THE INDO-PACIFIC ECONOMIC FRAMEWORK (IPEF):

WHAT IT IS, WHAT IT ISN'T, AND WHAT IT COULD BE

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INTRODUCTION

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We start with the obvious—what it isn't. The Indo-Pacific Economic Framework (IPEF) is not what we typically expect of a trade agreement. Unlike every modern trade agreement, no market access is being discussed. For this reason, it has been termed a "Framework" as opposed to a "Trade Agreement". The terminology may be dismissed as cosmetic at first blush, but with its four pillar structure—Trade, Supply Chain, Clean Economy, and Fair Economy—there appears to be an ambition for far more than lowering trade barriers. The open question is if these additional pillars can bring meaningful, mutual economic benefits to member countries. This brief note explores where in the economics literature one might look to answer this question, and what the literature tells us about best practices in driving meaningful growth.

IPEF was launched in May 2022 and now includes 14 countries—Australia, Brunei, Fiji, India, Indonesia, Japan, South Korea, Malaysia, New Zealand, Philippines, Singapore, Thailand, United States, and Vietnam. Together IPEF countries account for roughly 40% of global GDP and 32% of the world's population, so they represent

	GDP by Country (US\$BN)				Population (Millions)		
	2019	2020	2021	_	2019	2020	2021
Australia	1,391.95	1,327.84	1,542.66	Australia	25.37	25.69	25.74
Brunei	13.47	12.01	14.01	Brunei	0.43	0.44	0.44
Fiji	5.50	4.57	4.59	Fiji	0.89	0.90	0.90
India	2,831.55	2,667.69	3,173.40	India	1,366.42	1,380.00	1,393.41
Indonesia	1,119.10	1,058.69	1,186.09	Indonesia	270.63	273.52	276.36
Japan	5,123.32	5,040.11	4,937.42	Japan	126.63	126.26	125.68
Korea, South	1,651.42	1,637.90	1,798.53	Korea, South	51.76	51.84	51.74
Malaysia	365.28	337.01	372.70	Malaysia	31.95	32.37	32.78
New Zealand	213.43	211.73	249.99	New Zealand	4.98	5.09	5.12
Philippines	376.82	361.75	394.09	Philippines	108.12	109.58	111.05
Singapore	375.47	345.30	396.99	Singapore	5.70	5.69	5.45
Thailand	544.08	499.68	505.98	Thailand	69.63	69.80	69.95
United States	21,372.57	20,893.74	22,996.10	United States	328.33	331.50	331.89
Vietnam	330.39	343.24	362.64	Vietnam	96.46	97.34	98.17
Total	\$35,714.36	\$34,741.25	\$37,935.19	Total	2,487.30	2,510.02	2,528.69
% World GDP	40.75%	40.92%	39.47%	% World Pop.	32.37%	32.33%	32.27%

^{1.} Many thanks are due to Gary Gereffi, whose substantial insights influenced the report.

a meaningful share of the world economy.² This makes them reasonable candidates to partner with in an economic dimension.

IPEF countries have touted their "like-mindedness" and desire for an agreement with high standards. Notably, countries in the group might be considered economically free, with all but two countries (Fiji and India), categorized as "free" or "mostly free" in the Heritage Foundation 2022 Index of Economic Freedom. Fiji and India find themselves in the "mostly unfree category" weighed down by poor fiscal health scores, but avoid the "repressed category" for economies that are least economically free.³ In addition, with the exception of Brunei, these countries are democracies. While these facts represent no smoking gun, an argument can be made that they are, in fact, like-minded.

The like-mindedness of these countries plays a role in the desire to have a framework that spans more than the usual trade topics. Supply chain resilience, a clean economy, and a fair economy are not typical features found in economic agreements. This may seem unusual, but, in fact, these pillars represent the continuation of a trend toward deepening economic agreements between countries.⁴ According to the World Trade Organization (WTO) "Deep trade agreements (DTAs) matter for economic development. The rules embedded in DTAs, along with multilateral trade rules and other elements of international economic law such as bilateral investment agreements, influence how countries (and, hence, the people and firms that live and operate within them) transact, invest, work, and, ultimately, develop. Trade and investment regimes determine the extent of economic integration, competition rules affect economic efficiency, intellectual property rights matter for innovation, and environmental and labor rules contribute to environmental and social outcomes."⁵

With average tariffs between 0 and 7% for IPEF countries (with the exception of Fiji at 14.9%), the U.S. already having free trade agreements (FTAs) with Australia, Singapore, Korea, and most of these countries already have FTAs with each other, the potential gains from lowering tariffs further are limited. But there exist potential gains in the production of other global public goods—reducing uncertainty in global supply chains, addressing climate change, and improving living standards. As these are relatively new areas for an economic framework, the tools to measure and predict the magnitude of economic benefits are not yet well-established if we look at the literature on international trade. Fortunately, many of these questions have been tackled at length in other fields such as in environmental economics, and development economics.

The rest of this note lists some of this evidence and the policies that have been demonstrated to be effective to show what IPEF could focus on in the last three pillars. In essence, if done effectively, IPEF could be the standard for the next era of deep economic agreements that can improve living standards in each member country. The aggregate benefits of improved economic integration for advanced economies are well understood, but IPEF members are predominantly developing economies. We focus on some of the recent evidence with particular emphasis on developing economies.

- 2. "GDP (Current US\$) | Data," n.d., https://data.worldbank.org/indicator/NY.GDP.MKTP.CD.
- 3. Download Index of Economic Freedom Data, Maps and Book Chapters," Index of Economic Freedom, n.d., https://indexdotnet.azurewebsites.net/index/download.
- 4. A Mattoo, N Rocha, and M Ruta, "The Evolution of Deep Trade Agreements," World Bank, n.d.
- 5. "Deep Trade Agreements (DTAs): Data, Tools and Analysis," n.d., https://datatopics.worldbank.org/dta/about-the-project.html.

SUPPLY CHAIN PILLAR

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The rise of complex supply chains has been a significant boost to efficiency gains in the global economy. Yet, recent supply chain disruptions caused by the COVID-19 lockdowns highlight how supply chains also propagate shocks across the economy while amplifying shortages and inflationary pressures. Understanding the resilience and robustness of complex supply chains would allow policymakers to leverage the efficiency gains of supply chains and mitigate the propagation of adverse shocks. This is one area in which IPEF attempts to make progress. We can learn from some recent work done in India about possible benefits to this country, which accounts for a large share of IPEF output and trade.

Working closely with state governments in India, a group of researchers across a series of papers use administrative taxation data to better understand the roles supply chains play in the Indian economy. They examine resilience, or the ability of supply chains to recover in the aftermath of a shock, and robustness, the ability of the supply chain to not be impacted by the initial shock, and how this depends on various characteristics of the supply chain. The administrative data record firm-to-firm transactions, both within India, and with firms abroad, and allow researchers to build the entire supply chain from the data. A few important facts emerge from this research.

First, Khanna, Morales and Pandalai-Nayar (2022) show that supply chain resilience and robustness strongly determine the amplification of shocks, such as the Covid-19 lockdowns. For instance, firms with more suppliers in Covid-19 lockdown regions saw a 6.5 percent points higher net separation rate, and a 30% decline in the value of inputs purchased, both of which had strong downstream effects. Second, more complex supply chains (as measured by having more and varied inputs) are more resilient, as firms have likely fostered strong relationships and built contingencies for such shocks. Furthermore, firms with large and important suppliers (i.e., suppliers who had many other customers) were more resilient to such shocks. In contrast, firms that trade in widely available products were more likely to break links, as they perhaps had less incentive to invest in strong relationships. Third, the researchers studied how firms in India reform after such shocks. Firms concentrate their purchases on larger and better-connected suppliers, and to closer suppliers (i.e., reshoring).

In subsequent work Fujiy, Ghose and Khanna (2022) document that in the presence of such shocks, firms in India find it difficult to find new suppliers. The inability to quickly reallocate expenditures to other suppliers (who were, say, not in a Covid-19 lockdown zone) is one of the strongest determinants of the amplification of the shock. Moreover, Fujiy, Khanna and Toma (2022) point out that given the relatively weaker enforcement of contracts in this context, many firms form new links and trade based on prior relationships and social networks. This leaves potentially profitable and productivity-enhancing trade on the table. Better contract enforcement environments can facilitate such trade, boosting productivity.

The Indian experience suggests that to improve the resilience and robustness of supply chains, policies should:

- 1. Facilitate links with larger and better-connected suppliers;
- 2. Facilitate the matching of buyers and suppliers (perhaps with the help of online platforms); and
- 3. Facilitate investment in contract enforcement.

CLEAN ECONOMY PILLAR

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There is now overwhelming evidence backed by a scientific consensus that climate change harms not only nature but also economic growth and prosperity. Particulate matter, co-pollutants, and warming from carbon emissions are lowering economic growth (Burke et al., 2015), reducing hard fought gains in life expectancy (Carleton et al., 2022), hurting worker productivity across high- and low-skilled professions (Graff Zivin & Neidell, 2012; Chang et al., 2019; Somanthan et al., 2021) and raising inequality (Diffenbaugh & Burke, 2019). Indeed, climate change and air pollution are eroding many of the gains brought about during the postwar economic expansion. At the same time, the pace of innovation and technological transfers through trade have generated affordable pathways to enhance energy security and enable a just, clean energy transition. As a 2021 UCSD Task Force on Climate at Trade put it, "trade is part of the solution, not the problem." The IPEF represents a continuation of work started at the World Trade Organization (WTO) in this direction.

The advent of an effective and just renewable energy transition requires investments in adaptation. The effects of climate change are unequal because the global poor are disproportionately exposed (Harrington et al., 2016), have occupations that are more climate-exposed (Garg, Gibson and Sun, 2020), and lack resources to effectively avoid environmental exposure (Garg, Jagnani and Taraz, 2020). For example, Garg, Jagnani and Taraz (2020) find that nearly half of the damages from rising temperatures on human capital accumulation can be offset through workfare programs that effectively work as a conditional cash transfer program. Burgess et al. (2017) similarly find that expanded banking access reduces the temperature-mortality relationship in rural India. While these are typically thought of as domestic policies, economic frameworks, such as IPEF, can encourage high standards among member countries to improve productivity and growth of the entire region by encouraging such policies. This is consistent with the recent agreement on "loss and damage" reached at COP27.³

The clean energy transition is likely to generate unequal costs and benefits. For example, household subsidies for solar rooftop adoption can be regressive when utility fixed costs are passed away from richer early adopters to poorer late or never-adopters. Economic arrangements can help lower the cost of renewable energy sources, but this is likely not enough. Ensuring a just renewable transition requires expanding complementary social safety nets. These will play an important role in fostering adaptation amongst the poorest communities.

IPEF countries may focus on the following to encourage investments in renewable energy and adaptation:

- 1. Provide incentives to promote additional investments. That is, they should generate investments in renewable energy that would not have occurred otherwise (Calel et al., 2021).
- 2. Growing demand for quality and quantity of energy access will require organizing a "smart" grid with low-cost technologies that allow for demand-side management.
- 3. Demand-side management through "smart" technologies such as smart thermostats or smart plugs can maximize the emissions reduction benefits of clean energy during the clean energy transition.
- 1. "The Role of Trade in Addressing Climate Change: Recommendations for Policies and Practices," UCSD Center for Commerce and Diplomacy, November 2021, https://ccd.ucsd.edu/_files/2021-report_role-of-trade-in-addressing-climate-change.pdf.
- 2. "WTO Joins Call for Greener Markets and Trade Logistics to Promote Low-Carbon Transition," n.d., https://www.wto.org/english/news_e/news22_e/cop27_11nov22_e.htm.
- 3. COP27 Reaches Breakthrough Agreement on New "Loss and Damage" Fund for Vulnerable Countries", November 2022, https://unfccc.int/news/cop27-reaches-breakthrough-agreement-on-new-loss-and-damage-fund-for-vulnerable-countries

FAIR ECONOMY PILLAR

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The Fair Economy Pillar is perhaps the most innovative, and, consequently, the most risky. The first challenge is defining what is meant by "fair economy". The US Commerce Department describes the pillar as "preventing and combating corruption, curbing tax evasion, and enhancing transparency, recognizing the importance of fairness, inclusiveness, the rule of law, accountability and transparency. By innovating and strengthening shared approaches to implementing anti-corruption and tax measures." These are areas that have been extensively researched in the literature on development economics. We highlight a few specific areas—procurement, regulation, and public service delivery.

Public procurement is a major determinant of resource allocation (accounting for 15-30% of GDP in many countries), state effectiveness (quality of inputs procured impacts performance), and enterprise performance (public contracts being big business). Procurement also creates many opportunities for fraud and corruption. We expect these will distort resource allocation (best firms don't win), reduce state effectiveness, and generally undermine confidence in government. At the same time, overly rigid procurement procedures can backfire. For example, a strict rule to always select the lowest-cost bid regardless of quality will make kickbacks harder, but will also disincentivize high standard projects.

It is well-established that more regulation of things like business entry is associated with higher perceived levels of corruption (Djankov et al, 2002)). This study helped motivate reforms aimed at streamlining processes, including "single-window" reforms to streamline processes or reduce the number of human interactions. In some examples, bribery undermines the purpose of potential beneficial regulations — e.g. getting a driver's license in New Delhi (Bertrand et al, 2007), or bribes at checkpoints in Indonesia (Olken and Barron, 2009).

A substantial body of high-quality modern empirical development economics is about "leakage" from public programs. Leakage rates can be very high without proper oversight — e.g., around 75% in payments to workers on public employment schemes in India (Niehaus and Sukhtankar, 2012). Modernizing payment infrastructure can reduce leakage (Muralidharan, Niehaus, and Sukhtankar, 2016) and, in doing so, stimulate local economies (Muralidharan, Niehaus, and Sukhtankar, 2022). Stricter digital ID can reduce corruption, but the details of protocol matter, and the transitions need to be managed carefully to avoid serious costs to legitimate recipients (Muralidharan, Niehaus, and Sukhtankar, 2022). Audits help, but a typical gov't audit doesn't seem to be enough on its to wipe out corruption, e.g., reduces it about 25% (Olken, 2007) in Indonesian block grants. Tax collection creates opportunities for both collusion and extortion, thought to be large. Customs duties are particularly interesting given the IPEF context. Firms make shipping decisions to avoid corruption in customs (Sequeira and Djankov, 2014), and trade liberalization can itself reduce this kind of corruption (Sequeira, 2016).

^{1. &}quot;Guidebook on Anti-Corruption in Public Procurement and the Management of Public Finances: Good Practices in Ensuring Compliance with Article 9 of the United Nations Convention against Corruption," United Nations Office on Drugs and Crime, September 2013, https://www.unodc.org/documents/corruption/Publications/2013/Guidebook_on_anti-corruption_in_public_procurement_and_the_management_of_public_finances.pdf.

To make real progress in raising living standards and boosting productivity, the fair economy pillar of IPEF could focus on the following policies:

- 1. Increase adoption of "e-procurement" platforms. Some credible causal evidence from India and Indonesia suggests that this improved performance (Faupel et al, 2016).
- 2. Consider opportunities to increase centralization of procurement of public projects above certain thresholds.
- 3. Randomly assign the auditors responsible for monitoring compliance, as opposed to relying heavily on auditors selected by the regulated firms themselves. Evidence by Duflo, Greenstone, Pande, and Ryan suggests this has significant benefits (Duflo et al, 2013).

CONCLUDING REMARKS

With IPEF negotiations ongoing, it is important to have buy-in from domestic constituents in each country—not only business communities, but also voters. An important consideration is transparency in the negotiation process and the opportunity for consultation. Consultation with stakeholders, congress and local elected representatives will ensure a well-rounded and truly innovative agreement that takes the emphasis from aggregate economic gains, to gains for constituencies typically left behind in the process of economic integration. This note is a place to start to examine such gains, but only scratches the surface of where to look.

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