammad.jan@wolfson.ox.ac.uk](mailto:muhhammad.jan@wolfson.ox.ac.uk), University of Oxford, UK  
Investigates rural social linkages and how they affect trade and marketing patterns in potatoes

### **Medicinal and Aromatic Plants to Promote Economic Development in Swat Valley**

(ID No. 511) Dr. Hassan Sher, [hassan.botany@gmail.com](mailto:hassan.botany@gmail.com), University of Swat  
Demonstrations and economic analysis of MAP cultivation to raise incomes and preserve species (extension of project 104)

### **Strategies to Control Diseases and Increase Productivity of Livestock Sector**

(ID No. 536) Dr. Muhammad Ashfaq, [ashfaq9@hotmail.com](mailto:ashfaq9@hotmail.com), UAF, Faisalabad  
Assesses impediments to improved disease control and livestock quality (extension of project 150)

### **A Value Chain Analysis of the Leather Industry**

(ID No. 567) Dr. Zahoor Ul Haq, [zahoor.haq1@gmail.com](mailto:zahoor.haq1@gmail.com), Abdul Wali Khan University, Mardan  
Examines intra- and inter-firm determinants of value-added and export performance

### **Local Marketing Channels and Farm Profitability**

(ID No. 608) Dr. Bushra Yasmin, [bushrayasmin@yahoo.com](mailto:bushrayasmin@yahoo.com), Fatima Jinah Women University, Rawalpindi  
Investigates marketing alternatives to raise farm incomes

### **Effects of Biofertilizer on Productivity of Chickpeas in Cholistan-Bahawalpur**

(ID No. 610) Dr. Maqshoof Ahmad, [maqshoof\\_ahmad@yahoo.com](mailto:maqshoof_ahmad@yahoo.com), Islamia University, Bahawalpur  
Demonstration trials and economic analysis of biofertilizer to raise production

## **Energy Supply and Demand**

### **Energy Security through Adopting Biogas System in Kyber Pakhtunkhwa**

(ID No. 532) Dr. Malik Inayatullah Jan, [jaan.inayat@gmail.com](mailto:jaan.inayat@gmail.com), University of Agriculture, Peshawar  
Evaluates potential for small-scale organic energy production in rural KPK

### **Development of Demand Side Energy Management in Pakistan**

(ID No. 742) Dr. Fahad Javed, [fahadjaved@gift.edu.pk](mailto:fahadjaved@gift.edu.pk), GIFT University, Gujranwala  
Assesses alternatives for energy demand management using computer simulation

### **An Integrated Model of Sustainable Energy Systems**

(ID No. 831) Dr. Khanji Harijan, [khanji.harijan@faculty.muett.edu.pk](mailto:khanji.harijan@faculty.muett.edu.pk), Mehran University of Engineering and Technology  
Develops an operations research integrated energy sector and decision aid model

### **Impact of Climate Change on Electricity Consumption**

(ID No. 854) Dr. Pervez Janjua, [pzjanjua@hotmail.com](mailto:pzjanjua@hotmail.com), International Islamic University, Islamabad  
Investigates potential effects of climate change on energy demand

## **Water Systems and Utilization**

### **Allocative Inefficiency, Tenure Systems and Poverty in Irrigated Agriculture in Pakistan**

(ID No. 129) Dr. Ariel Dinar, [ariel.dinar@ucr.edu](mailto:ariel.dinar@ucr.edu), (Ph.D. candidate, Mr. Sanval Nasim, [snasi001@ucr.edu](mailto:snasi001@ucr.edu)),  
University of California-Riverside, USA  
Estimates the allocative inefficiency in ground water use based on farm-level constraints

### **Enhancing Water Productivity by Using Feasible Efficient Irrigation Techniques**

(ID No. 196) Dr. Allah Bakhsh, [bakhsh\\_uaf@yahoo.com](mailto:bakhsh_uaf@yahoo.com), UAF, Faisalabad  
Assesses the potential benefits of various high efficiency irrigation techniques

### **Formulating Water Policy Based on Rationalization of Water Allocations Using Remote Sensing and GIS**

(ID No. 470) Dr. Muhammad Jehanzeb Masud Cheema, [mjm.cheema@gmail.com](mailto:mjm.cheema@gmail.com), UAF, Faisalabad  
Investigates water allocation in the Indus basin and proposes policy options for optimal use

### **Optimal Groundwater Management in the Indus Water Basin**

(ID No. 599) Dr. Steven Helfand, [steven.helfand@ucr.edu](mailto:steven.helfand@ucr.edu), (Ph.D. candidate, Mr. Sanval Nasim, [snasi001@ucr.edu](mailto:snasi001@ucr.edu)),  
University of California, Riverside, USA  
Models groundwater extraction and quality under alternative policies (extension of project 129)

### **Developing a Real-Time Intelligent Water Allocation System**

(ID No. 682) Dr. Muhammad Jehanzeb Masud Cheema, [mjm.cheema@gmail.com](mailto:mjm.cheema@gmail.com), UAF, Faisalabad  
Integrates remote sensing and hydrological models to inform water allocation decisions

### **Efficient Irrigation Technologies for Groundwater Security in Balochistan**

(ID No. 735) Dr. Junaid Alam Memon, [memon@pide.org.pk](mailto:memon@pide.org.pk), PIDE, Islamabad  
Investigates efficient irrigations systems and farmers' willingness to adopt

### **Appendix 3: External Reviewers**

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**Imran Ali**, Karachi School for Business and Leadership (KSBL), Karachi

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**Roy Bahl**, Georgia State University, Atlanta, Georgia

**Mary Barkworth**, Utah State University, Logan, Utah

**Andrew Bell**, IFPRI, Washington, D.C.

**Ryan Cardwell**, University of Manitoba, Winnipeg, Canada

**Andrew Comstock**, IFPRI, Washington, D.C.

**Caesar Cororaton**, Virginia Tech, Arlington, Virginia

**Steve Davies**, PSSP, Islamabad

**Adam Eckerd**, Virginia Tech, Blacksburg, Virginia

**Nauman Farooqi**, Mount Allison University, Sackville, Canada

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**Pascal Ghazalian**, University of Lethbridge, Lethbridge, Canada

**Vidhan Goyal**, University of Science and Technology, Hong Kong

**Farhan Hameed**, Independent Consultant, Islamabad

**Dick Howett**, UC-Davis, Davis, California

**Naureen Karachiwalla**, IFPRI, Washington, D.C.

**Katrina Kosec**, IFPRI, Washington, D.C.

**Mary O'Mahony**, Kings College, London

**Momoe Makino**, IDE-JETRO, Mihamaku, Chiba, Chiba Prefecture

**Adeel Malik**, Oxford University, Oxford, UK

**Ammar Malik**, George Mason University, Fairfax, Virginia

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**Daanish Mustafa**, King's College, London  
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**Ranchand Oad**, Colorado State University, Fort Collins, Colorado  
**Hafiz Pasha**, Institute for Policy Reforms, Lahore  
**Javaeria A. Qureshi**, University of Illinois-Chicago, Chicago, Illinois  
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**Hassan Sher**, University of Swat, Mingora, Pakistan  
**Peter J. Sloane**, Swansea University, Wales, and National Institute of Labour Studies, Flinders University, Australia  
**Oliver Smith**, University of Florida, Gainesville, Florida  
**Zahoor ul Haq**, Abdul Wali Khan University Mardan, Mardan, Pakistan  
**Angelino Viceisza**, Spelman College, Atlanta, Georgia  
**Attiya Yasmin Javid**, Pakistan Institute for Development Economics (PIDE), Islamabad  
**Liang You**, IFPRI, Washington, D.C.

## Appendix 4: Competitive Grants Program Project Publications (as of November 2016)

### JOURNAL ARTICLES (full article available on request if not posted online)

A19: Memon, Junaid Alam. "Rehabilitating Traditional Irrigation Systems: Assessing Popular Support for Karez Rehabilitation in Balochistan, Pakistan." [\*Human Ecology\*](#) (forthcoming 2017).

A18: Jan, Malik Inayatullah. "Willingness of rural communities to adopt biogas system in Pakistan: Critical factors and policy implications." [\*Renewable and Sustainable Energy Reviews\*](#) (forthcoming 2017).

A17: Malik, Adeel and Rinchan Ali Mirza. "Pirs and Politics in Punjab, 1931-2013." [\*Modern Asian Studies\*](#) (forthcoming, 2017).

A16: Sher, Hassan, Rainer W. Bussmann, Robbie Hart, and Hugo J. de Boer. 2016. "[Traditional use of medicinal plants among Kalasha, Ismaeli and Sunni groups in Chitral District, Khyber Pakhtunkhwa province, Pakistan.](#)" [\*Journal of Ethnopharmacology\*](#) 188: 57-69.

A15: Younus, M., T. Abbas, M. Zafar, S. Raza, A. Khan, A.H. Saleem, M.A. Idrees, Q.U. Nisa, R. Akhtar and G. Saleem. 2016. "[Assessment of heavy metal contamination in raw milk for human consumption.](#)" [\*South African Journal of Animal Science\*](#) 46(2): 157-160.

A14: Tanwir, Maryam and Azam Chaudhry. 2016. "Reforming a Broken System: A New Performance Evaluation System for Pakistani Civil Servants." [\*Pakistan Development Review\*](#) 55:1 (Spring): 49-72.

A13: Aijazi, Omer. 2016. "[Who Is Chandni bibi?: Survival as Embodiment in Disaster Disrupted Northern Pakistan.](#)" [\*Women's Studies Quarterly\*](#) 44:1&2 (Spring/Summer): 95-110.

A12: Ashfaq, Muhammad, Amar Razzaq, Shamsheer-ul-Haq and Ghulam Muhammad. 2015. "[Economic Analysis of Dairy Animal Diseases in Punjab: A Case Study of Faisalabad District.](#)" [\*Journal of Animal and Plant Science\*](#) 25(5):1482-1495.

A11: Williams, Colin, Muhammad S. Shahid and Alvaro Martinez. 2015. "[Determinants of the Level of Informality of Informal Micro-Enterprises: Some Evidence from the City of Lahore, Pakistan.](#)" [\*World Development\*](#). 84(August): 312-325.

A10: Qutub, Ayub, Nomana Anjum, Nazia Iftikharm, Mehnaz Mehmood and Nighat Bibi. Fall 2015. "[Choices of Adolescent Girls for Schoolyard Activities in Rawalpindi-Islamabad, Pakistan.](#)" [\*Children, Youth and Environments\*](#) 25(3): 40-61.

A9: Bakhsh, A. M. Ashfaq, A. Ali, M. Hussain, G. Rasool, Z. Haider and R.H. Faraz. 2015. "[Economic evaluation of different irrigation systems for wheat production in Rechna Doab.](#)" [\*Pakistan Journal of Agricultural Sciences\*](#) 52(3): 821-828.

A8: Sher, Hassan, Mary E. Barkworth and Hugo J. de Boer. 2015. [Medicinal and aromatic plant cultivation in the Swat valley, north-western Pakistan, for economic development and biodiversity conservation](#). *Genetic Resources and Crop Evolution* 62: 8.

A7: Tanwir, Maryam and Azam Chaudhry. 2015. "The performance evaluation system in Pakistan's civil service." [Africa's Public Service Delivery and Performance Review](#) 3(2): 81-103.

A6: Sher, Hassan and Mary E. Barkworth. 2015. "Economic Development through Medicinal and Aromatic Plants (MAPs) Cultivation in Hindu Kush Himalaya Mountains of District Swat, Pakistan." [Journal of Mountain Sciences](#) 12(5): 1292-1301. DOI: 10.1007/s11692-014-3247-2.

A5: Ashfaq, Muhammad, Amar Razzaq, Sarfraz Hassan and Shamsheer ul Haq. 2015. [Factors Affecting the Economic Losses Due to Livestock Diseases: A Case Study of District Faisalabad](#). *Pakistan Journal of Agricultural Sciences* 52(2): 515-520.

A4: Malik, Ammar, Crooks, Andrew, Root, Hilton, Swartz, Melanie. 2015. [Exploring Creativity and Urban Development with Agent-Based Modeling](#). *Journal of Artificial Societies and Social Simulation* 18(2) 12.

A3: Williams, Colin and Muhammad Shehryar Shahid. 2014. [Informal entrepreneurship and institutional theory: explaining the varying degrees of \(in\)formalization of entrepreneurs in Pakistan](#). *Entrepreneurship & Regional Development* DOI 10.1080/08985626.2014.963889. Published online 8 October.

A2: Rizvi, Syed Kumail Abbas, Bushra Naqvi, Christian Bordes and Nawazish Mirza. 2014. [Inflation volatility: an Asian perspective](#). *Economic Research-Ekonomiska Istraživanja* 27(1): 280-303. DOI:10.1080/1331677X.2014.952090. Published online 25 September.

A1: Sher, Hassan, Ali Aldosari, Ahmad Ali and Hugo J de Boer. 2014. [Economic benefits of high value medicinal plants to Pakistani communities: an analysis of current practice and potential](#). *Journal of Ethnobiology and Ethnomedicine* 10:71.

#### PSSP WORKING PAPERS (Available on IFPRI website)

- PSSP Working Paper 041: [Channelizing Afghanistan to Pakistan Informal Trade into Formal Channels](#) by Adil Khan Miankhel. May 2016.
- PSSP Working Paper 040: [Potential of Market Discipline in Pakistan: The Bank Depositors' Perspective](#) by Nawazish Mirza, Bushra Naqvi, Syed Kumail Abbas Rizvi, and Birjees Rahat. April 2016.
- PSSP Working Paper 038: [Determinants of Entrepreneurial Behaviour in FATA Pakistan](#) by Ali Muhammad Mohmand and Muhammad Junaid. February 2016

- PSSP Working Paper 037: [DNA Barcoding and Biochemical Profiling of Medicinal Plants of Northern and Desert Areas of Pakistan to Improve Rural Living Standards](#) by Amer Jamil and Muhammad Ashfaq. February 2016
- PSSP Working Paper 036: [Assessment of Water Allocations using Remote Sensing and GIS Modeling for Indus Basin, Pakistan](#) by Muhammad Jehanzeb Masud Cheema, Allah Bakhsh, Talha Mahmood, and Muhammad Usman Liaqat. February 2016
- PSSP Working Paper 035: [The Pakistan Remittance Initiative and Remittance Flows to Pakistan](#) by Javaeria A. Qureshi. January 2016
  - Cited extensively in [Hurrahs for PRI](#), *Pakistan Business Recorder*, July 12, 2016
- PSSP Working Paper 034: [Optimal Groundwater Management in Pakistan's Indus Water Basin](#) by Sanval Nasim and Steven Helfand. December 2015
- PSSP Working Paper 033: [Experimental Evidence on Public Good Behavior across Pakistan's Fractured Educational System](#) by Zehra Aftab. December 2015
- PSSP Working Paper 032: [A Disaggregated Analysis of Productivity and Growth for Pakistan's Large Scale Manufacturing Sector](#) by Fauzia Kamal. October 2015.
- PSSP Working Paper 031: [Pakistan's Potential Trade and 'Behind the Border' Constraints](#) by Adil Khan Miankhel. June 2015
- PSSP Working Paper 030: [Religion, Land and Politics: Shrines and Literacy in Punjab, Pakistan](#) by Adeel Malik and Rinchan Ali Mirza. June 2015
  - Also the subject of an op-ed in the *Pakistan Express Tribune*, July 2, 2015 [Land of the Jinns: In the 115 tehsils studied in south Punjab, the authors found 64 shrines with direct political connections](#) by Ayesha Siddiqi
- PSSP Working Paper 029. [Aid Effectiveness in Poverty Alleviation in a Post-Conflict, Post-Disaster Setting: A Case Study of District Swat, Pakistan](#) by Murad Ali. March 2015
- PSSP Working Paper 028: [Economic Evaluation of Different Irrigation Systems for Wheat Production in Rechna Doab, Pakistan](#) by A. Bakhsh, M. Ashfaq, A. Ali, M. Hussain, G. Rasool, Z. Haider, and R. H. Faraz. March 2014
- PSSP Working Paper 027. [Urban Open Spaces for Adolescent Girls: An Assessment for Islamabad and Rawalpindi, Pakistan](#) by Syed Ayub Qutub and Nomana Anjum. February 2015
- PSSP Working Paper 023: [Effects of Livestock Diseases on Dairy Production and Incomes in District Faisalabad, Punjab, Pakistan](#) by Muhammad Ashfaq, Ghulam Muhammad, Shamsheer-ul-Haq and Amar Razzaq. November 2014

- Also resulted in the popular press article in *Pakistan Today*, January 14 2015  
[Livestock productivity under threat as diseases hound the sector](#) by M. Ashfaq, A. Razzaq and I. Javed
- PSSP Working Paper 022: [Public Investment Efficiency and Sectoral Economic Growth in Pakistan](#) by Qazi Masood Ahmed and Syed Ammad Ali. September 2014
- PSSP Working Paper 021: [The emergence and transformation of Batkhela \(Malakand\) Bazaar: Ethnic entrepreneurship, social networks, and change in disadvantageous societies](#) by Muhammad Ayub Jan. September 2014
- PSSP Working Paper 018: [How much do you love Pakistan? A property tax revenue simulation for a municipal revolution in Punjab](#) by Daniyal Aziz, Sabieh Haider and Muhammad Nasim Khan Raja. April 2014
- PSSP Working Paper 017: [An assessment of industrial employment skill gaps among university graduates](#) by Faisal Mehmood Mirza, Atif Ali Jaffri and Muhammad Saim Hashmi. April 2014
- PSSP Working Paper 015: [Allocative inefficiency and farm-level constraints in irrigated agriculture in Pakistan](#) by Sanval Nasim, Ariel Dinar and Steven Helfand. December 2013
  - Also circulating as UC-Riverside Water Science and Policy Center Working Paper 02-1113)
- PSSP Working Paper 013: [Can Pakistan have creative cities? An agent based modeling approach with preliminary application to Karachi](#) by Ammar A. Malik, Andrew T. Crooks and Hilton L. Root. December 2013
- PSSP Working Paper 012: [Analyses of selected heavy metals and aflatoxin M1 in milk for human consumption in Jhang city, Pakistan](#) by Muhammad Younus, Tariq Abbas, Muhammad Kamran Rafique, Muhammad Sajid and Muhammad Jabbar. December 2013
- PSSP Working Paper 011: [Collection and Marketing of High Value Medicinal and Aromatic Plants from District Swat, Pakistan](#) by Hassan Sher. November 2013