

# 2019 ASIA ECONOMIC FORUM

## SEMINAR 2: ECONOMIC COMPETITIVENESS AND QUALITY-ADJUSTED LABOUR PRODUCTIVITY FOR GREATER CHINA AND INDIA

JOINTLY ORGANIZED BY  
THE WORLD BANK GROUP AND  
ASIA COMPETITIVENESS INSTITUTE AT  
LEE KUAN YEW SCHOOL OF PUBLIC POLICY,  
NATIONAL UNIVERSITY OF SINGAPORE

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National University of Singapore**

*Forum Proceeding*

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*In 2020, ACI was ranked 11<sup>th</sup> globally, 2<sup>nd</sup> in Asia and 1<sup>st</sup> in Singapore amongst 94 think tanks worldwide under the “Best University Affiliated Think Tank” category by the Think Tanks and Civil Societies Program at the University of Pennsylvania, USA.*

## About ACI

The Asia Competitiveness Institute (ACI) was established in August 2006 as a Research Centre at the Lee Kuan Yew School of Public Policy (LKYSPP), National University of Singapore (NUS). It aims to build the intellectual leadership and network for understanding and developing competitiveness in the Asia region. ACI seeks to contribute to the enhancement of inclusive growth, living standards, and institutional governance through competitiveness research on sub-national economies in Asia. It identifies mitigating issues and challenges for potential public policy interventions through close collaboration with regional governments, business corporations, policy think-tanks, and academics. ACI's three key research pillars include (I) Sub-national economies level competitiveness analysis and city-level liveability analysis; (II) Firm-level competitiveness analysis in 16 Asia economies; and (III) Singapore's long-term growth strategies and public policy analysis.

ACI's value propositions may be encapsulated in its acronym:

- A**nalytical inputs to initiate policies for policy-makers and business leaders in Asia
- C**apacity building to enable others through improvement in productivity and efficiency
- I**ntellectual leadership to create pragmatic models of competitiveness and inclusive growth

The institute's core research competencies can also be encapsulated in this acronym describing our evidence-based assessments conducted on public policies for **A**SEAN in the context of the rise of **C**hina and **I**ndia.

## Vision and Mission

- ACI's over-arching vision is to build up its research credibility with policy impact, contributing as a professional, world-class think-tank.
- ACI's mission is to establish our niche as a leading policy think-tank by identifying competitiveness trends, opportunities, and challenges, as well as promoting competition and synergizing complementarities amongst Asian economies and business corporations.
- ACI endeavours to articulate sound recommendations, entice discourse, and shape agenda in the arena of public policy amongst Asian governments.
- ACI undertakes evidence-based analysis of public policy issues and decisions, in order to provide assessment of their effectiveness as well as economic and societal impact.

## Research Initiatives and Collaborations

- I. Identify trends of competitiveness and policy analysis on trade and investment of ASEAN, within the regional context of competition and complementarities with China and India.
- II. Identify competitive strengths and conduct policy analysis on Singapore within the context of regional economies with international benchmarking.
- III. We are regularly releasing three indices on liveability ranking including 64 Global Cities, 100 Greater China Cities, and 17 Shandong Cities.
- IV. We have established an Ease of Doing Business (EDB) Index on Attractiveness to Investors, Business Friendliness, and Competitive Policies for 21 sub-national economies of India and 33 sub-national economies of Indonesia.
- V. We have signed Memoranda of Understanding (MoU) with The World Bank (2015), Enterprise Singapore formally known as SPRING Singapore (2014) and European Central Bank (2014). The MoU between The World Bank and National University of Singapore, coordinated through ACI, was signed in 2016.
- VI. We have signed MoUs with various institutions in Greater China economies, including Institute of Economics at Shanghai Academy of Social Sciences (2019), Institute of World Economics at Shanghai Academy of Social Sciences (2016), Shandong Academy of Social Sciences (2015), Chongqing Municipal People's Government (2015), China Institute for Reform and Development, Haikou (2015), Counsellors' Office of the People's Government of Guangdong Province (LOI, 2014), and Chung-Hua Institution for Economic Research, Taiwan (2015).

- VII. We have signed MoUs with seven Chief Ministers' Offices in Uttarakhand (2019), Andhra Pradesh (2018, 2017 & 2015), Bihar (2015), Chhattisgarh (2015), Madhya Pradesh (2015), Odisha (2015), and Punjab (2015).
- VIII. We have signed a MoU with Committee for Acceleration of Priority Infrastructure Delivery at Coordinating Ministry for Economic Affairs, Indonesia (2016), Indonesia Investment Coordinating Board (2014), Indonesian Agency for Agricultural Research and Development at Ministry of Agriculture (2014), Indonesian President's Delivery Unit for Developing Monitoring and Oversight (2013), and Employer's Association of Indonesia (2013).
- IX. We have signed MoUs with Asian think-tanks and institutions, including Institute of Economic Growth, India (2018), Vietnam Chamber of Commerce and Industry, Vietnam (2016), Centre for Strategic and International Studies, Indonesia (2015), Institute of Strategic & International Studies, Malaysia (2015), Philippine Institute for Development Studies, the Philippines (2015), Thailand Development Research Institute, Thailand (2015), and Central Institute for Economic Management, Vietnam (2015).

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## About ACI's Research Pillars

ACI has consciously engaged in economic research that has significant relevance to Singapore and the Asian region. Over the years, ACI has focused on our expertise in quantitative competitiveness analysis and simulation, spinning off volumes of research output in the applications of our methodology and regional insight. At this stage, ACI has identified three core research pillars that will guide and define its research efforts moving forward. The three research pillars are as follows:

### **Pillar I. Sub-national Economies Competitiveness Analysis**

ACI engages in systematic and methodical competitiveness analyses of the sub-national economies by using an evidence-based, empirical approach involving a comprehensive list of relevant indicators, which are categorised under multiple layers called the 'environments'. A number of our projects, including competitiveness analyses of Greater China, ASEAN-10, India, and Indonesia, as well as other thematic research projects, were conducted by adopting this common methodology, with potential variations in the specific environments and indicators. ACI's competitiveness analysis of Asian economies goes beyond the usual ranking to offer constructive policy recommendations on how individual member states can improve their rankings vis-à-vis their sub-national or regional peers through the application of the 'what-if' simulation, which provides the projected improvements of each state's ranking whereby the bottom one-fifth of its indicators are enhanced.

### **Pillar II. Micro-based Firm Level Competitiveness Analysis**

Micro-based firm level competitiveness analysis is ACI's second research pillar that has been developed in view of the intrinsic importance of firm-level competitiveness in terms of productivity, efficiency, and governance. In the context of globalisation, mobility of economic activities, and blurring of borders, an understanding of the determinants and dynamics of firm-level competitiveness is paramount, in order for policy makers to adjust and prepare their industries for an increasingly competitive economic landscape. To this end, ACI has partnered with the European Central Bank to carry out research in this area, possessing a solid foundation in firm-level productivity research in the form of European Competitiveness Network database and methodology. ACI envisaged the expansion of Competitiveness Research Network (CompNet) into Asia, thereby pioneering the Asia's CompNet in encompassing 16 economies in Asia.

### **Pillar III. Singapore's Long-term Economic Growth Strategies and Public Policies Analysis**

The third and imminent research pillar focuses on Singapore's long-term economic growth strategies in the context of changing circumstances, future trends, and emerging opportunities for Singapore in the decades ahead. In particular, ACI will take on the task of critically examining Singapore's public policy strengths and areas of improvement by assessing policy successes of the past, identifying new issues to address and the current policy gaps, through a systematic and evidence-based research inquiry using quantitative methodology and empirical data, leveraging on our network of policy experts.

## Founding Patron and International Advisory Panel

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### Founding Patron

#### **Mr George Yeo**

Visiting Scholar, Lee Kuan Yew School of Public Policy, National University of Singapore & Former Minister of Foreign Affairs, Singapore

### International Advisory Panel

#### Co-Chairs:

#### **Professor Michael Porter (2006-2010)**

Bishop William Lawrence University Professor

#### **Ms Marjorie Yang (2006-2012)**

Chairman, Esquel Group

#### Members:

#### **Professor Kishore Mahbubani**

Former Dean, Lee Kuan Yew School of Public Policy, National University of Singapore

#### **Dr Kuntoro Mangkusubroto**

Former Head, President's Delivery Unit for Developing Monitoring and Oversight (UKP4), Indonesia

#### **Mr Narayana Murthy**

Former Chairman, Infosys Technologies Limited

#### **Mr Philip Yeo**

Former Chairman, Enterprise Singapore

#### **Mr Gabriel Lim**

Permanent Secretary, Ministry of Trade and Industry

#### **Ms Yong Ying-I**

Permanent Secretary, Public Service Division

#### **Professor Chan Kam Leung Alan**

Former Dean, College of Humanities, Arts and Social Sciences, Nanyang Technological University

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## Asia Competitiveness Institute

#### Co-Directors:

#### **Associate Professor Tan Khee Giap (2011 till now)**

#### **Professor Tan Kong Yam (2011 till now)**

# Contents

<b>About ACI</b> .....	<b>1</b>
<b>Contents</b> .....	<b>4</b>
<b>Executive Summary</b> .....	<b>5</b>
<b>Welcome Remarks</b> .....	<b>7</b>
<b>Opening Remarks</b> .....	<b>8</b>
<b>Keynote Speeches</b> .....	<b>9</b>
<b>Session 1: Sub-national Economic Competitiveness, Welfare Spending and Budget Sustainability of Greater China Economies</b> .....	<b>21</b>
<b>Forum Luncheon Talk</b> .....	<b>24</b>
<b>Remarks by Professor Khong Yuen Foong</b> .....	<b>29</b>
<b>Ceremony of Cheque Donation</b> .....	<b>30</b>
<b>Speech by Guest of Honour</b> .....	<b>31</b>
<b>Session 2: Sub-national Economic Competitiveness, Welfare Spending and Budget Sustainability of India</b> .....	<b>36</b>
<b>Session 3: Urban Composite Development Index for 17 Shandong Cities: Ranking and Simulation Analysis</b> .....	<b>38</b>
<b>Closing Remarks and Future Research Agenda</b> .....	<b>41</b>
<b>Programme</b> .....	<b>42</b>
<b>Profiles of Speakers, Discussants and Moderators</b> .....	<b>46</b>
<b>Media Coverage</b> .....	<b>56</b>
<i>Global value chains powerful engine for growth, job creation, but has negative impact: WB economist, XinhuaNet, 30 August 2019</i> .....	<b>56</b>

# 2019 ASIA ECONOMIC FORUM: SEMINAR 2

## *Executive Summary*

The Asia Competitiveness Institute (ACI) at the Lee Kuan Yew School of Public Policy (LKYSPP), National University of Singapore (NUS) and the World Bank Group jointly co-hosted *2019 Asia Economic Forum* from 29-30 August 2019, with its second seminar being on “**Economic Competitiveness and Quality-Adjusted Labour Productivity for Greater China and India**”. At the forum, ACI team members updated annual competitiveness rankings for subnational economies of India and China and presented studies on Quality-Adjusted Labour Productivity analysis for both countries at the national and subnational level. Additionally, there was also a presentation on ACI’s urbanization development studies for major cities in the Chinese province of Shandong.

The 2019 Asia Economic Forum began with **Welcome Remarks** from **Associate Professor Tan Khee Giap**, Co-Director of ACI-LKYSPP, and followed by **Opening Remarks** from **Ms Jyoti Shukla** who introduced a preview from the most recent World Development Report 2019 that was due to be officially published only in October 2019. She then addressed the importance of empirical evidence to project the future trajectory of economic competitiveness and global value chains before handing the time over to the keynote speakers.

After the welcome and opening remarks, two keynote speeches were delivered by **Dr Claire Honore Hollweg**, Senior Country Economist, Macroeconomics for Trade and Investment at the World Bank and **Professor Ajit Mishra**, Director at the Institute of Economic Growth in India. Dr Hollweg’s speech on “**World Development Report 2020: Trading for Development in the Age of Global Value Chains**” dealt with the relevance of development path through participation in global value chains given the rise of labour-saving technologies and increased trade protectionism. She also highlighted the importance of policies and institutions needed to maximize gains and mitigate risks of participating in global value chains. Professor Mishra’s speech was on “**India as the New Manufacturing Hub for Employment Creation and Greater Economic Growth**” which centred on the complexity of the Indian labour laws as well as the importance of investments that are needed to drive economic growth.

The first session of the seminar on “**Sub-national Economic Competitiveness and Quality-Adjusted Labour Productivity of Greater China Economies**” was moderated by Mr Tan Kway Guan, Research Assistant at ACI-LKYSPP. The session was split into two presentations. The first was on the annual update of ACI’s competitiveness rankings on the economies of Greater China, and the second provided the Quality-Adjusted Labour Productivity analysis of provinces of Mainland China. The three discussants for both sessions were **Dr Mark Roberts**, Senior Urban Economist for Social, Urban, Rural and Resilience Global Practice at the World Bank Group, **Dr Wang Huitong**, Research Fellow at the Institute for Finance and Economics Research at the Central University of Finance and Economics in People’s Republic of China, and **Dr Wang Hongxia**, Senior Researcher at Shanghai Academy of Social Sciences in People’s Republic of China.

**The Forum’s Luncheon Talk** was delivered by **Mr Henry Kwek**, Member of Parliament & Member, Government Parliamentary Committee for Trade and Finance, Republic of Singapore, and he spoke on “**Challenges faced by Small and Medium-sized Enterprises in a Growing Environment of Anti-Globalization and Protectionism**”. Mr Kwek elaborated on the importance of internationalizing SMEs and also touched on several programmes that the Singapore government has implemented to support SMEs specific to their needs. He also spoke about the research project that ACI has undertaken, namely the Productivity Tracking and Efficiency Monitoring (PTEM) index, which evaluates the performance of local SMEs in Singapore.

Following the Forum Luncheon Talk was the Ceremony of Cheque Donation from the state government of Andhra Pradesh, represented by the Honourable **Mr LV Subrahmanyam**, IAS, Chief Secretary for the State Government of Andhra Pradesh, India and to be received by **Professor Khong Yuen Foong**, Vice

Dean (Research), & Li Ka Shing Professor in Political Sciences, LKYSPP, NUS. The Honourable Mr LV Subrahmanyam would then deliver a Guest-of Honour speech on **“Investment Promotion and Opportunities for State of Andhra Pradesh, India: Best State in India before 2029”** which centred on the key policy framework being implemented in Andhra Pradesh by the newly incumbent Chief Minister as well as the natural endowments and industrial corridors of the state that makes it a viable place for investment opportunities.

The forum resumed after lunch with its second session, which was on **“Sub-national Economic Competitiveness and Quality-Adjusted Labour Productivity of India”** moderated by Ms Doris Liew Wan Yin, Research Assistant at ACI-LKYSPP, NUS. This session comprised of two presentations. The first dealt with the annual update of ACI’s competitiveness rankings and simulation studies of Indian states, while the second provided the Quality-Adjusted Labour Productivity Analysis of the sub-national economies of India. The discussants for both presentations were **Dr Manoj Panda**, RBI Chair Professor at the Institute of Economic Growth, India, and **Professor Lei Xinjun**, Senior Researcher at the Shanghai Academy of Social Sciences in People’s Republic of China.

The final session of the 2019 Asia Economic Forum was entitled **“2019 ACI-Shanghai Academy of Social Sciences 100 Greater China Liveable Cities (ACI-SASS GCLC) Index: Ranking and Simulation Analysis”** moderated by Mr Mao Ke, Research Assistant at ACI-LKYSPP. The presentation elaborated in detailed of the methodology adopted and findings of the Urban Composite Development Index which assessed the relative liveability of 100 cities in Greater China. The discussants for the third session were **Dr Lu Hsin-Chang**, Associate Professor at the College of Management in National Taiwan University, Taiwan, Republic of China, and **Dr Wang Huitong**, Research Fellow at Institute for Finance and Economics Research at the Central University of Finance and Economics in People’s Republic of China.

The forum was drawn to a close by **Associate Professor Tan Khee Giap**, Co-Director of ACI-LKYSPP, who alluded to ACI’s future research agenda. Professor Tan thanked the audience and participants of the forum for their views and their valuable suggestions during the insightful discussions over the past two days.

# **Welcome Remarks**

**Associate Professor Tan Khee Giap  
Co-Director, ACI-LKYSPP, NUS**

Ms Jyoti, Director at the World Bank Group Singapore, distinguished speakers, ladies and gentlemen, good morning! I am so glad to see that most of you are still here today and indeed very punctual too for the second seminar of the Asia Economic Forum!

You had a long day yesterday and you are going to have another long, but I believe, and even a more fruitful day! I am most impressed that yesterday, till the end of the seminar, nearly 6pm, we still had a full participation. We dealt with important issues related to ASEAN economies, adjusted labor productivity, cost of living for 105 cities and, of course, the empirical study on the Hong Kong protests issue which was widely reported today in the newspaper and TV stations world-wide.

I believe we would have another exciting seminar today. We would have a keynote speech from the World Bank Group where Dr Claire is going to brief us about the latest economic developments and whether there would be a global recession. This morning, I heard in CNN that most of the US chief executive officers and fund managers have sold their shares which amounted to US\$10 billion, so I am thinking whether I should do the same?

We would have many more discussants participating in the seminar today and I must express in particular my appreciation for Ms Jyoti as it is not easy to get them to join us given their busy schedules. This is the first time we see the Director of World Bank Singapore attending our two full days of forum, which indicates her very strong support to ACI at LKYSPP. So, I thank you again and I hope that you will enjoy those sessions ahead.

In the afternoon, we also have a very important activity where the state government of Andhra Pradesh will donate three quarters of a million, matched by another three quarters of a million by our Ministry of Education to ACI. The donation is the gesture by the state government of Andhra Pradesh in appreciation of our contributions to the development of the state. I hope you would be here again to witness this donation ceremony to be personally presented by the Honorable Mr LV Subrahmanyam, IAS, Chief Secretary, State of Andhra Pradesh and to be received by Professor Khong Yuen Foong, Vice Dean (Research), & Li Ka Shing Professor in Political Sciences, LKYSPP, NUS at 2pm today. In fact this is the second donation given to us by the state government of Andhra Pradesh of India.

For those foreign speakers, I understand that you are staying here till the Saturday evening. We hope to organize some social activities for you. For those who have come with your spouses or for those female speakers who like shopping, my wife can bring you around Singapore, teaching you how to help stimulate the Singapore economy.

Thank you!



## Opening Remarks



**Ms Jyoti Shukla**  
**Director, Singapore Infrastructure and Urban Development Hub,**  
**The World Bank Group**

Good morning.

I just wanted to echo Professor Tan's words. I am glad yesterday was long but fruitful and I am sure today will be the same. ACI has put together a really exciting morning.

I am really delighted from the World Bank Group side, we are able to share with you today the World Development Report 2019, which actually will be officially launched only in October 2019, next month. So, consider this a preview. Clearly, this is a very important topic, especially for researchers who are looking at economic competitiveness where the competitiveness of an economy and its economic outcomes are still significantly determined by the global environment as well as other trade policies. Especially in this time of change, it is important for us as empirical economists to take a step back and look at the empirical evidence as to how these global value chains have evolved, and where they are at the moment and where they can go.

I am really happy to welcome Dr Claire Hollweg, who is joining us from Cambodia, and was a key member of the World Development Report team in Washington until just about two weeks ago, to share with you the empirical findings and some policy recommendations. Also, I am delighted that Professor Mishra will be presenting the second keynote on how India is developing as a manufacturing hub and the increasing economic power of India.

So, without further ado, I look forward to this session.

Thank you.

# **Keynote Speech 1: “World Development Report 2020: Trading for Development in the Age of Global Value Chains”**



## **Dr Claire Honore Hollweg**

### **Senior Country Economist, Macroeconomics, Trade & Investment, The World Bank Group**

Good morning distinguished guests and thank you to the organizers. I am very honoured to be here today to present to you the World Bank’s 2020 World Development Report on Trading for Development in the Age of Global Value Chains.

How important are global value chains (GVCs) for development? And is there still a development path through GVC participation given that the world is changing in two important ways? First, the arrival of labor-saving technologies such as automation and 3D printing. And second, increased protectionism among large countries. These were the motivating questions of the 2020 World Development Report.

The report begins by defining what is a global value chain. GVCs, or the fragmentation of production across countries, have existed for centuries. But they grew swiftly after 1990 as technological advances—in transportation, information and communication—as well as reductions in trade barriers caused manufacturers to extend their production processes beyond their national borders.

This suggests that countries and firms participate in GVCs in two important ways. First, through backward participation, which is importing foreign inputs for processing and further export; or through forward participation, which is exporting inputs that are then incorporated in the exports of other countries. Though in reality, many countries participate in both ways.

The 2020 World Development Report recognizes two features that distinguish GVC trade from traditional trade. First, countries import not only for domestic consumption but they also import to export. As such, GVCs involve hyper-specialization. Countries no longer need to produce the entire good, they can only focus on one part of that good. And this makes participation in international trade easier and it allows

countries to better exploit their comparative advantage. Second, in contrast to “standard” trade, which is carried out mostly in anonymous markets, GVC transactions typically involve longer-term firm-to-firm relationships. Firms have a shared interest in specializing in specific tasks, exchanging technology and learning from each other.

The 2020 World Development Report discusses the determinants of GVC participation, including those of economic fundamentals such as endowments, geography and institutions. But it recognizes that these determinants need not drive destiny. Policy choices matter and it also considered the role that policies play for GVC participation. We also talk about consequences of GVC participation for countries and how policies can help ensure that the benefits are shared and sustained.

One important finding is that all countries participate in GVCs but in different ways. Even within ASEAN, participation is uneven across countries. Some countries such as Algeria, Nigeria and Venezuela engage at the base of most global value chains, selling predominantly unprocessed commodities and agriculture to their trade partners. Other countries like Honduras, Ethiopia and Bangladesh are mostly engaged in simple manufacturing tasks. While Malaysia, Poland and the Philippines specialize in more complex manufacturing segments of the value chains or in services tasks that are increasingly becoming traded. And mostly advanced countries as well as some emerging countries such as the Czech Republic specialize mostly in innovation-intensive activities and tasks.

And because of these differences, the GVC-led model of development is not a one-size fits all model. The policies that facilitate participation and moving up to the next level depend on where a country is today. For example, the 2020 World Development Report shows that transitioning from commodities into limited manufacturing GVCs typically require FDI, as well as timely access to imported inputs used in basic manufacturing. As such, countries should put a high priority on policies that support trade, and here, liberalizing transport services and distribution would help with these objectives.

Transitioning into advanced manufacturing and services GVCs presents a much bigger challenge for countries than transitioning into basic manufacturing. Examples of such sectors include motor vehicles, medical devices, and precision instruments. These advanced manufacturing GVCs typically require a more highly educated workforce and improvements in managerial practices. And as countries transition to high income, innovation becomes the main determinant of GVC participation, where R&D capacity and intellectual property right protection are critical.

Because countries participate differently, the consequences of participation for development are also different. One of the most compelling findings of the 2020 World Development Report is that all empirical evidence—from cross-country, to sector, to firm level—supports a picture of GVCs greatly boosting productivity and incomes above what countries achieve through standard trade. GVCs lead to hyper-specialization and flows of technology along the value chain. Firms that participate in GVCs, which we measure as firms that both import and export, also tend to be more productive than one-way traders or non-traders. And it is the relational nature of GVCs that I mentioned that makes them a particularly powerful engine for growth, because they represent a natural vehicle for technology transfer.

Through these channels, the 2020 World Development Report shows that GVC participation is associated with higher growth in incomes than standard trade at all stages of participation. But what we find is that the biggest growth comes to countries like Bangladesh, Cambodia and Vietnam when they transitioned into basic manufacturing from commodities or agriculture.

GVCs also deliver better jobs, but the relationship with employment is complex. Firms in GVCs tend to be more productive and capital-intensive than other firms, especially non-trading firms, which means their production also tends to be less job intensive. But the increased productivity leads to an expansion in firms’ output and thus to an increase in employment. In Ethiopia, for example, GVC firms are associated with faster growth in employment despite their higher capital intensity.

And not surprisingly, by increasing income and increasing employment, GVCs are also associated with poverty reduction. In Vietnam, the provinces that experienced more GVC participation between 2004 and 2014, which here we measure as the share of GVC firms in total employment, have also seen the largest reductions in poverty between these years.

To summarize, 2020 World Development Report shows that GVCs have supported growth, productivity, employment, and declines in poverty. But one important question is the impact of changing technology of production, especially automation and 3D printing, and what these means for GVCs as a path for development. There is a risk that these technologies could bring production closer to consumers at home and reduce labor intensive imported inputs from developing countries. At the same time, technologies of distribution like digital platforms are creating opportunities for SMEs in developing countries to sell their products to the world. What the 2020 World Development Report finds, though, is that the evidence, at least so far, suggests that these technologies are enhancing the contributions of GVCs to development.

Automation has encouraged countries to use less labor-intensive methods of production, including both in developed and developing countries. But it has also contributed to higher productivity and to a larger scale of production. This has increased the demand for imports of inputs from developing countries. In fact, 2020 World Development Report finds that the sectors that are the most automated are also the ones that are experiencing the fastest growth in imports from developing countries. So technological change is likely to be more of a boon than a curse for trade and GVCs, at least at this stage.

But not all of the findings are positive. There are two big concerns. First is inequality and second is the environment.

There is compelling evidence that the gains from GVC trade are being distributed unequally between and within countries. The 2020 World Development Report shows that increasing participation in GVCs is associated with increases in mark-ups. For example, in countries such as the US and other developed countries, increased participation, which is measured as how many inputs are used in the countries' exports or the measure of backward GVC participation, is associated with a rise of mark-ups in the textile sector. GVCs have reduced the cost of inputs for firms but these cost reductions are not being fully passed on to the consumers through lower prices. Meaning that firms are making bigger profits. But at the same time, we find evidence that the mark-ups for the producers of these inputs, which tend to be developing countries, are actually declining, as in the case of India's textile sector.

GVCs have also contributed to greater inequality between capital labor. Across the developed and developing world, the share of income that goes to labor has been declining. The 2020 World Development Report shows, at least in part, that this is associated with greater GVC participation.

Inequalities also manifest within the labor market. Across a wide range of countries, firms in GVCs tend to employ more women than non-GVC firms. They contribute therefore to the broader development benefits that come from increased female employment. But women are more likely to be in production and administration jobs. In fact, women are eight percent less likely to own and 10 percent less likely to manage firms in GVCs. So, they may be making the glass ceiling worse.

The 2020 World Development Report also discusses how GVCs are similarly a mixed blessing for the environment. The main environmental cost of GVCs are more—and more distant—trade in intermediate goods, which lead to great CO<sup>2</sup> emissions from transportation than what would happen with standard trade, as well as excess waste from more packaging of goods. On a more positive side, the concern that firms may choose to locate their most polluting stages of production in countries where environmental norms are laxer is not borne out by the data.

The policies and institutions that maximize the aggregate gains from GVC participation will not necessarily be those that ensure that these gains are distributed optimally or that the risks are mitigated. To address these challenges, the 2020 World Development Report argues that policies are needed.

First, developing countries would benefit from policies that spread the jobs and earning gains from GVC participation across society, thereby helping to lift the bottom 40 percent. GVCs can also be harnessed to improve working conditions within firms in developing countries. Because consumers are sensitive, firms in GVCs respond to alleviate some of these problems. But here, there is also a need for complimentary involvement and action by government, civil society as well as international organizations. For example, firms that participate in ILO IFC's Better Work Program improve compliance with labor standards over time in Vietnam. And public disclosure of the names of firms that fail to meet key labor standards, which was announced in 2015, has further improved compliance in the country.

Second, in advanced countries, displaced workers left behind in communities where factories have closed test the sustainability of trade and GVCs. In response, countries must adopt policies that mitigate the costs that arise from the impact of GVC-induced adjustments on people and places. Such policies can target both firms and workers. An example is Denmark's Flexicurity model which gives businesses the freedom to hire and fire workers with relatively limited restrictions while providing a generous broad-based unemployment benefit system that cushions the negative income effects on displaced workers. A key feature of Denmark's system is a significant investment in active labor market programs that enhance employability and connect workers to jobs.

And third, countries should adopt policies to mitigate negative environmental consequences and promote the adoption of environmentally-friendly technologies. Rising consumer awareness is driving GVC firms to increase sustainability practices of their suppliers. But domestic policy and international cooperation are also needed. An important first step is to price environmental degradation accordingly. Prices of goods should reflect not only their economic cost, but their socio-environmental cost as well. And trade should be carried out based on the comparative advantage that accounts for these costs. In addition to pricing, there is also a role for regulation, especially for specific pollutants and industries. These national measures should be complimented by global cooperation directly on the environment as well as to ensure that trade agreements are consistent with environmental goals.

International cooperation is also necessary to achieve poverty eradication and better development outcomes through GVCs. International cooperation is particularly beneficial to enable GVC-related trade growth when this goes beyond issues of market access and national treatment. Examples of provisions of deeper trade agreements include provisions to protect certain types of intellectual property, to adopt common approaches to regulate services sector, or to implement a competition law that embodies criteria that mirrors those of its trading partners. And the 2020 World Development Report shows evidence that GVC trade is greater between countries that share deep trade agreements. However, deepening trade cooperation is not enough.

To keep trade alive, we need to look beyond trade. Four areas are particularly important. First, taxation including destination-based taxes to avoid profit-shifting, competition with a focus on source countries, regulation of international data flows, and as I mentioned, environmental protection. The 2020 World Development Report concludes that GVCs can continue to boost growth, create better jobs and reduce poverty, provided developing countries implement deeper reforms and industrial countries pursue open, predictable policies.

Thank you.

## Keynote Speech 2: “India as the New Manufacturing Hub for Employment Creation and Greater Economic Growth<sup>1</sup>”



**Professor Ajit Mishra**  
**Director, Institute of Economic Growth, India**

I am thankful to ACI for inviting me and for giving me the opportunity to talk on “India as the New Manufacturing Hub for Employment Creation and Greater Economic Growth”. I recall my first lecture session (as an instructor) at the Delhi School of Economics where I transported my notebook style handwriting to the big blackboard and my letters were so small that students couldn’t read anything! The predicament here is somewhat similar. The topic offers a very broad canvas, especially for a micro economist like me. I hope I am able to do some justice and paint a legible picture for you all.

Let me begin with a quote from Lee Kuan Yew: *Since the industrial revolution, no country has become a major economy without becoming an industrial power.*<sup>2</sup> I will rephrase it and adapt it to the current context. I will argue that India has to be a major manufacturing hub, in order to meet the employment and growth objectives. The talk will not be so much about following and predicting the trajectory of Indian Manufacturing sector, rather it will be to highlight some issues that need to be looked at, in this pursuit.

### **Background**

While the reforms in India saw a boom in the services, the contribution of the manufacturing sector remained almost the same since independence, in the range of 14% to 17% (contribution to GDP). In fact the flatness has generated several discussions (see for example, Amirapu and Subramanian 2015) including the possibility

<sup>1</sup> Research assistance by Pranava Kadiyala is gratefully acknowledged.

<sup>2</sup> Attributed to his 2005 Nehru Memorial Lecture in New Delhi, by Amirapu and Subramanian (2015)

that India might have de-industrialized prematurely. The National Manufacturing Policy announced by the Government of India (2011) sought to enhance the share of manufacturing in GDP to 25% within a decade (by 2022) and create 100 million additional jobs in the Manufacturing sector in this period. Currently the share of manufacturing sector as percentage of GDP in India is at 15%, as opposed to China, which is at 29% and South Korea's at 27%.<sup>34</sup>

Employment contribution by manufacturing hasn't been high enough either, it stands at 11%. Manufacturing employment was growing at the rate of 0.6% in 2016-17 while the employment was growing at 1.1%. There has been a shift from farm jobs to non-farm jobs but those are concentrated in the construction, there has been little increase in the share employed in manufacturing (see Figure 3). This is incidentally not a recent phenomenon, as a study by Basole and Narayana (2018) shows that, job creation has always been low. Breaking 1983-2016 into three sub-periods, they find that 2006-2016 has seen the highest rise in jobs and wages.

If we disaggregate the sector into various industries, the decline is evident in some industries. As per the revised weights in 2011-12 in the Index of Industrial Production (IIP) food products, coke and refined petroleum products, chemicals and chemical products and basic metals contribute almost 50% of the weight of the manufacturing sector. The growth rates of these industries are shown in Figure 4. Barring food products, growth rates in all other industries are lower in 2018, as compared to 2012.

### Complementarity

Against this background, there are also some worrying signs on overall macroeconomic front. Private investment has remained low for some time, exports haven't grown as anticipated. More recently, domestic demand has plummeted in some sectors (i.e. auto industry) too.

Is this a kind of low investment, low productivity trap we are looking at? If so, what is the way out? There are differing views and two possible ways of looking at the situation. It can be explained better with the following simple analytical construct.

		Player/Firm 2	
		L	R
Player/Firm 1	T	3,3	6,1
	B	1,6	8,8

We can consider the above situation as a case where firms are considering whether to invest (long term/modernize) or not. Action T/L can be viewed as decision to 'not invest' and B/R refers to 'invest'. Payoffs are given in the boxes: these are payoffs to the firm from investing depending on what others do. The first number in the box refers to Firm 1's payoff and the second refers Firms 2's. Clearly, possible outcomes are both investing and both not investing. In formal terms, both (T,L) and (B,R) are Nash equilibria. This is nothing more than a case of strategic complementarity where firms are essentially waiting for others to invest. Hence if the economy is stuck at the lower level, it can be pushed up by coordination. The recent Gol Economic Survey (2018-19) does allude to this type of complementarity and the possibility of simultaneous developments on several fronts, although it does not subscribe to equilibrium analysis.

<sup>3</sup> World Bank Data. [https://data.worldbank.org/indicator/NV.IND.MANF.ZS?name\\_desc=false](https://data.worldbank.org/indicator/NV.IND.MANF.ZS?name_desc=false).

<sup>4</sup> See Figure 1 and Table 2 for a comparisons across time and countries.

Consider a slight variation of the above situation.

		Player/Firm 2	
		L	R
Player/Firm 1	T	3,3	6,1
	B	1,6	5,5

Now there is a unique equilibrium outcome, where there is no investment. (T,L) is the only equilibrium. No amount of coordination or government spending or temporary inducements will be able to shift the economy. The problems are deeper and structural. Investment is not inherently profitable in this economy.

In a similar context, various researchers have sought to analyze the lack of productivity convergence (to the global standards) and non-realization of frontier productivity. As Iyer (2018) points out most of the manufacturing sectors are still stuck with inputs, equipment and processes of Industry 2.0 Phase. In fact, there have been suggestions that it is the services sector and not the manufacturing sector which should be used as the driver of growth in the Indian context.

### **What is constraining?**

I feel that India is closer to the second example than the first. Coordination and strong boost by the government is required but at the same time the impact of a government push will be temporary unless certain structural bottlenecks are addressed.

- a. In an earlier contribution Hsieh and Klenow (2009) showed how allocation inefficiency could explain lower aggregate TFP (total factor productivity). In fact in their calculations, productivity would go up in India by 30-40% just by elimination of allocation inefficiencies. This allocative inefficiency can arise due to various (i) institutional and (ii) market imperfections. The adverse impacts of labour laws and imperfections in the labour market have been documented. The recent Economic Survey also points to the fact that labour regulations and perverse incentives which penalize expansion of firms might have led to the creation and sustained a large population of “dwarf” firms. That obviously meant that scale as well technology benefits have been compromised in the process.
- b. The Economic Survey (2018-2019) focuses on enabling MSMEs to grow for achieving greater profits, job creation and enhanced productivity. Dwarfs (firms with less than 100 workers) despite being more than 10 years old, account for more than 50% of all organized firms in manufacturing by number. Contribution of dwarfs to employment is only 14% and to productivity is a mere 8%. Large firms (more than 100 employees) account for 75% employment and close to 90% of productivity despite accounting for about 15% by number. Small firms benefit from several government policies and if firms grow beyond the thresholds these policies stipulate, then they will be unable to obtain the said benefits. Therefore rather than enable growth of the firm beyond the said threshold, entrepreneurs find it optimal to start a new firm to continue availing these benefits.

Flexible labour laws are deemed to accelerate job creation because the cost of employment of each worker goes down. Comparison of the ‘flexible’ and ‘inflexible’ states on parameters such as employment, capital employed in firms, NVA and wages show that on all these grounds flexible states perform better. But, flexible labor laws can have other undesirable features as well (i.e. excessive contractualisation).



- c. It can also be argued that industrial growth is constrained by the availability of (semi) skilled labour. This is plausible especially since it can be argued that India's industrialization strategy was more skill intensive and not so much labour intensive. But the current situation on skills and vocational training front, India's existing strength does not inspire much confidence. For example, compared to other countries in BRICS, India has a very low gross enrollment ratio in secondary education (India's primary education enrollment ratio seems comparable, tertiary gross enrollment rate is abysmal though). Of the students enrolled in upper secondary in India, only 3% are enrolled in vocational courses. This value is at 46% for China.<sup>5</sup> Vocational education and training has received least emphasis in India. Less than 5% of the workforce in the 19-24 group have received vocational training, compared to 75% in Germany. India has one of the least skilled (industrial) manpower among top manufacturing nations. Only 17-18% of those entering the workforce are skilled- of which 4% received vocational training. Comparative numbers for China stand at 69% with 39% vocationally trained. A Confederation of Indian Industry (CII) Report (2013) suggested that skill gap was likely to reach 100 million by 2025. Nothing drastic has happened in the interim period to suggest that this number will be much different. The National Policy on Skill Development and Entrepreneurship, initiated in 2015, is only a beginning.<sup>6</sup>
- d. Some of these findings are reinforced in more micro firm level studies. A recent study by Das and Chanda (2017) undertook a detailed firm level analysis to understand and explore the factors that either hinder or drive the firms to participate in India in the sectoral Global Value Chains (GVC) for the Electronic sectors. It looks at multiple perspectives such as; firm, sectoral, trade related, financial, and market barriers technology and manufacturing policy to provide a comprehensive picture of the factors influencing participation of firms in India in the electronics global value chains. Four important sub-segments of the Electronics industry in India were chosen for the study - Consumer, IT Hardware, Telecom and Solar. In order to achieve the goal of becoming a global manufacturing hub, India's domestic value addition in manufacturing needs to go up profoundly.

Several of the factors discussed earlier did show up to be important determinants in an econometric analysis of firm participation. Size was found to influence not only participation in value chains but also the position of the firm in the global value chain. Size reflects a firm's potential to achieve economies of scale, access to resources and ability to undertake risks; hence large and medium firms have a comparative advantage over small firms with a higher probability of being in a global value chain.

Market barriers have substantial negative impact on the odds of participation. The odds of electronics GVCs decline by nearly 31% as a result of market barriers such as high market entry costs, high capital costs, and long gestation time of projects. Likewise, the negative role of labour laws, lack of research and development and over-reliance on inputs have negatively impacted their participation.

- e. Besides all these institutional and market based constraints, India also has currently high levels of transport costs. The cost of road transportation is extremely high in India. The cost is as high as 19% of the total cost.<sup>7</sup> Roads carry 60% of the freight in India, though waterways are 50% cheaper than road transport and 30% cheaper than Railways.<sup>8</sup> According to a statistic by World Bank in its Brief 'Developing India's First Modern Inland Waterway' the cost to transport 1 tonne of freight over 1 km is only Rs. 1.19 for waterways while it is Rs. 2.28 for highways. There is therefore a need to shift

<sup>5</sup> WHITEPAPER on 'Skill Development for Industry 4.0', BRICS Skill Development Working Group.

<sup>6</sup> Even at the top end, spending on Research and Innovation stands at 0.7% of GDP (compared to 2.1% in China and 2.8% in USA).

<sup>7</sup> Sagarmala Big Picture, Ministry of Shipping, GOI. China's cargo waterways usage is at 30% whereas; India is at a mere 6%.

<sup>8</sup> Government of India, Ministry of Road Transport and Highways, Annual Report 2011-12

to water based transport. India needs to develop the inland waterways in India and integrate it with the coastal shipping. To do so, the Indian Government has initiated the Sagarmala project. The Sagarmala is a series of projects to leverage the country's coastline and inland waterways to drive industrial development. Navigational capacity of Ganga to be enhanced via multi modal terminals at Sahibganj and Haldia and a navigational lock at Farakka by 2019-20, under Jal Marg Vikas Project. The Project entails development of fairway with 3 meters depth between Varanasi and Haldia (Phase-I) covering a distance of 1380 km at an estimated cost of Rs. 5369 crore with target for completion in six years.

There has been a renewed emphasis on infrastructure developments. The Government has announced to invest Rs 10,000,000 crores in infrastructure over the next five years. Ministry of Railways has been allocated Rs 94,071 crore in 2019-20. Likewise, to upgrade 1,25,000 kms of road length over the next five years, investment to the tune of Rs 80,250 crore is envisaged under Pradhan Mantri Gram Sadak Yojana-III (PMGSY).

### ***The Way Forward***

So where does that leave us? The world is on the brink of a new Industrial Revolution, referred to as Industrial Revolution 4.0. How do we meet the aspirations to leapfrog to Industry 4.0? The concept of Industry 4.0 changes the way Indian will have to manufacture, design and service the products. What are the prospects and what is the road map?

#### *Digitization and Manufacturing*

As several commentators have mentioned this industrialization will be different: simultaneous and shared globally by countries. Industry 4.0 is characterized by digitalising vertical and horizontal value chains in the production or manufacture of goods and also digitizing existing product or creating new ones. But India faces some challenges; lack of data analytics skills and capabilities, cyber security breaches and replacement of physical labour through automation. Current status of digitization is 27% and India hopes to reach 65% in 5 years. The current global average is 33% and in the Asia-Pacific countries it is 36%.<sup>9</sup>

Digitalisation is going to replace scale benefits with flexibility and adaptability. So there is scope for medium and small firms to take part in global chains as well. It will of course require skilled manpower. Given the lack of necessary skills, there is a need for the government to invest in education. This is also necessary to address concerns of automation. The overall impact on jobs is still being debated, but there is no doubt that this will lead to a shift in the demand for jobs. The ability to work with data and make data-based decisions will play a major role in the jobs of future. India has initiated many skill and/or vocational training programs. Skill India is an initiative towards this goal.

It will require a new set of labour laws. In fact it has changed the way we look at the dichotomy between market and firm. The recent growth of platform which are a hybrid character is perhaps only the beginning.

### ***Conclusion***

I can't possibly end without mentioning competitiveness, especially when ACI has been such a wonderful host! India still has a reasonably high level of competitiveness both in terms of manufacturing competitiveness and in general business environments. It is true that it hasn't lived up to the expectations. For example the

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<sup>9</sup> PWC Report, Industry 4.0: Building the digital enterprise India highlights.

Deloitte-US Council on Competitiveness had predicted India to be ranked in the top 5 in their 2005 report, but the 2016 ranking based on Global CEO Survey puts India at 11<sup>th</sup> position in Manufacturing Competitiveness Index. Even general competitiveness based on institutions; market size, goods, labour and financial market; and other drivers does not look bad (39 out of 138).

Second, India's relative strength in IT base and software cannot be ignored. This can be harnessed in the digitalizing Indian manufacturing. As argued earlier, employment effects are not unclear but new jobs will be created in the place of old jobs.

Third, the so called demographic dividend, resulting from a young population can be harnessed by skill developments and digital inclusion. While some feel that India has already missed the opportunity, and the so-called dividend might in fact be a burden, the fact remains that there is no other option than to skill the young population. We are not going to see a low cost unskilled labour based manufacturing. Indian manufacturing sector has to be firmly placed in the GVC and the skill and technology compatibility, if not leadership, are essential.

In other words, the success of "Make in India" has to follow from the twin successes of "Digital India" and "Skill India".

Thank you.

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**Tables and Graphs**

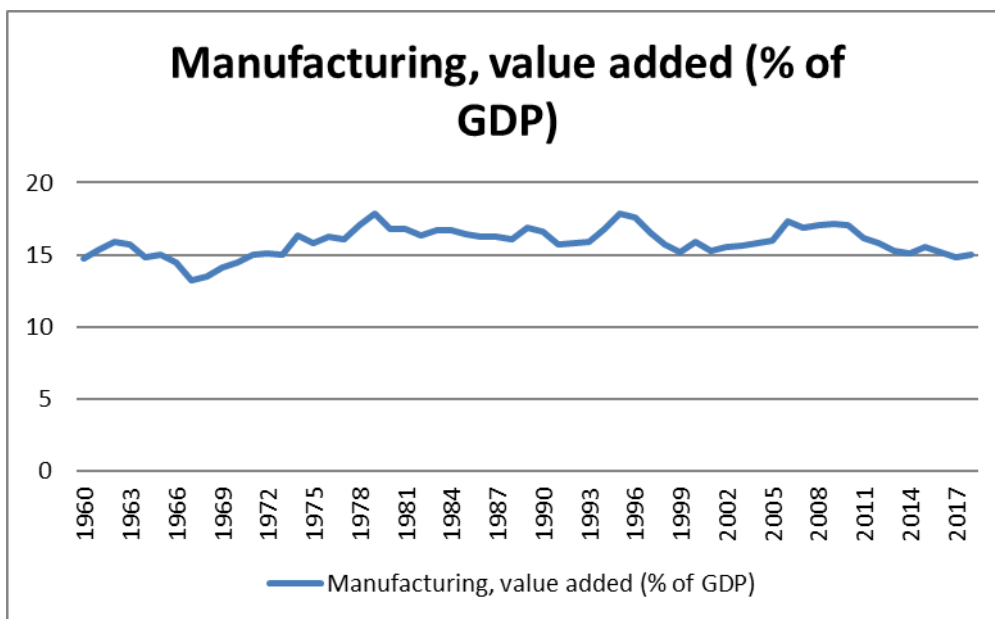


Figure 1: Manufacturing in India, value added (% of GDP)

Country Name	2010	2011	2012	2013	2014	2015	2016	2017	2018
Brazil	12.72	11.78	10.68	10.48	10.34	10.52	10.78	10.54	9.66
China	31.61	32.06	31.53	30.67	30.50	29.51	28.96	29.30	29.41
Germany	19.97	20.57	20.42	20.18	20.47	20.69	21.09	21.06	20.83
India	17.03	16.14	15.82	15.25	15.07	15.58	15.20	14.87	14.99
United States	11.93	11.95	11.85	11.81	11.64	11.62	11.12	11.15	

Source: World Bank

Table 2: Manufacturing in Various Countries, value added (% of GDP)

Note: Manufacturing refers to industries belonging to ISIC divisions 15-37. The origin of value added is determined by the International Standard Industrial Classification (ISIC), revision 3

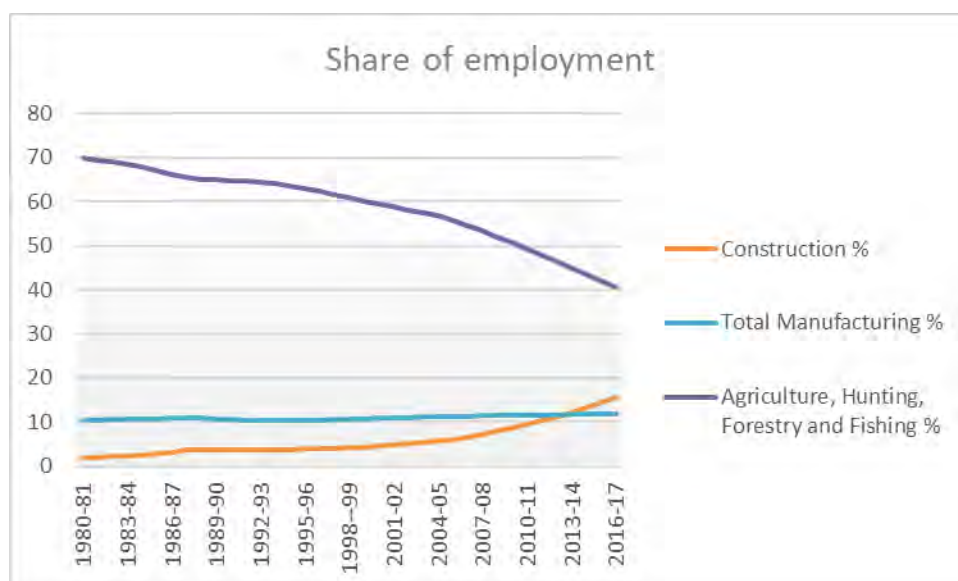


Figure 3

Source: KLEMS Database, RBI.

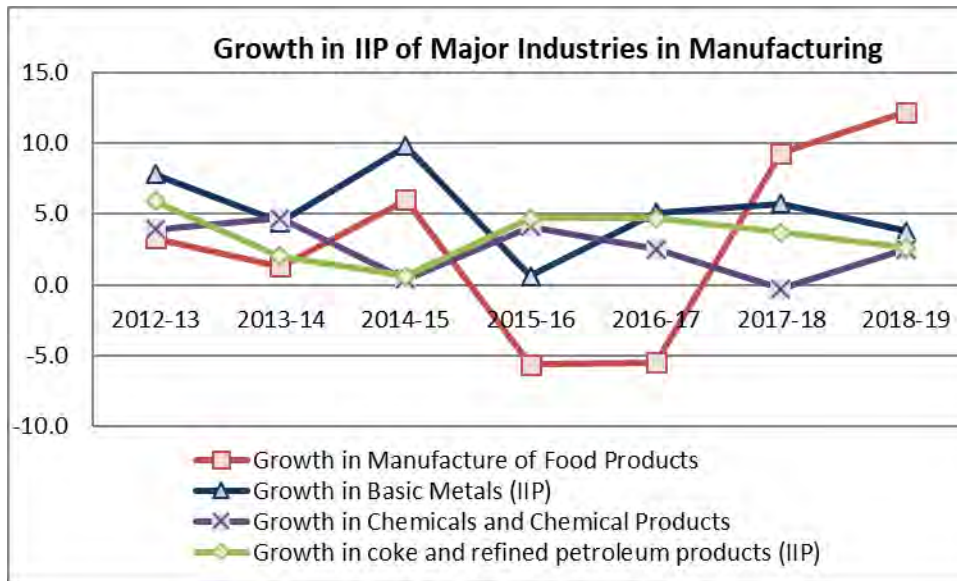


Figure 4

Source: IIP Data, Ministry of Statistics and Programme implementation.

## “Sub-national Economic Competitiveness and Quality-Adjusted Labour Productivity of Greater China Economies”



**Presenters from ACI-LKYSPP, NUS (from left to right):  
Mr Mao Ke, Research Assistant and  
Dr Zhang Xuyao, Research Fellow and Deputy Director (Research)**



**Moderator from ACI-LKYSPP-NUS (first from right):  
Mr Tan Kway Guan, Research Assistant**

**Discussants for Session 1:**



**Dr Mark Roberts**  
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**Finance and Economics, People's Republic of China**



**Dr Wang Hongxia**  
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## **Forum Luncheon Talk**

### **“Challenges faced by Small and Medium-sized Enterprises in a Growing Environment of Anti-Globalization and Protectionism”**



**Mr Henry Kwek**

**Member of Parliament & Member, Government Parliamentary Committee for Trade and Finance, Republic of Singapore**

Good morning.

You must be wondering why there is a picture of an elephant in my presentation and why I am talking about opportunities even though I am supposed to talk about challenges. This is something that is on many people's minds. I just arrived back this morning. Last few days, all the parliamentarians from ASEAN were in Bangkok. We pick a city and gather there every year for a series of conferences. This is a very pressing topic at the ASEAN level and even within the Singapore business community. Just before I came into this room, I think I met the CEO of World Scientific, a very major SME in publication and he felt that this was also something that was of interest to him. So, it is a pressing issue. Now, before I go into that, let us see what we are going to talk about today.

I will be presenting four parts. The first part would be the conflicting narratives that we are hearing. The second part would be the elephant chart. And then the politics of rage which I will explain later. Next thing, I would like to use this opportunity to introduce to you ACI's PTEM index. And then, of course, given the fact that I represent Singapore, I will share with you what is the current and evolving thinking that the Singapore government has on promoting SMEs especially in this kind of situation.

So, the question that people ask right now is, in this era of anti-globalism, the market now moves based on tweets, should SMEs take the courage to internationalize. Because internationalizing for SMEs is almost like relocation. You have to pack your bags and prepare to fight a new world out there. And if you don't do well, your own base will not survive. So, it is a major decision. The second question is, should SMEs even continue

to invest aggressively now because we are facing both cyclical and structural changes, and sometimes it is very hard to see which one is which. So, should we still invest now? And then, if the world gets fragmented into different economic and technological ecosystems, how are we going to adapt? And if this is not clear to SMEs, what about policy makers? Policy makers are supposed to make rational policy choices to support the rational business decisions. So, if the businesses don't know where to go, how should the policy makers see the issue?

There are two viewpoints that we see today. It all depends on which newspaper you read. Asian countries are thriving due to demographic dividend, urbanization, economic integration and general geopolitical stability, at least until recently. While the fundamentals are there, history matters. History matters because you have a mean reversion process where countries like China, India, Korea, Japan and Vietnam are societies with very deep tradition in science and technology. This cultural norm may not be captured in statistics but it is a very important factor. It sets aspirations and that aspiration is propelling this society forward. Then, if you look at countries like Indonesia, Malaysia and Singapore, they traditionally were on the expressway of global trade. In Indonesia, you have the Sriwijaya empire and the Majapahit empire; in Malaysia and Singapore, you have the trading ports; in Indo-China, you have Funan. Trade is in the blood of the coastal part of Southeast Asia.

These two cultural forces are shaping this Asian century. That is why the statistics now backs us up as ASEAN is the fourth largest fastest growing and most diverse region in the world. This is a very important point. Diversity doesn't mean just language and food, even biologically, in terms of life, this is the most diverse part in the world. This is the Asian century that we are all very familiar with. But at the same time, with technological disruptions, the future is now. We are seeing the disruption of traditional industries and we are beginning to see the retreat from global trade, especially from certain developing economies. We have already seen a reconfiguration of supply chain in Asia and we are maybe even seeing a deepening divide in this technological ecosystem.

This is the well weather of globalization because the most integrated industry in the world is technology. And if this gets split into different technological ecosystems, then that is really something. And then, we have moved from an international rule-based order to one that is increasingly based on might. I am not just talking about the trade war of the South China Sea. I am talking in general; this has already been happening for the last decade or so. When you are seeing a lack of proper policy adjustments through fiscal policies, conventional economic policies and leaving the central banks in developed economies with no choice but to press on with monetary policies, even bordering towards unconventional monetary policies, which has tremendous implications on market signals.

I want to spend the next few minutes showing you one chart. That one chart will make sense of the two conflicting views. It is called the famous elephant chart. Over here, you have the percentage of the global income distribution. Then, you have the increase in purchasing power, which means income over the last few decades, is in the shape of an elephant. Population in developing economies that do not benefit from integrating or globalizing are stuck. You have China, India and other emerging economies, especially ASEAN, who have done very well, integrating and being part of the global supply chain. They have seen a tremendous growth. In the developed countries, the rich are doing well and continued to do well. But the rest of the society have seen their economy stagnating.

What is responsible for the drop? Basically, in developed economies, a lack of inclusive policies – by inclusive policies, we mean tax transfers within the rich and poor within developed countries, a lack of state to state transfers, lack of social economic investments to ensure that the broad middle class does well, a lack of inclusive tax rates. If you think about it, not every developed society is like this. For example, Japan is still relatively egalitarian and part of Europe which includes the Nordic European countries which have invested heavily in the social compact, which is to say that for parts of the developed economy, the chart is probably a bit shallower. That means for certain societies like UK, US, the drop is even deeper.

This is the reason why there is something called the politics of rage in developed countries. By the politics of rage, the middle class is seeing real income stagnation, maybe even negative income, there are seeing job losses, they do not see positive change in the horizon and they don't even see a positive future. This is a key point. That is the reason why populist policies are on the rise in these countries. They know these policies are not rational but what do they have to lose.

A very famous singer during the hippie's movement is Janis Joplin. A particular phrase from his song is that freedom is when you have nothing left to lose. That is why in the rhetoric in US, you hear things like drain the swamp, punish those elites in the coastal cities, retaliate against the Chinese who are stealing the jobs, unfair competitions – these may not be rational but it is driven by this. Now, compare this viewpoint with the successful Asian economy, they are still talking about the rational policies of globalization. Therefore, the issue here is not an economic argument. It is way beyond an economic argument. It is a socio-political argument, which is to say, until the elephant becomes something else, no matter what happens in the trade negotiation between US and China, you are not going to see a real solution. Because it is not Trump. It is beyond Trump. It is that deep. But all is not lost.

So, what are the logical policy options for the Asian economies, especially ASEAN? Very simple as we go back to the elephant. Obviously, while the traditional engines of global growth are no longer in full throttle, you don't throw the baby out of the bathwater. You continue to press on when you can. There are developed economies like Japan that are still capable of the inclusive policies that have a broad support for globalization. In that sense, we continue to advocate a rule-based international political and economic order, we press on with RCEP, CPTPP, and we work with what you have.

But the second thing we must really do is that we must push for trade integration between these economies. Traditionally, we export some stuff there and they export some stuff back. This is traditionally the argument of the South to South trade, except the South is now a lot more prosperous. The prosperous South trading with the prosperous South. At the same time, we must not forget the lessons that we see some of the developed economies not doing. They do not push through inclusive policies and that is why there is a drop in support for globalization. The key part of this support for inclusive policies is to grow SMEs because the SMEs create the bulk of the jobs. Therefore, there are two ways of doing inclusivity. One is to tax people more and then redistributing. The other way is to promote growth in SMEs.

There is a Chinese saying – protect the base, but don't cap the mountain. It means creating inclusive tax policies to take care of the poor, while not holding the high-performers, the ones who create significant value to society, back. I want to tie this in with the work that ACI is doing. Traditionally, the MNCs from the large developed economies provide the SMEs with valuable technologies, skills partnerships and even acquisition options. Moving forward, we have some of these MNCs relocating or putting secondary supply chain outside China. At the same time, we also have MNCs from major economies like China and India, and also Southeast Asian economies, are also building their own global supply chain and value chain. Even Chinese companies serving US, they might also want to put a supply chain outside China to serve the US market. This is already happening. This has to happen very quickly because the political winds are so unreliable.

And that is where ACI's research over the last few decades are very valuable. We spent the morning talking about competitiveness index. That tells you which is the fertile soil for a reconfiguration of the supply chain. In the past, many of the MNCs just choose the fertile soil and they move and build the trees, and forest from scratch. And they had the time to do that. But today, we are going an accelerated product cycle and sudden changes to the supply chain that require us to be very nimble. And that is why I am very happy that ACI has gone that further step beyond identifying the fertile soil and also give a bit of survey over what is the ecosystem on each fertile soil. That is the PTEM index which I will talk briefly about. It looks at countries and also sub-regions.

ACI started doing the PTEM among Singapore SMEs for six different sectors. The results are preliminary, and I am sure Professor Tan's team has made progress that they will share with you at an appropriate time.

Basically, we are looking at firm level data constraints and how do we get good data to break past these constraints. We are understanding the strengths and weaknesses of SMEs and more importantly, there is insufficient academic research on microeconomics, especially at the SME level. It is a not as well understood area. If there is an in-depth understanding of this, that would help policy foundation. ACI's aspiration is to then go beyond Singapore to have different countries in the region, putting everything into something called the Asia Com Net, and this dataset would be a prelude to do further in-depth understanding and studies. Like the competitiveness study, ACI does it in four different categories, 12 environments and 86 indicators. You can trust ACI to always come up with a whole range of indicators.

Some of the preliminary results are in for Singapore. For example, the scores are displayed by industries, then by sub-categories by industries. The next question is this; what is the purpose of this information? If you are the international company trying to move into Southeast Asia, and you have to rapidly make decisions with long term consequences because supply chains are nowadays tightly coupled. You need to make sure that it is fertile ground and that is what you have from ACI's competitiveness index but you also need to know which ecosystem has already shaped your success.

Of course, people would say that they can just do some business survey trips; why is there a need for academics to tell us which ecosystems are strong and weak. I have this view on academic research. Academic research is like a very introverted person. Academics speak very little, but when they speak, it is with an astounding amount of force and might because it is all supported by data. We are living in an age where information is easily obtained, we go on factory tours and consult for businesses in China, we know that in parts of emerging Asia, there are even factories for rent. The purpose of academic research is to do detailed understanding and to paint a broad but robust picture. That would help MNCs move in, identify the fertile soil, identify where is your best bet at finding partners that can scale and go with you for the distance. In this era where you have to rapidly configure the supply chain.

Let me move on to the last part of the speech which is to update you on Singapore's approach to promoting SMEs. As you know, in Singapore, SMEs form 99 percent of our enterprises; we have more than 200 SMEs in Singapore; they contribute to nearly half of our GDP; and they employ 70 percent of our workforce. This statistic is broadly similar with others in ASEAN, except in Indonesia where the importance of SMEs could be even more.

The challenge about talking about SMEs is that you are talking about many different animals here. It is very wide in scope and moves at different speed. The top firms are already competing with the best in the world. Our job is quite straightforward. We support them to make sure they stay at the top and that they also break new ground as they stay at the top. We know how to work with international MNCs on this. We host MNCs in Singapore. At the bottom, at the foundation stage, there are more than 100,000 firms. This includes the egg-seller in the market. For these, the best way to support them is not necessarily a transformation. For these companies, we need to focus on broad based measures, whether it is tax, equipment, training or grants, broad-based measures that are easy to implement. The real action for us comes at this core group.

Let me summarize the presentation today. What are doing for our core SMEs that occupy the core space? This ranges from tens to hundreds of millions of revenues. Singapore has reconfigured quite a lot of our programs to grow. Of course, when you reconfigure programs, there is always a time lag and there has been feedback from the floor on how we can improve these schemes. Broadly speaking, I can see three major groups. The first is to digitize, transform and collaborate. The Singapore government looks at digitization as a public good. You have to have a company's core competence and you have to be digitized. Being digitized does not mean that you are good at your job.

We have introduced something called the pre-scope technology solution for various industries. For example, in the past, if a restaurant operator wants to have an e-ordering system, he would apply for a grant and write up a long proposal to us. Because most of the retailers can get by with three or five different options,

customized to their needs. In that sense, rather than supporting them with grants, we say that we support them if they buy any of these four to five solutions for that industry. So then, they can hit the ground running, they have less things to worry about. That is what we mean by standard productivity solution grants. Another example is ERP. We have started exploring how we can have local ERP systems for SMEs and offer it at low cost to a majority of companies within certain sectors. This is what we mean by digitization as a public good.

At the country level, there are certain digitization we can achieve through digitization. Last time, we had something called the national single window for trade facilitation and clearance for our ports. Now, we have a huge system that is being built, the national trade platform, parts of it also use modern technologies and part of it also means that there are credit scores available for people to access. So, you create digital efficiencies at the national level. Next thing is that we have transformation grants to support transformation efforts and grants to support collaboration. Collaboration refers to something deeper such as doing joint research or technological transfer from a big company to a small company or even companies of equal size. Then, we have to internationalize. Even within traditional developed economies, there are still opportunities. So, Singapore companies must internationalize and we must learn how to hunt as a pack.

We are getting our people ready because Southeast Asia is so diverse, you need to understand not just language, politics, the economic structure of the whole market, and then you can get started. We are exposing our young people and even the senior management to the Southeast Asia markets, some of which includes internships and subsidies for wages. We are also pushing for us to internationalize as a group. We have a huge network outside of Singapore for our country size. We have many industrial parks. For example, in Vietnam, we have seven or eight industrial parks and in China, we also have a few industrial parks. That is a good base for our companies to go out there and to trust the environment that there are familiar with; that is for manufacturing and services companies. For our retail companies, if you go to places like Cambodia or Vietnam, sometimes you see major malls that have brought Singapore brands with them when they go out. Lastly, for start-ups, something called the global innovation alliance where we find friendly areas where start-up culture is encouraged.

In the western world, it is mainly the big universities that are very collaborative. We get our Singapore companies and start-ups to have a base in, for example Stanford University, and from the helpful ecosystem, they can then branch out to the market. We are now moving beyond the developed markets. For universities, we are also looking at top cities in Asia, for example Jakarta. This is a big push. The next thing is also the mindset and knowledge. Let me talk about the industry transformation maps. This is our key economic strategy now. We want to have a very clear strategy per sector. We have 23 sectors. Some sectors may have more than one strategy. For each sector, you must have an understanding of what 4.0 means. You must understand what the logical strategy for that sector is, and then, you have to translate that into what are the future skill-set needed for that sector. Then, you can get grants to have your people and companies ready to pursue that objective.

I have to also stress that ACI has an Enterprise Future Initiative which also studies all these things from the academic perspective, so that we can come up with more robust policies. Whilst this is going on, we are also doing something new, which is mindsets. We have just introduced a very innovative program – Scale-up Singapore. It is to get companies from the core with the ambition to grow. I see this as the effort to build the future national champions. That means you have relatively successful companies that we pick by not just quantitative factors but also by their ambition. We know they want to go further and we support them with leadership training, management consulting and such. We are doing it for the first class right now and they are from different industries. We hope that they would form the heart of the future top SMEs. We have to start with mindset because mindset and ambition are critical.

With that, I will end my presentation. Thank you so much.



**Professor Khong Yuen Foong**  
**Vice Dean (Research) & Li Ka Shing Professor in Political Science, LKYSPP, NUS**

Your excellency, Mr Subramaniam, Chief Secretary from the State Government of Andhra Pradesh,  
Distinguished guests, ladies and gentlemen,  
A very good afternoon to you.

This is the second leg of the Annual Asia Economic Forum jointly organised by the World Bank Group and the Asia Competitiveness Institute at the Lee Kuan Yew School of Public Policy at the National University of Singapore. I am truly delighted to see the active participation of so many senior government officials, captains of industries, academics and graduate students in this forum. I must also say that we are really pleased and deeply honoured to receive from his excellency, Y.S. Jaganmohan Reddy, the Honourable Chief Minister from the state of Andhra Pradesh, a donation to the Asia Competitiveness Institute at the Lee Kuan Yew School of Public Policy. This second donation is a superb gesture by the state government of Andhra Pradesh in appreciation of the ACI's role in helping chart the economic development of the state and its help in capacity building for senior government officials.

ACI hopes that we can continue to live up to your expectations. Helping to enhance the economic competitiveness of the countries in our region has always been a priority of the government of Singapore. And ACI as a think-tank that is fully funded by the ministry of trade and industry, is gratified to see the achievement of this objective. We hope to continue to play a role in supporting more regional governments if only to ensure greater economic connectivity and integration in the years to come. Finally, I would like to thank the state government of Andhra Pradesh for the confidence that is placed in us and to Secretary Subramaniam in particular, for making the effort to be with us today despite your busy schedule. I wish all our participants a very fruitful forum this afternoon and after your serious work and discussion, I hope you find some time to rest and play and to visit the many attractions in this garden city of Singapore.

Thank you.

**Ceremony of Cheque Donation from State Government of Andhra Pradesh, India, to LKYSPP, represented by Mr LV Subrahmanyam, IAS, Chief Secretary, State Government of Andhra Pradesh, India, and Professor Khong Yuen Foong, Vice Dean (Research), LKYSPP, NUS**



**Speech by Guest of Honour:**  
**“Investment Promotion and Opportunities for State of Andhra Pradesh, India: Best State in India before 2029”**



**Mr LV Subrahmanyam, IAS**  
**Chief Secretary, State Government of Andhra Pradesh, India**

Namaste to everyone here! Greetings from my state, my country! Professor Khong Yuen Foong, our distinguished Member of Parliament Henry Kwek and dear friends.

It's such a pleasure to be in this part of Singapore in the academic environment. I am feeling very much at home because I come from a family of an academican so when I stand before an academic group and when distinguished professors share the dais with me, I always think it's a great opportunity. In India, all of us think, just as you believe here because yesterday, I was there in that centre which is called Lifelong Learning Institute in Singapore, as long as we live, we try to learn. We learn from our mistakes and more importantly, we try to learn from others' experiences so that we don't make those mistakes. So, I am really happy to be here.

Andhra Pradesh state as you know has been engaged with the Asia Competitiveness Institute here to understand exactly how public services can be improved. I will just spend couple of minutes on that and then get into the investment opportunities.

In monitoring of the government programmes, we often come across this problem that truth is not travelling upwards and sometimes people are not revealing the exact performance of various programmes at the district level and at the village level. So, there is an urge to have a well-informed third party to go and check various programmes. So that's the kind of engagement that we have in all the 13 districts in Andhra Pradesh and we identified initially about nine departments to see how the programmes were faring. So we picked on agriculture department, animal husbandry, fisheries, health and family welfare, horticulture, labour and employment, police, panchayat raj, rural development, women, children, disabled and senior citizen. So as I said, with the help of the Asia Competitiveness Institute, the Lee Kuan Yew School of Public Policy, the first



was of course an evaluation - the Real Time Outcome Monitoring System or ROMS as it was called and the second one was also in the process check the quality of data that was coming in and the important one is to see the evaluation of some schemes of these departments that I mentioned. As far as the health, sanitation and some of those programmes were concerned we took the help of UNICEF in evaluating that performance. I must place on record, the excellent work that was done, the timely reports that were brought and the teams that were deployed by Professor Tan Khee Giap and others. They pursued with absolute objectivity and sincerity in picking the real drawbacks. I don't know whether the audience will be very happy for me to go through those individual reports that may not be very appropriate and Professor Khong might cut my mike because academicians/professors are always very strict. I am not going too much into that, but I must tell this that these reports have helped us in making adjustments in the policy framework, in exactly understanding how the district administration was implementing it and in making on course corrections.

Now you might wonder where are we taking this from there? So I will just spend another two minutes on this. In the initial assessment that we have done in the department of planning in the state of Andhra Pradesh, we have looked at the nine important programmes of the new Chief Minister's government. We have a very dynamic and a young Chief Minister Mr Jaganmohan Reddy who is a 46 years old person, who came with a huge political mandate. In our legislative assembly if there are 175 seats, he had won 121, so it's a massive number and then for 25 parliamentary seat selections, he won 22 of them. So he got an absolute majority and his philosophy is that "unless we have an inclusive growth, no growth is stable and no growth is sustainable". So, his government is continuously looking at this principle of equity which must be there. As part of that equity, he has initiated activity in this Navaratnalu, as they are called, nine gems, if you really understand them. Of these nine gems, I will just talk about only two of them because we don't have time, I just have to quickly tell you what we did is when we meet up again with the professors we would be looking at the lead department which is implementing that programme and the number of indicators which are required to be there for that particular programme.

For example, the first programme that I wish to mention is the YSR Rythu Bharosa, in Telugu. Now, Rythu Bharosa if you really translate it means security to the farmer. Now we are not talking about physical security, we are talking about the kind of assurance to the farming community because the market is very volatile and the farming activity is continuously depending upon the monsoon, as a result due to debt burden it's becoming inevitable for many of them to in fact give up their own lives, they are committing suicides. This is something which is extremely painful and distressful.

So, the very first gem in this government is how to improve the morale of the farming community. In that there are a few of measures which they would like to take whether it is the investment support. When we talk about investment support, we are talking about the investment that goes into farming so before any commercial bank or cooperative bank is able to give any loan, how the farmer can have a start-up kind of a capital with him with which he is able to initiate the agricultural operations. So every year the farmer gets in Indian Rupees something like 12500 Rupees which are given to the farmer. Then you also have this issue of a tenant farmer and an owner farmer. So the farmer who owns the land need not be a cultivator, he can be an absentee landlord, he may be living in an urban agglomeration, he may be working in Singapore, but he has agricultural land behind. Now it is a cultivable land, fertile land, so some person in that village who likes to cultivate, he becomes the cultivator. So we have brought out legislation which permits this cultivator to take this land on lease, he does not get any ownership rights, he cultivates the land, he can borrow the money from the bank and he has a tie up with the owner on whatever terms and conditions that were found to be acceptable to both of them. He may be giving the owner 25 percent of the proceeds, he may be giving him 30 percent of the proceeds, it is up to both of them, but the state government is assuring the land owner that your land will not be taken away from you but please allow the cultivator to cultivate. So how to give this cultivator a head start to start his cultivation is this Bharosa, you give him some support.

You also have in many dry areas the need for irrigation, so as part of this initiative, we also support some minor irrigation structures, could be borewells, tube wells, deepening of open wells, programmes like that. It also includes how to improve storage capacity of the agricultural produce once the agricultural season is

over, harvesting is done. How to protect that crop? Now storage enhances the value for the crop. If there is a distress sale going on in the market, the farmer need not sell it away, he can hire some space and keep it for a longer duration. So, we need to have all-season cold storages at least at selected places. We also need, if the farmer in spite of all these efforts, let's say if he were to go and commit suicide or something like that, the debt burden is still there, the family is left without any bread winner, so how to compensate that family? I am mentioning all this to you just to enable you to understand that there are several initiatives all getting packaged as an assurance to a cultivator.

So, we have seen this list and we have evolved a set of indicators which can be used and tomorrow when the professor and his team were to come to Andhra Pradesh, they will be able to go around and see it. So we have evolved about 95 indicators so far for these nine gems, as I said Navaratnalu, and we are hoping that very soon we will put across these indicators through the collectors, take some feedback from the collectors, firm up on these and once we are clear in our mind that these are the ones which we need to see, we will certainly get back to the Asia Competitiveness Institute and prepare the programme for monitoring of these government programmes. So, this is how the state government loves to continue this association with the university and with this institute and take the performance of the state to a better level of governance and see that the developmental targets which have been fixed are accomplished with your association.

So, these words I have spoken more as a kind of a thanksgiving to the association that we have, and the efforts that have gone into it. I do understand how difficult it is for people coming from Singapore to travel to some of the interior pockets, the distances there, the labour, sometimes the alienation from their native food and then their persistence with truth. It's very tempting to travel away from truth when situation is not comfortable, but they haven't done it so I am very grateful to them and that's how we will like to take it forward.

I am also here just after I have completed 36 years of my public service, only yesterday I was remembering 36 years back when I joined this distinguished Indian civil service in trying to understand how I can contribute to the country's growth, to the state's growth and in terms of enabling us how to cope with the challenges and I am very happy as a student of political science and public administration that today's chairman of the session is a senior professor in political science so he is like my guru on the dais, so I told him I am extremely happy to be here. I did my master's in political science way back in 1981 and its long, long ago and it's nice to be here again.

Today we are talking here exactly at a point of time when global trade and investments are threatened by new thinking. This thinking is perhaps making the current and future trade agreements very questionable because we learnt in the nineties when the World Bank and the International Monetary Fund talked about free trade and how barriers for free trade must be reduced, we thought that's the dogma which is going to be relevant for a long, long time. We studied as students of economics how distortions in different economies need to be removed and how we thought the globe is a village and how we must be interconnected in a seamless fashion.

I think today some of these are coming up for appraisal and I think most of the countries today believe that it is not just international trade which is important, it is also important to look at the domestic economic environment and how to create jobs in one's own country. So it is a very difficult time, how national governments have to look within and need to also look without and see how each country can grow along the developed economies, where the developed economies are not like in the past freely coming and investing from the word go, they are instead waiting for the native governments to provide huge infrastructure support and in the market place today there is no charity. It is a very, very tough situation which is coming out. We have seen the environment that is building between China-India, China-America, Japan-China, like this you will look at different, different countries, extreme competitive environment is growing and how can a national government and much less a state government like mine, how do we prepare our growth algorithm is a very, very difficult question. So, this is a time when we have to be extremely

careful. So, we have to live with this concept that private enterprise will certainly come only when assured profit is there and they have a chance to repatriate this profit, these are issues which I think most of the state governments are understanding. I would also like to remind this audience that the national Prime Minister has said that country needs to move in to a five trillion US Dollar economy by 2024. Now this is something which is really spurring a lot of thinking in the country and each state needs to play a very progressive role.

Ladies and gentlemen, I am sure you are aware that we can't put all the states in the country on the same footing. So, some states have to really excel, and they need to carry on this business much more professionally otherwise the growth that the country deserves to achieve may not be fulfilled. So, Andhra Pradesh is one such state which has been showing good growth which needs to grow at least annually between 9-10 percent so that the country's progress is not hampered. When I look at this as a broad economic indicator, now what is it that I can offer for investments to come to achieve this kind of growth. I will say a few things about this and close it and answer in detail if they are some comments.

The first important factor which I wish to submit here is leveraging the natural and human resource endowment which is existing in the state of Andhra Pradesh. When I talk about the natural endowment in the state, I mean the kind of manpower that coming out of various colleges. We have an Indian Institute of Technology, we have a National Institute of Technology, we have an All India Institute of Medical Sciences, we have 21 state universities, we have 479 engineering colleges and 535 Industrial Training Institutes. I am trying to impress all of you with a large number of educational institutes which are providing premier education to the students and all these are producing over three lakh students every year who are walking out of these technical institutions, who are a huge manpower for any investment.

Now, similarly we also have a huge long coastline. We have more than 970 kilometres of coast which is the second longest one in the country and certainly this helps the state to emerge as a maritime trade centre for Southeast Asia. I will also tell you a little more, the state has six seaports, six airports, we have more than a lakh and 23 thousand kilometres of all-weather roads and some of the rich mineral wealth is also there in the state. We have two river lines going through the state bringing into an assured cultivation of nearly six to seven lakh acres every year. So these are the factors which need to be taken into consideration that we have huge human resource, we have huge natural resource and huge infrastructure is already in place and there is also scope for at least four more seaports to come up because in the hinterland of the country there is a huge market which has already emerged and I believe by 2024, as several institutes which have projected, India's growth story as taking us to the third place in the world by 2024 or thereafter. So, it's a huge market which is there for which we need to take this country forward and that throws open an opportunity to have more ports.

If the governance system in the state deserves to be mentioned, I would only mention to all of you, ladies and gentlemen, that we have been ranked first in the country in the Ease of Doing Business which is now becoming an annual benchmark which is being done by the World Bank and Andhra Pradesh has always been doing very high in this Ease of Doing Business. We have very effective online clearances of all the applications which come for investment. We are also doing extremely well in the Global Competitiveness Index for the state. The World Economic Forum is helping us with such evaluations.

Lastly, before I go and resume my seat, I wish to place before you that we have huge investment opportunities, for example, the Chennai-Bangalore Industrial Corridor is a huge corridor which is being supported by the Government of India and here we have about three nodes out of eight nodes which have been identified which are a part of Andhra Pradesh state where we can think of beautiful industrial clusters which can also have not just the workplace but also the place of residence so that people walk to work and these are all the pristine townships and the urban agglomerations in our state.

We also the Visakhapatnam-Chennai Industrial Corridor which is going through about nine districts in our state which also is very helpful. We have about 19 operationalised Special Economic Zones (SEZs) which

also are capable of taking huge investments whether it is pharmaceuticals, whether it is multi-product SEZs, whether it is textiles, leather products, building products, food processing and what have you.

Yesterday in the conference that I addressed, the Singapore Indian Chamber of Commerce and Industry gathering, SICCI as it was called, I have told them that it is quite possible that we can earmark one of the clusters for MSMEs in any of these corridors where the Singapore Enterprise can find its expression. Similarly, we have the Andhra Pradesh MedTech Zone where the medical technology, the instruments, the gadgets, the appliances, all these which go into the treatment world can be also located. All of us today are extremely concerned about the population and the emission of carbons as a result of high use of petroleum products. So we also have an electric mobility policy in the state, and we wish to have about ten lakh e-vehicles on roads in the next five years and production of these e-vehicles is going to be a huge challenge for which we are also preparing ourselves.

I would like to also say that on the traditional items of productions for the artisans, whether it is the handloom, the wood-based industry and such things, where the artisans also live, Andhra Pradesh has its own story to tell and I will be also showing you a piece of art which I have brought here to give to the Asia Competitiveness Institute. So, there are groups of artisans whose families are still living by encouraging these traditional arts. So, it's a state full of ambitions, opportunities and as I said it is led by a dynamic Chief Minister.

All of us in the civil service, we have come the hard way into the civil service but we also feel there is a need for us to hone our skills from time to time and that's the place when we discovered the contribution of the Asia Competitiveness Institute, the Lee Kuan Yew School and we are continuously upgrading our abilities. I do concede that there is a greater chance to use these reports in our administration. So we are on the learning curve, we are moving forward and I do hope with investments coming in, with more and more employment opportunities created, our boys and girls who are extremely talented, who are going to different parts of the world to pursue their education, they would all be eager to come back and contribute to the state's growth. So I wish to welcome everybody to Andhra Pradesh and promise that your enterprise will find full expression in Andhra Pradesh without any hindrance.

I thank you all, ladies and gentlemen, for this wonderful opportunity to meet with you and talk to you and I am extremely happy that I had the opportunity to come and handover a very, very humble small donation to them and may this institute's help reach many more deserving people and may many more people cross the hurdles that are being set before them and may they all lead a happier life and a healthier life in future. Thank you!

## Session 2

### “Sub-national Economic Competitiveness and Quality-Adjusted Labour Productivity of India”



**Presenters from ACI-LKYSPP, NUS (from left to right):  
Ms Sumedha Gupta, Ms Aishwarya Narayanan, Mr Vardaan Chawla, Research Assistants and  
Dr Zhang Xuyao, Research Fellow and Deputy Director (Research)**



**Moderator from ACI-LKYSPP, NUS (first from left):  
Ms Doris Liew Wan Yin, Research Assistant**

Discussants for Session 2:



**Dr Manoj Panda**  
**RBI Chair Professor, Institute of Economic Growth, India**



**Professor Lei Xinjun**  
**Senior Researcher, Shanghai Academy of Social Sciences, People's Republic of China**

**“2019 ACI-Shanghai Academy of Social Sciences Greater China Liveable Cities (ACI-SASS GCLC) Index: Ranking and Simulation Analysis”**



**Presenter:**  
**Professor Shen Kaiyan**  
**Director, Institute of Economics, Shanghai Academy of Social Sciences,**  
**People’s Republic of China**



**Presenters from ACI-LKYSPP, NUS (from left to right):**  
**Dr Zhang Xuyao, Research Fellow and Deputy Director (Research) and**  
**Associate Professor Tan Khee Giap, Co-Director**



**Moderator from ACI-LKYSPP, NUS (first from right):  
Mr Mao Ke, Research Assistant**

**Discussants for Session 3:**



**Dr Lu Hsin-Chang  
Associate Professor, College of Management, National Taiwan University, Taiwan, ROC**





**Dr Wang Huitong**  
**Research Fellow, Institute for Finance and Economics Research, Central University of Finance and Economics, People's Republic of China**

## **Closing Remarks and Future Research Agenda**



**Associate Professor Tan Khee Giap  
Co-Director, ACI-LKYSPP, NUS**

# Programme

## 2019 ASIA ECONOMIC FORUM Seminar 2: Economic Competitiveness and Quality-Adjusted Labour Productivity for Greater China and India

JOINTLY ORGANISED BY  
THE WORLD BANK GROUP  
&

ASIA COMPETITIVENESS INSTITUTE (ACI) AT LEE KUAN YEW SCHOOL OF PUBLIC  
POLICY (LKYSPP), NATIONAL UNIVERSITY OF SINGAPORE (NUS)

30 AUGUST 2019

Dress Code: Business Attire

Venue: Lobby, Oei Tiong Ham Building, LKYSPP, NUS

Time	Programme
0830 – 0855	<b>Arrival of Keynote Speaker, Discussants, Moderators, Presenters and Participants</b>
0900 – 0910	<b>Welcome Remarks</b> Associate Professor Tan Khee Giap Co-Director, ACI-LKYSPP, NUS
0910 – 0920	<b>Opening Remarks</b> Ms Jyoti Shukla Director, Singapore Infrastructure and Urban Development Hub, The World Bank
0920 – 0940	<b>Keynote Speech 1: “World Development Report 2020: Trading for Development in the Age of Global Value Chains”</b>  <b>Keynote Speaker 1</b> Dr Claire Honore Hollweg Senior Country Economist, Macroeconomics, Trade & Investment, The World Bank
0940 – 1000	<b>Keynote Speech 2: “India as the New Manufacturing Hub for Employment Creation and Greater Economic Growth”</b>  <b>Keynote Speaker 2</b> Professor Ajit Mishra Director, Institute of Economic Growth, India
1000 – 1015	<b>Question &amp; Answer</b>  <b>Moderator:</b> Associate Professor Tan Khee Giap Co-Director, ACI-LKYSPP, NUS
1015 – 1030	<b>Coffee/Tea Break</b>
1030 – 1205	<b>Session 1: Sub-national Economic Competitiveness and Quality-Adjusted Labour Productivity of Greater China Economies</b>
1030 – 1035	<b>Moderator:</b> Mr Tan Kway Guan

Time	Programme
1035 – 1050	<p>Research Assistant, ACI-LKYSPP, NUS</p> <p><b>Session 1a: 2019 Annual Update of ACI’s Competitiveness Ranking and Simulation Studies on Greater China Economies</b></p> <p><b>Presenters:</b></p> <ul style="list-style-type: none"> <li>• Dr Zhang Xuyao Research Fellow and Deputy Director (Research), ACI-LKYSPP, NUS</li> <li>• Mr Mao Ke Research Assistant, ACI-LKYSPP, NUS</li> </ul>
1050 – 1105	<p><b>Session 1b: Quality-Adjusted Labour Productivity of Mainland China Economies</b></p> <p><b>Presenters:</b></p> <ul style="list-style-type: none"> <li>• Dr Zhang Xuyao Research Fellow and Deputy Director (Research), ACI-LKYSPP, NUS</li> <li>• Mr Mao Ke Research Assistant, ACI-LKYSPP, NUS</li> </ul>
1105 – 1120	<p><b>Discussant 1 for Sessions 1a &amp; 1b:</b> Dr Mark Roberts Senior Urban Economist, Social, Urban, Rural and Resilience Global Practice, The World Bank</p>
1120 – 1135	<p><b>Discussant 2 for Sessions 1a &amp; 1b:</b> Dr Wang Huitong Research Fellow, Institute for Finance and Economics Research, Central University of Finance and Economics, People’s Republic of China</p>
1135 – 1150	<p><b>Discussant 3 for Session 1a:</b> Dr Wang Hongxia Senior Researcher, Shanghai Academy of Social Sciences, People’s Republic of China</p>
1150 – 1205	<p><b>Question &amp; Answer</b></p>
1205 – 1235	<p><b>Forum Luncheon Talk: “Challenges faced by Small and Medium-sized Enterprises in a Growing Environment of Anti-Globalization and Protectionism”</b></p> <p><b>Distinguished Luncheon Speaker:</b> Mr Henry Kwek Member of Parliament &amp; Member, Government Parliamentary Committee for Trade and Finance, Republic of Singapore</p>
1235 – 1250	<p><b>Question and Answer</b></p> <p><b>Moderator</b> Associate Professor Tan Khee Giap Co-Director, ACI-LKYSPP, NUS</p>
1250 – 1400	<p><b>Lunch</b></p>
1400 – 1410	<p><b>Remarks by</b> Professor Khong Yuen Foong Vice Dean (Research) &amp; Li Ka Shing Professor in Political Science, LKYSPP, NUS</p>
1410 – 1420	<p><b>Ceremony of Cheque Donation from State Government of Andhra Pradesh, India, to LKYSPP, represented by Mr LV Subrahmanyam, IAS, Chief Secretary, State Government of Andhra Pradesh, India, and Professor Khong Yuen Foong, Vice Dean (Research), LKYSPP, NUS</b></p>

Time	Programme
1420 – 1440	<p><b>Speech by Guest of Honour: “Investment Promotion and Opportunities for State of Andhra Pradesh, India: Best State in India before 2029”</b></p> <p><b>Guest of Honour:</b> Mr LV Subrahmanyam, IAS Chief Secretary, State Government of Andhra Pradesh, India</p>
1440 – 1455	<p><b>Question &amp; Answer</b></p> <p><b>Moderator:</b> Professor Khong Yuen Foong Vice Dean (Research) &amp; Li Ka Shing Professor in Political Science, LKYSPP, NUS</p>
1455 – 1615	<p><b>Session 2: Sub-national Economic Competitiveness and Quality-Adjusted Labour Productivity of India</b></p>
1455 – 1500	<p><b>Moderator:</b> Ms Doris Liew Wan Yin Research Assistant, ACI-LKYSPP, NUS</p>
1500 – 1515	<p><b>Session 2a: 2019 Annual Update of ACI’s Competitiveness Ranking and Simulation Studies on India’s Sub-national Economies</b></p> <p><b>Presenters:</b></p> <ul style="list-style-type: none"> <li>• Ms Sumedha Gupta Research Assistant, ACI-LKYSPP, NUS</li> <li>• Ms Aishwarya Narayanan Research Assistant, ACI-LKYSPP, NUS</li> <li>• Mr Vardaan Chawla Research Assistant, ACI-LKYSPP, NUS</li> </ul>
1515 – 1530	<p><b>Session 2b: Quality-Adjusted Labour Productivity of India Sub-National Economies</b></p> <p><b>Presenters:</b></p> <ul style="list-style-type: none"> <li>• Ms Sumedha Gupta Research Assistant, ACI-LKYSPP, NUS</li> <li>• Dr Zhang Xuyao Research Fellow and Deputy Director (Research), ACI-LKYSPP, NUS</li> </ul>
1530 – 1545	<p><b>Discussant 1 for Sessions 2a &amp; 2b:</b> Dr Manoj Panda RBI Chair Professor, Institute of Economic Growth, India</p>
1545 – 1600	<p><b>Discussant 2 for Sessions 2a &amp; 2b:</b> Professor Lei Xinjun Senior Researcher, Shanghai Academy of Social Sciences, People’s Republic of China</p>
1600 – 1615	<p><b>Question &amp; Answer</b></p>
1615 – 1630	<p><b>Coffee/Tea Break</b></p>
1630 – 1735	<p><b>Session 3: 2019 ACI-Shanghai Academy of Social Sciences Greater China Liveable Cities (ACI-SASS GCLC) Index: Ranking and Simulation Analysis</b></p>
1645 – 1650	<p><b>Moderator:</b> Mr Mao Ke Research Assistant, ACI-LKYSPP, NUS</p>

Time	Programme
1650 – 1705	<p><b>Presenters:</b></p> <ul style="list-style-type: none"> <li>• Professor Shen Kaiyan Director, Institute of Economics, Shanghai Academy of Social Sciences, People’s Republic of China</li> <li>• Dr Zhang Xuyao Research Fellow and Deputy Director (Research), ACI-LKYSPP, NUS</li> <li>• Associate Professor Tan Khee Giap Co-Director, ACI-LKYSPP, NUS</li> </ul> <p><b>Discussant 1:</b> Dr Lu Hsin-Chang Associate Professor, College of Management, National Taiwan University, Taiwan, ROC</p>
1705 – 1720	<p><b>Discussant 2:</b> Dr Wang Huitong Research Fellow, Institute for Finance and Economics Research, Central University of Finance and Economics, People’s Republic of China</p>
1720 – 1735	<p><b>Question &amp; Answer</b></p>
1735 – 1745	<p><b>Closing Remarks and Future Research Agenda</b> Associate Professor Tan Khee Giap Co-Director, ACI-LKYSPP, NUS</p>
<b>END OF SEMINAR 2</b>	

# Profiles of Speakers, Discussants and Moderators

(in alphabetical order)

**Lanka Venkata SUBRAHMANYAM**

**PRESENT POSITION:** Chief Secretary to Government of Andhra Pradesh

## **CAREER PROFILE:**

A member of the Indian Administrative Service (IAS), since 1983 with wide ranging experience in development administration. Worked in various positions in district administration in districts of Nalgonda (AC-UT), Warangal (Sub Collector) and Vizianagaram (PO, ITDA). Held charge of Mahaboobnagar district as Collector and District Magistrate for more than 2 years. Innovated in implementation of welfare programmes and restoring paradigms for good governance. Further, worked for over three years as the Chief Executive of the Hyderabad Metro Water Supply and Sewerage Board, one of the largest water and sanitation utilities in India. Dealt with Infrastructure challenges in organizations like A.P. State Housing Corporation, Sports Authority of Andhra Pradesh, A.P. Industrial Infrastructure Corporation and Infrastructure Corporation of A.P., Worked as Principal Secretary, Health and Family Welfare and was associated as Team Leader in implementation of Health Sector reforms. Brought significant changes in convergence of state efforts in reform agenda. Further, provided leadership to state efforts in managing disease and epidemic control including scare of 'swine flu'. Held charge of Medical Education and administration of all Teaching Hospitals, Health & Family Welfare matters of the A.P. State. Worked as E.O., TTD for two years and initiated programmes for spread of awareness on Ancient Indian Culture and spirituality.

## **EDUCATION PROFILE:**

1994 Masters of Science in National Development and Project Planning from University of Bradford, United Kingdom.

1981 Masters of Arts in Political Science from Bangalore University winning Sri Jaya Chamarajendra Wodeyar Gold Medal for highest marks.

1979 Bachelor of Arts from Sri Satya Sai College of Arts, Science and Commerce College affiliated to Bangalore University.

Obtained a 'Diploma in Satya Sai Education' in 1980, After attending three month long summer course on Indian culture and spirituality."

## **Senior Positions held:**

1. Collector, Mahaboobnagar
2. MD, Urban Development, A.P., State Housing Corporation Limited.
3. MD, Hyderabad Metro Water and Sewerage Board.
4. VC&MD, Sports Authority of Andhra Pradesh.
5. Vice-Chairman and Managing Director, INCAP.
6. Principal Secretary, Investment & Infrastructure Department.
7. Principal Secretary, Health Medical & Family Welfare, Department.
8. Principal Secretary, Finance Department.
9. Executive Officer, Tirumala Tirupati Devasthanams.
10. Special Chief Secretary to Govt., Health Medical & Family Welfare Department.
11. Special Chief Secretary, (Youth Advancement & Sports), YAT & C Department
12. Presently - Chief Secretary to Government, Andhra Pradesh

兰卡·文卡塔·苏布拉马尼亚姆

**现职:** 安得拉邦政府秘书长。

## **职务简介:**

印度行政服务局 (IAS) 的成员, 自 1983 年以来在发展管理方面拥有广泛的经验。曾在纳尔贡达 (助理署长), 瓦朗加尔 (副署长) 和维济亚讷格勒姆 (综合部落发展署项主管) 的地方行政部门担任过各类职务。在马赫布卜讷格尔区任署长和区行政长官超过 2 年。在福利计划的实践中进行创新并恢复了优良治理的模式。此外, 还在印度最大的供水和卫生设施公司之一的海德拉巴地下供水和污水处理委员会担任首席执行官超过三年。他在安得拉邦房产公司, 安得拉邦体育管理局, 安得拉邦工业基础设施公司和安得拉邦基础设施公司等组织中处理基础建设挑战。担任过卫生医疗及家庭福利部首席秘书和卫生部门改革实行小组负责人。为改革议程中的国家趋同的工作带来了重大改变。此外, 还为国家在管理疾病和控制流行病方面的工作提供了指导, 其中包括应对“猪流感”的恐慌。负责医学教育和管理安得拉邦的所有教学医院, 健康和家庭福利事宜。曾担任蒂鲁帕蒂蒂鲁马拉寺信托管理执行官两年, 并发起了古印度文化和灵性传播项目。

## 教育简介:

1994年 英国布拉德福德大学国家发展和项目规划理科硕士。

1981年 加罗尔大学政治学文科硕士，以最高分获得斯里·贾亚·查玛拉詹德拉·沃德亚金奖。

1979年 班加罗尔大学附属斯里萨提亚赛文理与商业学院文科学士。

在参加了为期三个月的关于印度文化和灵性的暑期课程之后，于1980年获得了“萨蒂亚教育文凭”。

## 高级职位:

1. 署长，马赫布卜纳格尔
2. 董事总经理，城市发展，安得拉邦房产有限公司。
3. 董事总经理，海德拉巴地下供水和污水处理委员会。
4. 副董事长、董事总经理，安得拉邦体育管理局。
5. 副董事长、董事总经理，安得拉邦基础设施有限公司。
6. 首席秘书，投资与基础设施部。
7. 首席秘书，卫生医疗及家庭福利部。
8. 首席秘书，财政部。
9. 执行官，蒂鲁帕蒂蒂鲁马拉寺信托管理。
10. 政府特别秘书长，卫生医疗及家庭福利署。
11. 政府特别秘书长，青年促进及体育部。
12. 现职 - 安得拉邦政府秘书长。

## Tilak ABEYSINGHE

Tilak Abeysinghe has been with the Department of Economics at the National University of Singapore since 1988. He also served the Department as a Visiting Professor before he retired in July 2019. He holds an Adjunct position in the Asia Competitiveness Institute, NUS. In July 2017 he took up a new offer as the Research Director of the Gamani Corea Foundation, a private Foundation, in Colombo. He served as the Director of the Singapore Centre for Applied and Policy Economics and an Executive Committee member of the Department of Economics. He held other important administrative responsibilities at NUS such as Deputy/Acting Headship, Director of Economics Graduate Program and member of the Faculty Tenure and Promotion Committee. He was also a visiting professor at Kyoto University and Peradeniya University. He coordinated the keenly awaited monthly newspaper column in The Straits Times, "Ask NUS economists". He obtained his PhD in Economics/Econometrics from the University of Manitoba and worked for the United States Agency for International Development (Colombo) before joining NUS in 1988. His research interests lie in a range of theoretical and applied econometric topics that include the Singapore economy, housing affordability, stress and cancer and quantitative health research. He has published in various reputable international journals like Journal of Econometrics and NBER paper series. A major line of his research has been the econometric modelling of the Singapore economy, forecasting and policy analyses. As the coordinator of the Econometric Studies Unit since 1992 he has built a number of econometric models, one of which appears in the Routledge book, The Singapore Economy: An Econometric Perspective. Policy analyses based on these models have appeared in news media frequently. He has supervised a large number of PhD, Masters and Honours students.

## 蒂拉克·阿贝辛哈

蒂拉克·阿贝辛哈从1988年起在新加坡国立大学经济系任职。在2019年7月退休前，他曾任经济系客座教授。他目前在新加坡国立大学亚洲竞争力研究所担任客座职务。2017年7月，他担任了位于科伦坡的私有基金会，伽摩尼·科里亚基金会的研究主任。他曾担任国大新加坡应用与政策经济中心主任及经济系执行委员会委员。他还在新加坡国立大学担任过其他重要的行政职务，如副/代理校长、经济学研究生项目主任、教师任期及晋升委员会委员。他也是京都大学和佩拉德尼亚大学的客座教授。他协调了备受期待的《海峡时报》月刊专栏《询问国大经济学家》。在1988年加入新加坡国立大学之前，他在曼尼托巴大学获得经济学/计量经济学博士学位，并在美国国际开发署(科伦坡)工作过。他的研究兴趣包括新加坡经济、住房负担能力、压力和癌症及定量健康研究等一系列理论和应用计量经济学课题。他曾在许多著名的国际期刊上发表论文，如《计量经济学杂志》和美国国家经济研究局系列报告。他的研究方向主线之一是新加坡经济的计量模型、预测和政策分析。自1992年任计量经济学研究部门主任以来，他建立了许多计量经济学模型，其中之一收录于劳特利奇出版的《新加坡经济:计量经济学视角》一书中。基于这些模型的政策分析经常出现在新闻媒体上。他还指导了大量的博士生、硕士研究生和本科荣誉学生。

## Vardaan CHAWLA

Vardaan Chawla is working as a Graduate Research Assistant at Asia Competitiveness Institute (ACI) at Lee Kuan Yew School of Public Policy, National University of Singapore (NUS). He graduated with an Honours Degree in Economics from the University of Delhi. Vardaan has professional experience working as an Analyst with KPMG and as a Fellow with Teach For India. He is currently pursuing his Master of Social Science in Applied Economics from NUS. At ACI, he is currently working on the Annual



Competiveness Analysis, as well as the calculation of Quality Adjusted Labour Inputs, for Indian sub-national economies. His research interests include Public Policy, Development Economics and Education Policy.

### 瓦丹·查瓦拉

瓦丹·查瓦拉是新加坡国立大学李光耀公共政策学院亚洲竞争力研究所的研究助理。他毕业于德里大学，获得经济学荣誉学位。瓦丹拥有毕马威会计师事务所分析师和在印度教学的专业工作经验。他目前正在攻读新加坡国立大学应用经济学专业社会科学硕士学位。在亚洲竞争力研究所，他目前的工作是印度次国家经济体的年度竞争力分析以及质量调整劳动生产率的计算。他的研究兴趣包括公共政策，发展经济学和教育政策。

### Sumedha GUPTA

Sumedha is currently working as a Research Assistant at Asia Competitiveness Institute at the Lee Kuan Yew School of Public Policy, National University of Singapore (NUS). She graduated from NUS with Master of Social Sciences (Applied Economics) degree and was among the top five percent students in Public Finance and Urban Economics. Prior to this, she had graduated with a First Class Honours degree in Commerce from Shri Ram College of Commerce, New Delhi. She is currently the coordinator for the Annual Competitiveness Analysis of 36 Indian Sub-National Economies and the Quality Adjusted Labour Productivity Study for the States and Federal Territories of India. She is also involved with the project Productivity Tracking and Efficiency Monitoring of Micro, Small and Medium Enterprises in Uttarakhand. Her research interests include public policy and development economics.

### 苏米达·古普塔

苏米达现任新加坡国立大学李光耀公共政策学院亚洲竞争力研究所的研究助理。她毕业于新加坡国立大学应用经济学专业，获得社会科学硕士学位，并且是财政学和城市经济学两门课程的成绩前百分之五的学生。在此之前，她毕业于新德里斯里拉姆商业学院的商业专业，获一等荣誉学士学位。苏米达现在负责印度 36 个次国家经济体年度竞争力分析项目以及印度各州和联邦的质量调整劳动生产率研究项目。她还参与了北阿坎德邦微型，中小型企业的生产力追踪和效率监测项目。她的研究兴趣包括公共政策和发展经济学。

### Claire Honore HOLLWEG

Claire H. Hollweg is the Senior Country Economist for the World Bank in Cambodia working on growth and fiscal policy. She joined the World Bank in 2011 specializing in international trade. Her research interests include development economics, with a focus on the nexus between trade, labor markets, servicification of manufacturing, and upgrading in global value chains. She received her PhD and MA in economics from the University of Adelaide. Before studying economics, she worked as a journalist in newspaper and radio, and she holds a BS from the University of Colorado at Boulder. She also has worked with the government of South Australia and the Pacific Economic Cooperation Council in Singapore.

### 克莱尔·欧诺瑞·霍尔韦格

克莱尔是世界银行在柬埔寨负责增长和财政政策的高级国家经济学家。她于 2011 年加入世界银行，专门从事国际贸易方面的事务。她的研究兴趣包括发展经济学，重点关注贸易、劳动力市场、制造业服务化和全球价值链升级之间的关系。她在阿德莱德大学获得经济学博士学位与硕士学位。在学习经济学之前，她曾在报纸和广播行业任记者，并拥有科罗拉多大学博尔德分校的学士学位。她还曾与南澳大利亚州政府和新加坡太平洋经济合作委员会合作。

### KHONG Yuen Foong

KHONG Yuen Foong is Li Ka Shing Professor of Political Science at the Lee Kuan Yew School of Public Policy, National University of Singapore. Prior to joining the LKYSPP in 2015, he was Professor of International Relations and a Professorial Fellow of Nuffield College, Oxford University. He received his PhD from Harvard University in 1987 and was Assistant/Associate Professor at Harvard University's Government Department from 1987-1994. His PhD dissertation was awarded Harvard's Sumner Prize for the best dissertation on war and peace in 1988. His book, *Analogies at War: Korea, Munich, Dien Bien Phu, and the Vietnam Decisions of 1965* (Princeton, 1992; sixth printing 2006) was co-winner of the American Political Science Associations Political Psychology Book Award (1994). He also received the Erik Erikson Award for distinguished early career contribution to political psychology in 1996. He has held grants from the Social Science Research Council (New York)-MacArthur Foundation Program on Security in a Changing World, the United States Institute of Peace, and the (U.K.) Leverhulme Trust. A former Vice-President of the International Studies Association (U.S.A), 1999-2000, he has also served on the Social Science Research Council-MacArthur Foundation Committee on International Peace and Security. His research interests include United States foreign policy, the international relations of the Asia Pacific, and cognitive approaches to international relations. Recent publications include "Power as Prestige in World Politics," *International Affairs* (January 2019), "The American Tributary System," *The Chinese Journal of International Politics* (2013) and "The United States Response to China's Rise," *International Security*, (2013/2014).

### 邝云峰

邝云峰是新加坡国立大学李光耀公共政策学院李嘉诚政治学教授。他于 2015 年加入李光耀公共政策学院，在此之前，他是牛津大学纳菲尔德学院的国际关系教授和教授研究员。他于 1987 年获得哈佛大学博士学位，在 1987 年至 1994 年担任哈佛大学政府系助理/副教授。他的博士论文在 1988 年被评为战争与和平方面的最佳论文获得了哈佛大学的萨姆纳奖。他的著作《战争类比：朝鲜，慕尼黑，奠边府和 1965 年的越南决策》（普林斯顿，1992 年；2006 年第六次印刷）是美国政治科学协会政治心理学图书奖（1994 年）的联合获奖作品。他还在 1996 年因其在政治心理学方面的杰出的早期职

业贡献而获得了埃里克森奖。他曾获得麦克阿瑟基金会社会科学研究理事会（纽约）的多变世界的安全项目，美国和平研究所和英国利华休姆信托的赞助。在 1999 年至 2000 年，他曾担任美国国际研究协会的副主席，他还曾在麦克阿瑟基金会国际和平与安全委员会社会科学研究理事会任职。他的研究兴趣包括美国的外交政策，亚太地区的国际关系以及国际关系的认知方法。最近的出版物包括“将权利化作世界政治中的威望”，国际事务（2019 年 1 月），“美国的纳贡体系”，中国国际政治学报（2013）和“美国对中国崛起的反应”，国际安全，（2013/2014）。

### **Henry KWEK**

A member of the Singapore Parliament, Henry is a former management consultant and economic planner. He previously worked in the North American office of McKinsey & Co. where he worked with senior management of global firms from the energy, medical devices, construction, and logistics to develop strategies and manage organisational change. Before that, he was with the Singapore Economic Development Board (EDB) where he promoted and evaluated investment projects for Singapore in the IT and chemical sectors. Henry is currently the Vice-Chairperson of PAP.SG, PAP's political wing for seniors. As a Singapore parliamentarian, he is part of the Government Parliamentary Committees for Defence and Foreign Affairs; Finance and Trade and Industry; as well as Culture, Community and Youth. He is a member of the Ministry of Defence's Accord Committee, which maintains public support for national service. Concurrently, Henry sits on the Board of Advisers to The Federation of Merchants' Associations, Singapore's Shipbuilding and Marine Engineering Employees' Union, People's Association Youth Movement, Nanyang Confucius Association, and Siong Leng Musical Association. Henry actively contributes to public discussions on economic matters such as Asia-Pacific's economic integration, Singapore's economic transformation, and promoting Singapore entrepreneurship. Beyond the economic sphere, he is passionate about seniors-related policy, traditional Chinese culture, and social work. Henry graduated from Stanford University with an MSc Management Science and Engineering, as well as a BA in Economics.

### **郭献川**

郭献川为现任新加坡国会议员。从政前曾于专业管理顾问公司，美国麦肯锡顾问公司任职管理顾问，帮助国际公司的高级管理阶层制定策略与企业重组，领域横跨能源、医疗设备、建筑、物流等领域。而在加入麦肯锡顾问公司前，在新加坡经济发展局任职，在资讯科技与化学领域从事经济规划。同时，郭献川目前是人民行动党年长组的副主席。在国会方面，郭献川兼任三个国会政府委员会，分别为：国防及外交委员会，财政及贸工委员会，与文化、社区及青年委员会。在国防部方面，他是社区联系咨询委员会的委员。除此以外，他也担任新加坡全国商联总会（FMA），造船与海事工程雇员联合会（SMEEU），人协青年运动（PAYM），湘灵音乐社，和新加坡南洋孔教会的顾问。郭献川时常针对经济课题，如亚太区域经济融合、新加坡的经济转型及支持本地创业者等课题，提出意见。除了经济课题以外，他也常针对社会老龄化，建立义工文化与提倡传统文化等课题提出建议。郭献川拥有美国史坦福大学管理科学工程硕士学位，同时也毕业于该大学经济系。

### **LEI Xinjun**

Lei Xinjun obtained his PhD in Economics, now is Associate Research Professor and MA Supervisor. His research interests include industrial economy, enterprise development, small and medium enterprises and brand economy. Professor Lei has finished many provincial level and ministerial-level research projects, and published many academic papers. His representative publications include The Role of Government in the Japanese Industrial Development (Japanese Version) and Comparative Study of Urban Industrial Transformation Experience of Yangpu District of Shanghai and Kawasaki City, Japan, etc.

### **雷新军**

经济学博士，副研究员，硕士导师。主要研究方向为产业经济、企业发展、中小企业、品牌经济。主持完成多项省部级以上科研项目，发表学术论文多篇，代表作为《日本产业发展过程中的政府作用》(日文版)、《城市产业转型比较研究：上海市杨浦区与日本川崎市的产业转型经验》等。

### **Doris LIEW Wan Yin**

Doris Liew is a Research Assistant at the Asia Competitiveness Institute, Lee Kuan Yew School of Public Policy, National University of Singapore. Doris graduated from Nanyang Technological University with a Bachelor of Arts (Honours) in Economics with Distinction and a minor in Public Policy and Global Affairs. She is currently the project coordinator for Annual Competitiveness Rankings and Simulation Studies for Indonesia, Quality-Adjusted Labour Productivity for Indonesia Sub-national Economies and the Indonesia Special Economic Zone Project. She is also involved in the Annual Competitiveness Analysis and Development for ASEAN-10 Economies as well as Quality-Adjusted Labour Productivity for ASEAN Economies. Her research interests include ASEAN economics, environmental economics, international trade and development economics.

### **刘婉吟**

刘婉吟是新加坡国立大学李光耀公共政策学院亚洲竞争力研究所的研究助理。刘婉吟毕业于南洋理工大学，主修经济学，获文学学士学位荣誉学位，并辅修公共政策与全球事务。她目前负责印度尼西亚的竞争力排名和模拟，以及印度尼西亚经济特区研究项目。她同时也积极参与东盟十国经济体的年度竞争力分析与发展，以及质量调整劳动生产率。她的研究兴趣包括东盟经济学、环境经济学、国际贸易和发展经济学。

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## **卢信昌**

卢信昌（芝加哥大学经济学博士），国立台湾大学管理学院商业经济学副教授和银行与金融研究中心研究员。卢教授是台湾竞争力论坛的创始会员与理事，该论坛致力于研究台湾经济所面临的挫折和推动台湾经济的可行解决方案。卢教授的教学包括研究所和 EMBA 项目的产业组织，人力资源和知识经济分析，全球投资和贸易以及计量经济学等课程。他在关于劳动力市场表现，台湾外商直接投资和国际贸易问题上有 30 多篇论文研究并撰写过三本书。他曾于 2004 年和 2005 年参与台湾卓越服务奖的评审工作。他在 2005 年至 2007 年连续三年，调查台湾服务业发展和出版统计年鉴的团队负责人。他曾参与亚太经合组织下的台湾项目：APEC 中小企业因应全球金融危机研讨会，担任主题演讲人；和对包括非洲塞内加尔在内的一些发展中国家，提供专业的经贸政策制定建议。他是国家政策基金会的成员，该基金会目前是政府咨询的智库。政府机构，保险和金融公司聘请他担任咨询顾问和培训讲师。他参与了 90 年代对航空运输的放松管制和银行业改革，并且仍然在多个公共事务与政策委员会任职，包括保险发展、食品安全、公用事业，有线电视和电信网商。多年来，他一直积极倡导消费者权益和保护。他于 2004 年至 2006 年担任台湾消费者杂志的出版人，自 2002 年以来一直担任消费者基金会的董事会成员。在 1997 年的亚洲金融危机期间，他被国际消费者协会邀请参加论坛，以缓解金融恐慌的适当作为与政策需要。他还与日本消费者金融同盟和韩国工会密切合作，以解决东北亚国家消费者的个人债务和信贷危机等问题。

## **MAO Ke**

Mao Ke is a research assistant at Asia Competitiveness Institute, Lee Kuan Yew School of Public Policy, National University of Singapore. He graduated from National University of Singapore with Bachelor of Business Administration with Honours (Distinction) and specialised in Finance and Operations & Supply Chain Management. At ACI, he works as the coordinator of the project on Annual Competitiveness Analysis for 34 Greater China Economies. He is deeply involved in the project: Independent Review and Efficiency Monitoring (IREM) of Real Time Outcome Monitoring System (ROMS) for the Government of Andhra Pradesh (GoAP), India, providing data insights for government authorities. He is also actively involved in several other projects such as Welfare Spending and Fiscal Sustainability Analysis and Cost of living and Wages for Expatriates and Average Residents for 105 Cities. His research interests cover the fields of financial economics, macroeconomic policy and development economics.

## **毛可**

毛可现任新加坡国立大学李光耀公共政策学院亚洲竞争力研究所研究助理。他以工商管理荣誉特优学位毕业于新加坡国立大学并专修于金融以及运营与供应链管理专业。他在亚洲竞争力研究所中担任大中华圈 34 个经济体年度竞争力分析项目的负责人。他深入地参与了印度安得拉邦政府实时监测系统的独立审查和效率监测项目，为政府当局提供数据分析及见解。他同时积极参与了其他的研究项目，包括福利支出与财政可持续性的分析和 105 个城市的外籍人士和平均居民的生活成本和工资。他的研究兴趣囊括金融经济学、宏观经济政策和发展经济学。

## **Ajit MISHRA**

Ajit Mishra is the current Director of the Institute of Economic Growth, Delhi, India. After completing his PhD from the Delhi School of Economics in 1994, he has been actively engaged in research and lecturing over the last twenty-five years in several areas of economics: fooneconomic development, public economics, and economic theory. Prior to joining the Institute, he taught at the University of Bath, UK. Besides Bath, he has taught at various institutions including University of Dundee, UK; Scottish Graduate Programme, University of Edinburgh, UK; Delhi School of Economics, Indira Gandhi Institute of Development Research, and Ashoka University, India. He has made significant contributions in the field of development economics with key areas being the study of corruption and governance; incentives and public provision; inequality; vulnerability and poverty. Besides several papers in international refereed journals, he has published two books- Economics of Corruption (Oxford University Press, 2005)

and Markets, Governance and Institutions in the Process of Economic Development (eds. Oxford University Press, 2018, with T Ray). He is an Associate Editor of a leading journal (Journal of Economic Behavior and Organization, Elsevier) and has been a Guest Editor of various journals for their special issues. Both nationally and internationally, he has given research seminars and public lectures in more than fifty odd departments. He has also contributed to Handbooks (Edward Elgar, Princeton University Press) and Companions (Oxford University) on topics related to corruption and inequality. He has been an academic visitor in several leading universities including Boston University, Cornell University, Louisiana State University, Loyola (USA), Monash University (Australia), University of Bergen, Christian Michelsen Institute (Norway), Hebrew University (Israel), WIDER (Finland), and Stellenbosch University (South Africa). He has made contributions in non-academic policy and consultancy spheres too. He has been a consultant to the UNDP and the World Bank and a member of various policy research centres.

### **阿吉特·米什拉**

阿吉特·米什拉现任印度德里经济增长研究所所长。在 1994 年从德里经济学院获得博士学位后，他在过去的二十五年中积极参与经济发展，公共经济学和经济理论等几个领域的研究和教学。在加入该研究所之前，他曾在英国巴斯大学任教。除了巴斯大学之外，他还曾在多家机构任教，包括英国邓迪大学；英国爱丁堡大学的苏格兰研究生课程；德里经济学院；英迪拉·甘地发展研究所和印度阿育王大学。他在发展经济学领域做出了重大贡献，其关键领域是贪污与治理研究、激励和公共供给、不平等、易损性和贫困。除了在国际期刊上发表的多篇论文外，他还出版了两本书 – 《贪污经济学》（牛津大学出版社，2005 年）和《经济发展过程中的市场，治理与制度》（牛津大学出版社，2018 年，与 T Ray 共同出版）。他是前沿期刊（经济行为和组织期刊，爱思唯尔）的副主编，并为多个期刊的特刊担任客座编辑。无论是在国内还是国际上，他在五十多个部门举办过研究研讨会和公开讲座。他还为有关贪污和不平等的主题手册（爱德华埃尔加，普林斯顿大学出版社）和联盟（牛津大学）做出了贡献。他曾在美国波士顿大学、康奈尔大学、路易斯安那州立大学洛约拉、澳大利亚蒙纳士大学、挪威卑尔根大学、克里斯蒂安·米切尔森学院，以色列希伯来大学、芬兰联合国世界发展经济学研究院和南非斯坦陵布什大学担任访问学者。他也在非学术政策和咨询领域做出了贡献。他是开发计划署和世界银行的顾问，也是多个政策研究中心的成员。

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### **艾什瓦尔雅·纳拉亚南**

艾什瓦尔雅·纳拉亚南是新加坡国立大学李光耀公共政策学院亚洲竞争力研究所的研究助理。她毕业于合作国际大学，获得经济学荣誉学位。她目前正在攻读新加坡国立大学应用经济学社会科学硕士学位。在亚洲竞争力研究所，她目前的工作是印度次国家经济体的年度竞争力分析以及质量调整劳动生产率的计算。她的研究兴趣包括发展经济学，公共政策，贫困和不平等问题。

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### **马努基·潘达**

马努基·潘达是德里经济增长研究所的印度储备银行讲座教授，他曾担任海德拉巴经济增长研究所所长（2012 年 11 月至 2019 年 6 月）和经济与社会研究中心主任（CESS）。他曾在孟买英迪拉·甘地研究所（IGIDR）（1992-2012）和新德里国家应用经济研究委员会（1982-92）担任过各种学术职务。他还曾在美国耶鲁大学进行了一年的博士后研究（1996-97）。他拥有印度统计研究所的经济学博士学位。潘达博士为包括世界银行、亚洲开发银行和联合国开发计划署在内的几个国际组织执行短期任务。他的研究领域包括宏观经济趋势和前景的监控和分析、可计算的一般均衡(CGE)模型和应用的发展以分析贸易和财政政策方案、建设社会核算矩阵(SAM)、不平等、贫困以及碳排放与经济增长的交互作用。

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## Mark ROBERTS

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## 马克 罗伯特

马克·罗伯特是世界银行城市、恢复力和土地全球实践的资深经济学家。在加入世界银行之前，马克是剑桥大学空间经济学讲师。马克在空间经济发展主题的权威期刊上发表了大量文章，并且是空间经济分析期刊的前联合编辑。他是“世界银行南亚地区旗舰报告”、“扩大南亚城市化”、“拉丁美洲和加勒比地区旗舰报告”、“提高拉丁美洲和加勒比地区生产性城市标准”以及即将出版的印度尼西亚城市化旗舰报告“采取行动的时间：实现印度尼西亚的城市潜力”的共同作者。他曾在欧洲、中亚、撒哈拉以南的非洲区域工作，他目前担任工作组团队的顾问，负责分析城市 and 空间发展过程。他拥有英国剑桥大学土地经济学博士学位和经济学硕士学位，以英国华威大学的经济学专业理学硕士学位。

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## Jyoti SHUKLA

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## 乔蒂 舒克拉

舒克拉女士是世界银行集团新加坡基础设施和城市中心主任。新加坡中心由来自世界银行、国际金融公司和多边投资担保机构的 200 名工作人员组成，主要侧重于通过公私部门伙伴关系改善基础设施服务和促进智慧城市发展。舒克拉女士于 1994 年加入世界银行担任青年专员，此后主要是在基础设施方面的公私伙伴关系领域担任了多个职位。她在世界银行集团最新的职务是全球水务实践主任。舒克拉女士拥有德里经济学院和普林斯顿大学伍德罗威尔逊公共和国际事务学院的硕士学位。在加入世界银行之前，她曾在普林斯顿大学担任过教职和在印度的一家开发咨询公司工作过。

## TAN Khee Giap

Tan Khee Giap is a Co-Director of the Asia Competitiveness Institute (ACI) and Associate Professor at the Lee Kuan Yew School of Public Policy, National University of Singapore. He is also the Chairman of the Singapore National Committee for Pacific

Economic Cooperation. Upon graduating with a PhD from University of East Anglia, England, in 1987 under the Overseas Research Scheme awarded by the Committee of Vice-Chancellors and Principals of the Universities of the United Kingdom. He joined the banking sector as a treasury manager and served as secretary to the Assets and Liabilities Committee for three years, there after he taught at the Department of Economics and Statistics, National University of Singapore, 1990-1993. Dr Tan joined Nanyang Technological University in 1993 and was Associate Dean, Graduate Studies Office, 2007-2009. Dr Tan has consulted extensively with the various government ministries, statutory boards and government linked companies of Singapore government including Ministry of Finance, Ministry of Trade & Industry, Ministry of Manpower, Housing & Development Board, Civil Aviation Authority of Singapore, Singapore Tourism Board, Trade Development Board, Maritime Port Authority, Ministry of Information, Culture & Arts, Economic Development Board, Ministry of National Development, Media Development Authority, Ministry of Environment and Water Resources, Singapore Design Council, Ministry of Community Development, Youth & Sports, Singapore Press Holdings, Yayasan Mendaki, StarHub, CapitaLand and Great Eastern Life. He has also served as a consultant to international agencies such as the Asian Development Bank, Asian Development Bank Institute, United Nations Industrial Development Group, World Bank Group, World Gold Council, ASEAN Secretariat, Central Policy Unit of Hong Kong, Kerzner International, Las Vegas Sands and Marina Bay Sands. Dr Tan is the lead author for more than 20 books, serving as journal editors and published widely in international refereed journals. He is the associate editor of the journal Review of Pacific Basin Financial Markets and Policies (US) and is on the editorial advisory board of the journal Competitiveness Review (UK). His current research interests include Cost of Living and Purchasing Power Index for World's 105 Cities, Global Liveable Cities Index, Ease of Doing Business Index and competitiveness analysis on sub-national economies of China, India, Indonesia and Association of South East Asian Nations. Dr Tan was Deputy President of the Singapore Economic Society, 2004. He served in the 2002 Economic Review Committee (ERC), served as Chairman of the Task Force on Portable Medical Benefits (PMB), served as the Deputy Chairman of the IPS Forum for Economic Restructuring (IFER) in 2003 and served as a member of the Resource Panel of the Government Parliamentary Committee for Transport and Government Parliamentary Committee for Finance and Trade & Industry and Government Parliamentary Committee for Defense and Foreign Affairs since 2007. Dr Tan is currently an Independent Director of the publicly listed BreadTalk Group, Boustead Singapore, TEE Land and Chengdu Rural Commercial Bank, and Senior Business Advisor to United Overseas Bank Limited, Singapore.

### 陈企业

陈博士曾被英国大学副校长委员会授予海外研究生奖学金，并于 1987 年毕业于英国东英格兰大学，获得博士学位。毕业后，他进入银行业担任财库资金经理，并任职资产与负债委员会的秘书长长达三年。此后，他在 1990 至 1993 年间任教于新加坡国立大学经济学与统计学系。陈博士于 1993 年加入新加坡南洋理工大学商学院，并在 2007 至 2009 年间担任大学研究生院副院长。目前，他任职于新加坡国立大学李光耀公共政策学院，担任亚洲竞争力研究所所长。陈博士也是新加坡太平洋经济合作理事会主席。陈博士广泛地为各政府部门、法定机构及新加坡政府关联企业提供咨询和研讨关于金融、财政、贸易、旅游业、公共住屋、人力资源、电信、宜居城市、创意产业、媒体、社区发展、机场及海港的运作等领域的相关政策及措施。这些部门、机构和企业包括财政部，贸工部，人力部，建屋发展局，新加坡民航局，新加坡旅游局，贸易发展局，海事港务局，新闻、通讯及艺术部，新加坡经济发展局，国家发展部，媒体发展局，环境和水利部，新加坡设计理事会，社会发展、青年及体育部，新加坡报业控股，回教社会发展理事会、星和电信、嘉德置地和大东方人寿等。他还曾为亚洲开发银行，亚洲开发银行研究院，联合国工业发展组，世界黄金协会，东盟秘书处，香港中央政策组，科兹纳国际，拉斯维加斯金沙和滨海湾金沙酒店等国际机构和部门担任顾问。陈博士已撰写了超过二十本书，他是美国《太平洋地区金融市场和政策评论》期刊的副主编，也是英国《竞争力研究期刊》的编辑咨询委员。他目前的研究领域包括世界 105 个城市生活成本和购买力指数，全球宜居城市指数，营商便利指数，和中国、印度、印度尼西亚次国家经济体和东盟十国的竞争力分析。陈博士曾于 2004 年担任新加坡经济学会副主席。他在 2002 年的经济审查委员会 (ERC) 担任便携式医疗福利 (PMB) 工作组主席，在 2003 年担任政策研究学院经济重组论坛 (IFER) 副主席，并且自 2007 年起担任国会运输委员会、国会财政及贸工委员会与国会国防及外交委员会的顾问小组成员。陈博士广泛地指导和引领了多家跨国公司的公开上市，尤其是来自中国大陆和台湾的公司。他目前也是新加坡上市公司面包物语、宝德新加坡、腾地有限公司与成都农商银行的独立董事，并担任新加坡大华银行的资深企业顾问。

### TAN Kway Guan

Tan Kway Guan is a Research Assistant at the Asia Competitiveness Institute, Lee Kuan Yew School of Public Policy, National University of Singapore. Kway Guan graduated from the University of Western Australia with a Master of Economics and a Bachelor of Commerce, double major in Economics. He is currently the project coordinator for the Annual Competitiveness Analysis and Development Strategies for ASEAN 10 Economies, Quality-Adjusted Labour Productivity for ASEAN Economies. He is also assisting in the Annual Indices for Purchasing Power, Cost of living and Wages for Expatriates and Average Residents for 105 Cities. His research interests include development economics and energy economics.

### 陈科源

陈科源现任新加坡国立大学李光耀公共政策学院亚洲竞争力研究所研究助理。他毕业于西澳大学，获得经济学硕士学位以及经济学双专业的商学士学位。他目前负责东盟 10 国年度竞争力分析和策略，以及东盟国家质量调整劳动生产率的研究项目。他也同时参与 105 个城市年度外籍人士和普通公民的生活成本、购买力和工资指数的研究以及东盟社会福利支出与政府预算可持续性关系的项目。他的研究领域包括发展经济学和能源经济学。

### **WANG Hongxia**

Ms Wang Hongxia is a Professor at the Institute of Economics of Shanghai Academy of Social Sciences. She is also the chief professor of Metropolis Spatial Development Strategy & Policy Research Innovation Think Tank. She got her PhD in Economics from Fudan University in 2004. Her research fields include population urbanization, industry economy, urban and regional development. As a leader, she has finished many research programs on population urbanization, immigrants and social segregation in Mega-cities, regional development and integration, and aging China etc. Some of which are sponsored by national government fund. Now she is hosting the national key research project on Immigrants' social segregation during the process of Population Diversification in Big Cities. She is also a very important consultant of Shanghai municipal government, Zhejiang, Jiangsu, Anhui, Shandong, Hebei, Yunan, Guizhou, Qinhai, Xinjiang and Tibet, mostly consulted project focusing on the national social and economic development strategy, silk road development strategy and Yangtze Delta Area development, regional industry Plan, and so on.

### **王红霞**

王红霞，女，2004年毕业于复旦大学获经济学博士学位，目前系上海社会科学院经济研究所研究员，上海社会科学院“大都市空间发展战略与政策研究”创新智库团队首席专家。主要研究领域：人口城市化、城市与区域产业经济发展。主持完成国家哲学社会科学基金项目、上海市决策咨询项目多项，并参与完成多项国家、省部级重大课题研究，目前主持在研国家自然科学基金重大项目《老龄社会的城乡和区域经济特征》子课题，国家哲学社会科学基金重点项目《大城市人口多元化进程中外来人口的社会隔离研究》以及多项省市级课题。2004年以来出版专著4部，在《中国人口科学》、《社会科学》、《经济科学》、《财经研究》等CSSCI期刊发表论文20多篇，著作、论文、研究报告多次获省部级奖。

### **WANG Huitong**

Professor Huitong Wang is the director of Institutes of Environmental Economics and a professor in the Institute for Finance and Economics Research at Central University of Finance and Economics. She is the member of Beijing Haidian District Committee of the Chinese People's Political Consultative Conference. Prof Wang held the deputy director of the Research Office at Beijing Municipal Bureau of Financial Work from 2011 to 2012. Prof Wang focus on finance, environmental economics, regional economic theory and policy. She has a PhD degree in finance from National Academy of Economic Strategy of Chinese Academy of Social Sciences. She also has a bachelor's degree in Industrial analysis from Guilin University of Technology, a master's degree in finance from Chinese Academy of Social Sciences, and a master's degree in environmental economics from Wageningen Universiteit in Holland. Wang has published over 60 works in refereed journals in the areas of finance, environmental economics, regional economics, and management science, such as management World, Finance & Trade Economics, China Population, Resources and Environment, and Urban Studies. In 2016, an authored paper won Beijing Twelfth Outstanding research achievement award. In 2006, an authored paper won the second place Best Paper Award from Beijing Municipal Commission of Development and Reform. Wang has consulted for international financial organizations and government, including The World Bank, Asian Development Bank, Ministry of Finance of the People's Republic of China, National Development and Reform Commission, Ministry of Environmental Protection of the People's Republic of China, National Planning Office of Philosophy and Social Science, Beijing Municipal Commission of Development and Reform, Beijing Municipal Science & Technology Commission, Beijing Municipal Bureau of Financial Work, Beijing Haidian District Financial Services Office, Beijing Haidian District Development and Reform Commission. She is one of the most sought after experts on finance strategy and performance evaluation. Prof Wang is a member of the Chinese Women Economists Union, a fellow of the Economic Committee of Beijing Committee of China Zhigong Party. She has received many academic awards, including the New Century Excellent Talents by Ministry of Education (2010), Three one hundred projects in Beijing (2011), the three-time most Academic Award at Central University of Finance and Economics in 2009, 2014 and 2016.

### **王卉彤**

王卉彤教授是中央财经大学环境经济研究所所长和财经研究院教授、博士生导师。她是北京市海淀区中国人民政协委员。王教授于2011年至2012年在北京市金融工作局担任研究室副主任。王教授专注于金融学，环境经济学，区域经济学理论和政策的研究。她拥有中国社会科学院国家经济战略研究院金融学博士学位。她还拥有桂林理工大学工业分析学士学位，中国社会科学院金融学硕士学位和荷兰瓦赫宁根大学环境经济学硕士学位。王教授在金融、环境经济学、区域经济学和管理科学等领域的期刊上发表了60多篇论文，如管理世界、金融与贸易经济学、中国人口、资源与环境、城市研究等。2016年，王教授撰写的一篇文章获得了北京市第十二届杰出研究成果奖。2006年，她撰写的一篇文章获北京市发改委最佳论文奖第二名。王教授为国际金融组织和政府提供咨询，包括世界银行、亚洲开发银行、中国财政部、中国国家发展和改革委员会、中国环境保护部、中国全国哲学与社会科学研究办公室、北京市发展和改革委员会、北京市科学技术委员会、北京市财政局、北京市海淀区金融服务办公室、北京市海淀区发展和改革委员会。她是最受追捧的融资战略和绩效评估专家之一。王教授是中国妇女经济学家协会会员、中国致公党北京市委员会经济委员会成员。她获得过许多学术奖项，包括教育部新世纪优秀人才（2010年）、北京“三个一百”重点工程项目（2011年）、2009年、2014年和2016年三次获得中央财经大学最佳学术奖。

### **ZHANG Xuyao**

Zhang Xuyao is a Research Fellow at the Asia Competitiveness Institute (ACI) at the Lee Kuan Yew School of Public Policy, National University of Singapore (NUS). Dr Zhang received his PhD in Economics from NUS in 2016 and obtained his Bachelor (Honors) degree in Applied Mathematics from NUS as well in 2012. During the PhD candidature, he worked as teaching assistant in conducting undergraduate tutorials, such as Microeconomics, Macroeconomics and Managerial Economics. His research focuses

on Industrial Organizations, Applied Game Theory, and Public Economics. In particular, he is interested in technology transfers and anti-trust policies. He studies the optimal environmental taxation on the pollution problems in the presence of corruption. He also works on the beneficiary of research joint ventures with technology transfer. He also studies the Qualcomm's anti-trust case in China. At ACI, Dr Zhang is supervising all the Competitiveness Projects (ASEAN, China, India and Indonesia). He is the coordinator for the Quality Adjusted Labour Productivity Project, Welfare Spending and Budget Sustainability project and Shandong Urban Composite Development Index project. He is also the co-coordinator for the project studying the impact of exchange rate on trade at provincial level of Mainland China. Dr Zhang is also working on the methodology of applying the concept of Shapley values to index ranking analysis. This method will subsequently serve as a robustness check to all the competitiveness ranking studies in ACI. Additional projects he is working on include the construction of the Special Economic Development Area index, the construction of Infrastructure index and the Independent Review and Efficiency Monitoring (IREM) of Real Time Outcome Monitoring System (ROMS) for the Government of Andhra Pradesh (GoAP), India.

### 张续堃

张续堃现任新加坡国立大学李光耀公共政策学院亚洲竞争力研究所的研究员。分别于 2012 年和 2016 年获得新加坡国立大学应用数学系荣誉学士学位和经济学系博士学位。读博期间，曾经担任该大学微观经济学，宏观经济学和管理经济学的助教。其研究领域为产业组织理论，博弈论和公共经济学，尤其对专利授权，技术转让和反垄断方面有更深的研究。研究论文包括：在存在腐败的情况下，政府在治理污染问题时的最优税率；在合资研究中，技术转让的益处；以及高通公司在中国的反垄断案中应采取的专利授权方法。在亚洲竞争力研究所，主要监督东盟，中国，印度和印度尼西亚竞争力研究的项目，同时负责质量调整劳动生产率的项目，社会福利支出与政府预算可持续性关系的项目，以及山东省 17 个地级市城市发展指数的研究。还协同负责研究汇率对于中国大陆各省份的进出口贸易的影响。也在研究如何把夏普利值应用于指数排名分析中。这个方法将广泛应用于亚洲竞争力研究所所有指数排名的项目。同时，也参与讨论了创建经济发展特区指数，基础设施建设指数和印度安得拉邦政府效率评估等项目。



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## Asia&Pacific

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### Global value chains powerful engine for growth, job creation but has negative impacts: WB economist

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SINGAPORE, Aug. 30 (Xinhua) -- Countries participating in the global value chain largely enjoy increased growth and development, but the gains are not always distributed optimally and negative environmental impacts may arise, according to a representative from the World Bank.

Claire Honore Hollweg, senior country economist for the World Bank in Cambodia, was delivering the keynote speech at the 2019 Asia Economic Forum on Friday in Singapore.

The topic was on the "World Development Report 2020: Trading for Development in the Age of Global Value Chains (GVCs)".

GVCs refer to the international fragmentation of production, where a single finished product results from manufacturing and assembly in multiple countries, and each step in the process adding value to the end product. A key distinguishing feature of GVCs is the international, inter-firm flow of know-how.

Generally, GVCs are a "powerful engine" for higher growth, job creation, and increased living standards as compared to standard trade, said Hollweg. "They represent a natural vehicle for technology transfer," she said.

Bangladesh, Cambodia and Vietnam were found to have reaped the biggest benefits in growth, when they transitioned into basic manufacturing from commodities and agriculture, she said.

Better jobs and higher productivity ultimately lead to lower poverty. In Vietnam, poverty reduction has been greater in provinces with increased presence of GVC firms, she said.

However, not all of the findings are positive as the gains from participation in GVC are distributed "unequally" between countries, according to Hollweg.

For instance, Japan saw a rise in mark-ups in the textile sector - where firms enjoy cost benefits from the GVC, but do not pass on the reductions to consumers.

Conversely, the producers, which tend to be developing countries such as India, saw a decline in mark-ups, said Hollweg.

GVCs are also a "mixed blessing" for the environment as it can bring detrimental outcomes, such as greater carbon emissions which arise from excess transportation, excess waste

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generated and pollution. Yet at the same time, it can prompt the development of new environmental goods and lead firms to push standards.

Hence, there needs to be right policies to help countries maximise and ensure shared and sustained benefits, said Hollweg.

This range from GVCs being harnessed to improve working conditions within firms in developing countries, adopting policies to help displaced workers in advanced countries, international cooperation to help eradicate poverty, and promoting environmentally friendly technologies and practices, she said.

An important "first step" is to price goods so it reflects not just their economic cost, but socio-environmental costs as well, said Hollweg.

The forum, held from Aug. 29 to 30, is jointly organized by the World Bank Group and the Asia Competitiveness Institute.

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