Asian Development Bank Institute (ADBI) Session (online)

**Session title:** Resilience to Shocks, Economic Recovery, and Sustainable Development

**Scope:** With a focus on Asian economies, this session discusses new empirical work on macrofinancial resilience and the role of institutions, the effect of COVID-19 on households and implications for human capital development, the economic impact of COVID-19 containment policies in the People’s Republic of China, and factors underpinning R&D investment in energy storage technologies.

**Chairperson:** John Beirne

**Paper 1: Institutional Quality and Macrofinancial Resilience in Asia**
Authors: John Beirne (ADBI) and Pradeep Panthi (ADBI)
Presenter: John Beirne, Vice-Chair of Research and Senior Research Fellow, ADBI; Email: jbeirne@adbi.org

**Abstract:** This paper examines the role of institutions for macrofinancial resilience in Asia. Focusing on a panel of 12 Asian economies from 1996Q1 to 2020Q4, we find that the institutions for economies with high levels of institutional quality enhance the resilience of real GDP per capita, FDI and portfolio equity during periods of elevated financial stress. Economies with low levels of institutional quality may exhibit resilience to reversals of portfolio debt during crisis times, although it is important to factor in portfolio rebalancing effects. As well as pointing towards resilience thresholds in institutional quality, our paper provides insights on critical sub-components of overall institutional quality, notably rule of law, political stability, and regulatory quality, helping to inform the direction of policy efforts towards strengthening institutional capacity and related structural reforms. While developing strong institutions is a gradual and longer-term endeavor, policy makers in emerging economies in particular should intertwine their macroeconomic policy frameworks with measures to enhance institutional quality. This can have important implications for sustainable economic development and reducing exposure to external financial shocks.

**Paper 2: Impacts of COVID-19 on Households in ASEAN Countries and their Implications for Human Capital Development: Medium run impacts and the role of government support**
Authors: Peter J. Morgan (ADBI), Long Q. Trinh (ADBI), and Kunhyui Kim (ADBI)
Presenter: Peter J. Morgan, Senior Consulting Economist and Advisor to the Dean, ADBI; Email: pmorgan@adbi.org
Abstract: The outbreak of the COVID-19 virus and the resulting falls in demand due both to uncertainty and policy interventions such as lockdowns, “social distancing,” and travel restrictions are having a severe impact on Asian economies and hence on Asian households. These negative impacts come through a variety of channels, including loss of employment or reduced working hours, loss of sales and income of a household business, inability to travel to work, increased need to stay at home to look after children or sick household members, higher prices and/or lack of availability of staple items, reduced access to schooling, etc. At the same time, governments implemented aid programs to support households and businesses. In order to better understand these impacts, we carried out computer-assisted telephone interviews of households in seven ADB developing member countries: Cambodia, the Lao People’s Democratic Republic, Indonesia, Malaysia, the Philippines, Thailand, and Vietnam. Two waves of the survey were conducted: the first from the end of May to the end of July 2020 and the second from the end of January to February 2021. The following factors contributed to declines in income and expenditure and experience of financial difficulty: lower income group, lower education of household head, female household head, having at least one person who lost their job and being located in lockdown area. The receipt of government aid did not vary much by income class, but the amount relative to pre-pandemic income was much higher for lower income groups. Nonetheless, we could not find positive effects of the receipt of government aid on household income or expenditure. One of the most striking findings is that 60% of households experienced financial difficulties during the first wave period, and this ratio actually increased to 78% in the second wave period. This suggests that prolonged nature of the pandemic has put increasing strains on household finances, even though incomes have stabilized somewhat. Only about 7% of children who stopped attending school could not participate in online learning, but some could only participate partially due to weak/insufficient internet connections and a lack of digital devices. Two COVID-19-related factors—having at least one person who lost their job or had working hours reduced and experiencing financial difficulties—significantly affect the intensity of online classes taken by children in an average household. This has negative implications for longer-term human capital formation.

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Abstract: Since the outbreak of the coronavirus disease (COVID-19) pandemic, governments around the globe have undertaken multiple policies to control its spread. Yet, only a few studies estimated the cost of COVID-19-related stringency measures on economic output, which can be attributable to the time lag and low frequency of conventional economic data. To bridge this gap in the literature, this paper uses novel high-frequency and spatially granular surface urban heat island (SUHI) data from satellites to quantify the impact of COVID-19-
related containment policies in the People’s Republic of China, exploiting variations in such policies. Three empirical results emerge. First, we find stringency measures decrease urban heat island in locked cities only marginally, which is equivalent to 0.04–0.05 standard deviation or CNY22.2 billion (US$3.6 billion) of economic output drop which is a 0.09% annual GDP decline in 2020. Second, our results suggest that governments have been learning continuously to manage containment measures better. Third, the government’s containment policies have generated both positive and negative spillover effects on unlocked cities in which the former effect has dominated the latter.

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Abstract: Renewable energy can reduce pollution by providing renewable electricity, heating, cooling and transportation. The main disadvantage of renewable energy deployment, is that once it reached a high share in electricity generation, the intermittency caused by renewable energy sources makes balancing of an energy system challenging. Most energy storage technologies are immature and require investments in R&D to improve performance and safety, and to reduce cost. Empirical literature studying investments in renewable energy is abundant, however empirical literature studying investments in energy storage is highly limited due to data availability. To the best of our knowledge, this is the first empirical study measuring the impact of energy storage policies on investments in energy storage technologies. Using panel data from all OECD countries over the period 1985-2016 we study the determinants of investments in R&D of energy storage technologies. The results of fixed effects and random effects estimations provide an empirical evidence that energy storage policy and environmental patents increase investments in R&D of energy storage technologies.

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