

PROCEEDINGS AND PAPER ABSTRACTS
OF THE
Himalayan Policy Research Conference (Thirteenth
Annual) Nepal Study Center

Thursday, October 11, 2018, Madison Concourse Hotel and Governors' Club, Symposium
Venue of the 47th South Asian Conference at the University of Wisconsin-- Madison

Department of Economics, The University of New Mexico, 1915 Roma Ave NE, MSC05 3060, Rm. 1019
Albuquerque, NM 87131
<http://nepalstudycenter.unm.edu>, Ph: 505-277-5903, nsc@unm.edu

Nepal Study Center, University of New Mexico



Published by *Nepal Study Center*, University of New Mexico, Albuquerque, NM, 87131, USA

Guest Editors

Mukti P. Upadhyay, PhD
Eastern Illinois University

Mohammad Mashiur Rahman
University of New Mexico

Conference Organizing Committee

Alok K. Bohara, PhD
University of New Mexico

Mukti P. Upadhyay, PhD
Eastern Illinois University

Vijaya R. Sharma, PhD
University of Colorado Boulder

Sakib Mahmud, PhD
University of Wisconsin-Superior

Shikha Silwal, PhD
Washington and Lee University

Prakash Adhikari, PhD
Central Michigan University

Jeffrey Drope, PhD
Marquette University

Technical Support

Soumi Roy Chowdhury
University of New Mexico

Naresh Nepal
University of New Mexico

Tami Henri
University of New Mexico

Mohammad Mashiur Rahman
University of New Mexico

Session Chairs and Discussants

Session 1: Health outcomes and mitigation strategies

Chair: Veeshan Rayamajhee, University of New Mexico, USA

Discussants:

Siobhan Yilmaz, University of New Mexico, USA
Rajan Bishwakarma, University of New Mexico, USA
Mohammad Mashiur Rahman, University of New Mexico, USA
Mandy Liu, University of New Mexico, USA

Session 2: Price, Food Security, and Crop Diversification Chair:

Sakib Mahmud, University of Wisconsin-Superior Discussants:

AKM Mahbub Morshed, Southern Illinois University, USA
Sahan Srestha, Eastern Illinois University
Soumyajit Chakraborty, University of New Mexico, USA

Session 3: Natural Disaster and Adaptation

Chair: Prakash Adhikari, Central Michigan University Discussants:

Sakib Mahmud, University of Wisconsin-Superior
Veeshan Rayamajhee, University of New Mexico, USA
Pearly Wong, University of Wisconsin-Madison
Prakash Adhikari, Central Michigan University

Contents

Welcome Note from Editors	1
Acknowledgement	3
PAPER ABSTRACTS	4
Health outcomes and mitigation strategies	4
Long-Term Effect of Extreme Temperature on Health: Evidence from Nepal.....	4
A case of Negative Externality: Use of pesticide and its impact on health among farmers in Salumbhu village, Nepal.....	5
The Dynamic Optimal Control Model for Analyzing the Cost-effectiveness of Cervical Cancer Prevention in South-Asian Developing Countries	6
The Stressor in Adolescence of Menstruation: Economic Analysis of Effective Coping Strategies.....	7
Price, Food Security, and Crop Diversification.....	8
Role of Agronomical Knowledge in Crop Diversification and Adoption of Hybrid Rice Seeds: A Case Study of Nepal	8
Price Convergence among Indian Cities: The Role of Linguistic Differences, Aggregation, and topography.....	10
Impact of FDI on Domestic Entrepreneurship: A comparison between South Asia and east Asia.....	11
Natural Disaster and Adaptation	12
Natural Disasters, ex-post coping mechanisms, and post-disaster resilience: Evidence from 2015 earthquakes in Nepal.....	12
Are remittances a source of finance for private adaptation strategy? Evidence from the Cyclone Sidr hit regions in southern Bangladesh	13
Public Opinion on Transitional Justice Process in Nepal.....	14
A Missed Opportunity for Transformation? – An Analysis of Official Climate Change Discourse and Adaptation Strategy in Nepal	15

Welcome Note from Editors

On behalf of the editorial board of the *Development Journal of the south (DJS)* and the conference organizing committee, I would like to thank all the participants at the Thirteenth Annual Himalayan Policy Research Conference (HPRC) held at the venue of the University of Wisconsin's 47th Annual South Asian Conference, Madison, WI.

As usual, we had a very successful event with an enthusiastic participation from all over. A larger number of abstracts were carefully screened and ranked by a team of our dedicated NSC member scholars – Dr. Mukti Upadhyay, Dr. Vijaya Sharma, Dr. Sakib Mahmud, Dr. Prakash Adhikari, and Dr. Shikha Silwal. NSC was established at the University of New Mexico in 2004 with the objective to promote policy research related to the South Asian region and the countries of the Himalayan region. The NSC team remains dedicated to creating platforms for the enhancement of knowledge sharing, particularly in the areas of sustainable development, environment, poverty, governance, and health. Among its other prominent activities, NSC publishes an e-portal *Development Journal of the South* which is a peer reviewed journal and maintains an electronic repository *Himalayan Research Papers Archive* to allow scholars to upload, store, and disseminate policy research, coordinates the Himalayan study abroad program, and doctoral and post-doctoral research projects.

Nepal Study Center has added a milestone by facilitating the signing of the Memorandum of Understanding (MOU) between the University of New Mexico and the Kathmandu University (KU) and the Centre for Integrated Mountain Development (ICIMOD)'s 8-country Himalayan University Consortium (HUC). On a NSF-supported exploratory research trip, NSC formed an interdisciplinary team at UNM and went to Nepal to advance understanding of the linkages and feedback mechanisms between biophysical and social factors. This is a research initiative that has led to creation of an international research hub which is Lumbini Center for Sustainability in Siddharthanagar, Lumbini, Nepal of Pratiman Neema Memorial Foundation.

Our inaugural HPRC in 2006 was ambitious in ensuring a significant convergence of researchers working on policy relevant issues on South Asia. That foundation work led to consecutive successes in the following years and has now made HPRC a durable annual event. We hope that these conferences, together with research activities performed at NSC and by its research affiliates, will culminate in the formation of an *Association for Himalayan Policy Research*. In recognition of the activities directly and indirectly supported by NSC, many scholars from North America, South Asia, Europe, the Far East, and Australia have joined this network. Our policy research association will continue to expand this global network of scholars, professionals, and policy practitioners interested in the development of the South Asian region.

The Sustainable Development Action Lab (SDAL), a new initiative from Nepal Study Center, concept builds upon the field research track record of the Nepal Study Center (NSC), a South Asia focused research center at UNM, and its various doctoral research activities over the last several years. This is an interdisciplinary approach to research, learning and problem solving by bringing together the three disciplines: *Natural Sciences, Social Sciences and Humanities*. Additionally, The Himalayan Study Abroad Program initiated by NSC, which is an experiential learning experience that combines research, hands-on community service-learning projects, & eco adventure. This semester abroad platform will be available to other program around the country.

We are grateful to the University of Wisconsin's 47th Annual South Asian Conference for giving us the pre-conference venue. We are also thankful to those who have provided financial support to conduct this conference. We appreciate the help from the staff and graduate students of the Department of Economics, UNM, and the goodwill and support of many friends of NSC. We particularly thank UNM students Mohammad Mashiur Rahman and Soumi Roy Chowdhury for their assistance. Finally, we would like to thank our guest editors Mukti P. Upadhyay and Mohammad Mashiur Rahman for their help in preparing the HPRC proceedings. NSC also would like to thank NSC secretariat Tami Henri for her support.

Sincerely,

A handwritten signature in blue ink that reads "Alok K. Bohara". The signature is written in a cursive style and is underlined.

Alok K. Bohara, PhD
Editor, HJDD
Professor, Department of Economics, University of New Mexico

Acknowledgement

NSC would like to encourage all the friends of NSC to continue their financial support so that it can successfully undertake various tasks: update software, run conferences, produce proceedings, maintain electronic research repository, advertise and publish journals (HJDD). NSC is a not-for-profit organization registered under the College of Arts and Sciences, University of New Mexico. NSC would like to thank University of Wisconsin, Madison, for providing the platform for the last 12 years to participate in the conference.

PAPER ABSTRACTS

Health outcomes and mitigation strategies

Long-Term Effect of Extreme Temperature on Health: Evidence from Nepal

Rajan Bishwakarma,¹

University of New Mexico, USA

Alok K. Bohara²

University of New Mexico, USA

This paper examines how exposure to the extreme temperature in-utero affects the health of children later in life using a Multiple Indicator Cluster Survey of Nepal. Using a nationally representative sample of 4951 children under the age of 5 years, I employ ordinary least square method to estimate the effect of extreme temperature on height-for-age of the children. The extreme temperature in-utero is an indicator variable, which is equal to 1 if the monthly mean of the daily maximum temperature is greater than 2 standard deviations. Prior work has identified that extreme temperature exposure has a detectable negative contribution in health production function. Consistent with the literature, I find that the exposure to extreme temperature in-utero has negative effect on long-term health measured in terms of height-for-age. The extreme temperature in-utero is an indicator variable, which is equal to 1 if the monthly mean of the daily maximum temperature is greater than 2 standard deviations. In other words, the effect decreases as the age of the children increases. Contributing to initial findings, I explore the underlying mechanism by also focusing on nutritional intake, disease prevalence and behavioral mechanisms (adaptation and avoidance behavior). The finding suggests that the nutritional intake is the most likely mechanism driving the results.

Keywords: Temperature, Fetal origins, Height-for-age

JEL Codes: I12, I15, J13, O13

¹ Email: sroychowdhury@unm.edu

² Email: bohara@unm.edu

A case of Negative Externality: Use of pesticide and its impact on health among farmers in Salumbhu village, Nepal

Mohammad Mashiur Rahman³

University of New Mexico, USA

Soumi Roy Choudhury⁴

National Council of Applied Economic Research, India.

Alok K. Bohara⁵

University of New Mexico, USA

Biraj Karmacharya

Kathmandu University, Nepal.

Agriculture is the major contributor of the economy for developing countries. In the process of mass level Agric-production, there is a necessity of using pesticides to increase the net yield for the farmers. The widespread and uncontrolled use of harmful pesticide creates influential negative externalities ranging from environmental degradation to the health status of the farmers. This study investigates the effect of using pesticide on different health symptoms experienced by the farmers from a primary survey data in Salumbhu, a village in Nepal. A total of 6 health symptoms were considered among the farmers those who are the applicator of pesticide in the field. They are grouped into 2 categories, such as serious health related issues and irritants, and estimated by the ordered logit model. The estimation shows a significant effect of using pesticide on all the health symptoms faced by the farmers and the sign is expected. The farmers are more prone to the serious health-related issues than irritants from pesticide use. The findings of main empirical model are robust across different models such as Poisson and Negative binomial.

Keywords: Pesticide use, health symptoms, ordered logit

JEL Classification: I10, Q53

³ Email: mmashiur70@unm.edu

⁴ Email: sroychowdhury@unm.edu

⁵ Email: bohara@unm.edu

The Dynamic Optimal Control Model for Analyzing the Cost-effectiveness of Cervical Cancer Prevention in South-Asian Developing Countries

Mengqi Liu (Mandy)⁶

University of New Mexico, USA

Alok K. Bohara⁷

University of New Mexico, USA

As cervical cancer becomes one of the most frequent cancer in women, the prevention methods as HPV vaccination and screening are being measured not only clinically but also economically. This paper is using dynamic optimal control model to find the optimal vaccination rate and screening rate to minimize the cost of vaccination, screening, and treatment for cervical cancer in developing countries. The simulation is under the south-Asian developing countries' scenario. With the general form set up and different-scenario assumption discussion, the paper found the vaccination rate and screening rate are determined by the price and the dynamics of population change. By comparison to only having vaccination program or only screening program, having both vaccine and screening is cost-effective for cervical cancer prevention methods with the data based on the literature.

Keywords: HPV vaccine; screening; cervical cancer; cost-effectiveness; dynamic optimal control model

⁶Email: mliu@unm.edu

⁷Email: bohara@unm.edu

The Stressor in Adolescence of Menstruation: Economic Analysis of Effective Coping Strategies

Siobhan K. Yilmaz⁸

University of Wisconsin-Superior, USA

Alok K. Bohara⁹

University of New Mexico, USA

Swati Thapa

Pratima-Neema Memorial Foundation, Rupandehi, Nepal

Adolescents are slowly being recognized as a generation, worldwide, that may require different policy approaches to aid in improving their health and wellbeing. Much anecdotal evidence exists from surveys and interviews that girls throughout the developing world face many hardships with menstruation due to a number of constraints, many of which result in poor emotional wellbeing. Most of the research, up to this point, has consisted of purely qualitative analysis or at best, correlational evidence of linkages between girls' background and their likelihood to practice good hygiene. This work, grounded in the Transactional Model of Stress and Coping, evaluates the roles that cultural and school environments play in secondary appraisals of menstruation as a major life stressor. Further, emotional wellbeing is measured as an outcome indicative of the impact of these appraisals on coping strategies and their ultimate effectiveness. Using primary survey data from schools in both the Terai and Hill areas of Nepal, we performed fixed effect logit regressions utilizing multiple indexes building techniques, including principle component and multiple correspondence analysis. Robust results are found in support of our theoretical framework, showing that strong cultural norms during menstruation increase the probability of girls self reporting as feeling lonely, while presence of hygiene supporting infrastructure at schools reduces this outcome. Such evidence provides greater motivation for increasing government policies to provide stronger hygiene infrastructure in schools to improve problem management-based coping skills, and to emphasize more supportive cultural environments/social support to improve the effectiveness of emotional regulation-based coping strategies.

Keywords: logit, psychological wellbeing, school support, cultural support, primary data, menstruation, hygiene, PCA, MCA, stress, and coping

⁸ Email: sdegnan@unm.edu

⁹ Email: bohara@unm.edu

Price, Food Security, and Crop Diversification

Role of Agronomical Knowledge in Crop Diversification and Adoption of Hybrid Rice Seeds: A Case Study of Nepal

Soumyajit Chakraborty¹⁰

University of New Mexico, USA

Alok K. Bohara¹¹

University of New Mexico, USA

Nayan K. Joshi¹²

Research Associate, Socioeconomics Program, CIMMYT-Nepal

Major South Asian economies have gone through reforms in the late 1980s. Liberalization has been considered as a fundamental of economic reform policies. But at the same time, the globalization of agriculture is being exposed to several challenges. The potential of the South Asian countries to intensify the agricultural produce and export is evident as the agriculture is one of the labor-intensive sectors. South Asian agriculture is experiencing a downturn in technological capacity in staple crops, while cash crops are being encouraged by subsidies. Agriculture in Nepal is the most important sector for economic growth. It benefits the poor. So, intensifying the production would lead to an increment of agricultural incomes. It can be the key to fight poverty, as a considerable proportion of the population derives their livelihoods from agriculture. Most of the studies have tried to link agricultural extension services *directly* to the farmers' decision, and thus a potential gap in the literature can be identified. It is not certain that having access to extension services, access to agro-vets, access to agricultural market always lead to a change in perception about adopting hybrid seeds or diversifying crops. It can be argued that agronomical knowledge itself can be one of the determinants of farmers' decision/adoption process. And agronomical literacy is gained through years of experience and regional extension services in agriculture help in shaping perceptions about innovation in agriculture. Hence, it is important to identify the causal relationship between agronomical knowledge (through extension services) and farmers' agricultural decisions. The primary research questions can thus be formulated as: '*Does agronomical knowledge affect positively towards the adoption of (1) hybrid seeds and (2) crop diversification?*' If yes, '*Does access and distances to agricultural extension services play a significant role in building agronomical knowledge?*' The data which is used in this study were collected through a questionnaire administered by the Nepal Seed and Fertilizer (NSAF) project funded through the United States Agency for International Development (USAID). The study analyzed the state of crop diversification and adoption of hybrid seeds in Nepal. It is found that

¹⁰ Email: soumyajitchakraborty@gmail.com

¹¹ Email: bohara@unm.edu

¹² E-mail: n.joshi@cgiar.org, nayankrishnajoshi@gmail.com

agronomical knowledge has significant and positive effects on both. It is generally seen in South Asian countries that crop diversification sees a gradual transformation from staple crops to cash crops. Also, cash crops (e.g. coffee, cotton etc.) have an attractive market value compared to rice. Still, Nepal has shown that agronomical literacy can affect the farmers' perception and adoption decision of staple hybrid and diversification.

Price Convergence among Indian Cities: The Role of Linguistic Differences, Aggregation, and topography.

Erick M. Kitenge¹³

Central State University, USA

AKM Mahbub Morshed¹⁴

Southern Illinois University, USA

This study examined the validity of the Law of One Price (LOP), using goods level monthly retail price data from the linguistically and topographically diverse India. The recent confluence of high growth rate and moderate inflation in India provides a unique test case to analyze the influence of communication costs and transportation costs on market integration and price convergence. Using panel unit root tests, we found that lower communication costs due to commonly spoken languages, and lower transportation costs resulting either from shorter geographic distances or lower variations in topographical features across locations, resulting in faster rates of price convergence. We also observed signs of “aggregation bias” in the convergence of Indian prices.

JEL Classification: F3, E 31.

Keywords: Law of One Price, Price Convergence, Market Integration, Language, Topography, Aggregation Bias, India

For full working paper visit http://digitalrepository.unm.edu/nsc_research/75/

¹³ Email: erinkfletcher@gmail.com

¹⁴ Email: sgitter@towson.edu

Impact of FDI on Domestic Entrepreneurship: A comparison between South Asia and east Asia

Sahan Srestha ¹⁵

Eastern Illinois University, USA

This paper explores the impact of foreign domestic investment (FDI) on the domestic entrepreneurship measured by self-employment in 7 South Asian countries (Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka) and 6 East Asian Countries (China, Hong Kong, Japan, South Korea, Philippines and Singapore). By using the data from World Bank, UNCTAD and ILO, this paper assesses the influence of the stock inflow of FDI on self-employment in South Asia and the influence of net inflow of FDI on self-employment in East Asia during the time span 1991 – 2016. This paper uses a feasible Generalized Least Squares (fGLS) approach, and the findings highlight the fact that FDI has a negative impact on domestic entrepreneurship, the impact being stronger in South Asian countries compared to East Asian countries.

Natural Disaster and Adaptation

Natural Disasters, ex-post coping mechanisms, and post-disaster resilience: Evidence from 2015 earthquakes in Nepal

Veeshan Rayamajhee¹⁶

University of New Mexico, USA

Alok Bohara¹⁷

University of New Mexico, USA

In the aftermath of natural disaster shocks, households adopt a specific set of coping mechanisms to overcome post-disaster challenges. The choice of these mechanisms is a crucial determinant of their recovery. Using the incidents of the 2015 mega-earthquakes in Nepal as a natural experimental set up, we conduct a retrospective survey among 510 households in the Basbari village of Nepal. The objectives of this study are twofold: first, to evaluate the direct impact of the disaster and gauge at what specific coping strategies households adopt in the face of such covariate shocks, and second, to identify effective strategies that lead to swifter recovery. The observational component of our analysis indicates that mutual assistance, mobilization of short-term loans (personal and institutional), and reduction in household consumption are among the most common strategies adopted. Subsequently, we categorize all strategies into three broader bins: financial coping strategies, labor adjustment choices, and external assistance. Because household responses are inherently endogenous, we use a multi-equation simultaneous recursive regression framework to account for the processes that determine households' choices. We find strong evidence to suggest that both financial and labor adjustment coping mechanisms have positive and significant impact of post-disaster economic resilience. On the other hand, while financial coping mechanisms also enhance psychosocial resilience, we find that labor adjustment choices can disturb family and social dynamics, thereby negatively impacting psychosocial resilience. Our findings indicate that government assistance can have unintended detrimental impacts on economic resilience, hinting at the subpar quality of political institutions in Nepal.

Keywords: Natural disasters, shocks, coping, resilience, recovery, Nepal

¹⁶ vrayamajhee@unm.edu

¹⁷ bohara@unm.edu

Are remittances a source of finance for private adaptation strategy? Evidence from the Cyclone Sidr hit regions in southern Bangladesh

Sakib Mahmud¹⁸

University of Wisconsin-Superior, USA

Gazi Hassan¹⁹

University of Waikato, NZ

Coastal communities in developing countries face considerable challenges regarding how to manage their response to actual and anticipated damage from major storm events. However, private defensive strategies to avert and mitigate storm-inflicted damages might be influenced by the presence of public sponsored storm mitigation programs, such as embankments, dams, cyclone shelters, etc. and access to remittances – both domestic and foreign. Given the possible nexus among these variables, we explore the dynamics of the household storm protection behavior by proposing a theoretical model. We, then, empirically tested our model based on data collected from a recently concluded household survey along the coastal areas of Bangladesh that have been frequently exposed to cyclones during 2007-2015 period. Using the household survey data, our goal is to find whether publicly sponsored storm mitigation programs and access to remittances influence the economic behavior of the coastal communities by partially or fully crowding out private storm-protection actions. From policy perspectives, our theoretical and empirical findings will be particularly relevant for developing countries with poor coastal-based communities in two areas: (1) coordination between international and local or indigenous resources for emergencies and humanitarian purposes once exposed to a major storm event; and, (2) coordination with the affected economies to reserve development aid (not humanitarian aid) to enhance long-term capacity of coastal communities to reduce the likelihood of facing extensive storm-inflicted damages in future.

Key words: Endogenous risk, storm protection behavior, disaster response, government relief, remittances.

¹⁸ smahmud@uwsuper.edu

¹⁹ gmhassan@waikato.ac.nz

Public Opinion on Transitional Justice Process in Nepal

Prakash Adhikari²⁰

Central Michigan University, USA

The goal of this research is to investigate public opinion on post-conflict transitional justice process in Nepal, focusing on Truth and Reconciliation Commission (TRC). Violent conflicts around the world affect millions of people every year. Not surprisingly, devastating events are often followed by post-conflict reconciliatory measures such as transitional justice and reparations. Strikingly, most post-conflict compensation programs are also heavily criticized by victims and non-victims alike. What explains why post-conflict compensation programs are often criticized for lacking fairness? The standard expectation is that all affected persons view post-conflict justice processes as fair and equal. An important and understudied aspect of post-conflict justice process is public perception and the impact that it can have on trust and state building efforts in the aftermath of civil war. Using primary data collected at the individual level, this paper provides some assessment of public opinion of victims on the fairness and efficacy of post-conflict transitional justice process in Nepal.

²⁰ Adhik1p@cmich.edu

A Missed Opportunity for Transformation? – An Analysis of Official Climate Change Discourse and Adaptation Strategy in Nepal

Pearly Wong²¹

University of Wisconsin-Madison

Despite the highly political process of international climate change negotiations, most efforts in climate change adaptation assume an apolitical, technical policy process (Tanner and Alloche, 2011). The paper examines the different climate justice discourses as well as critical approaches to climate change adaptation, followed by a case study of Nepal, to examine their translation into its national and sub-national policy framework. I conducted qualitative analysis on eight major climate-change related documents by the country, chosen based on availability online, language, and their broader scope of applicability. The result shows that Nepal has adhered to the ‘vulnerability’ and ‘transition’ discourses, which serve as important tools to advocate for support from the international climate change regime. Driven primarily by international processes and guidelines, the climate change policies and documents in Nepal project a heavily technocratic approach with little socio-cultural considerations. Vulnerability is understood as a static property and assessed based on sectors and geographic area, while adaptation is understood as series of actions to be implemented. Overall, the policies demonstrate an apparent lack of political ecology and anthropological perspectives, with the risk of perpetuating the existing systemic ills, as well as impeding imaginaries to pursue more radical socio-political and cultural change as effective adaptation measures.

Keywords: Nepal, climate change, climate justice, adaptation, policy-making

²¹ Pwong7@wisc.edu