COMPLEXITY AND PUBLIC POLICY
Prof. Naresh Singh's Guide to Understanding Complex Adaptive Systems

OFF THE MAP
A Utopian Take on Globalizing Cities

INDIA & CHINA
How do Developing Economies fare Post-Covid?

INNOVATION
An Essential Fact of Capitalism
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>THE PRESIDENT’S ADDRESS</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>FROM THE EDITOR’S DESK</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>FOREWORD</td>
<td>Dr. Subhashish Ray</td>
</tr>
<tr>
<td>4</td>
<td>THE COMPLEXITIES OF REVERSE MIGRATION</td>
<td>Ruchi Yemul</td>
</tr>
<tr>
<td>5</td>
<td>ROLE OF FISCAL POLICY IN INDIA DURING THE RECENT SLOWDOWN</td>
<td>Muskan Bhargava</td>
</tr>
<tr>
<td>6</td>
<td>FREEZE THE DISEASE</td>
<td>Aakrith Harikumar</td>
</tr>
<tr>
<td>7</td>
<td>CHALLENGES OF COVID- 19 ON BREXIT AFFECTED UK AND EU</td>
<td>Jyot Shikhar Singh</td>
</tr>
</tbody>
</table>
8 CHALLENGES OF POST-PANDEMIC ECONOMIC RECOVERY
Nivrithi Kailash Kumar

9 RELEVANCE OF H-O THEORY IN MODERN-DAY INTERNATIONAL TRADE
B.S. Ashish

10 ESSENTIAL FACT OF CAPITALISM
Surampudi Phani Datta

11 JENNIFER ROBINSON’S GLOBAL AND WORLD CITIES
Ishita Bharadwaj

12 COMPLEXITY AND PUBLIC POLICY
Prof. (Dr.) Naresh Singh
THE PRESIDENT’S ADDRESS

With the Inaugural edition of ‘The Ordinary Mercantile’ coming out, I would like to congratulate our team on pulling this off and welcome all the readers on this exciting journey.

It was not long ago that we were laying down the foundational plans for Arthaniti as I distinctly remember talking about the value this magazine would hold for us. As a new society, I was aware of the challenges and availability of numerous blogs and newsletters already being run by various organisations and societies, hence I came up with the idea of a ‘Digital Magazine,’ which would have something for everyone, and could cater to a larger audience.

Therefore, this magazine is not just about the journals and articles related to economics. It beautifully incorporates the idea of highlighting economics and its effects on our daily life. The overwhelming responses for the submission of material stands subject to the uniqueness of our magazine.

Lastly, it brings us so much joy to announce that for a completely student-run society, we have already conducted two successful events under one of the initiatives undertaken by Arthaniti and by publishing this magazine we will successfully kickstart our second initiative.

Simran Agnihotri
President
Arthaniti
FROM THE EDITOR’S DESK

Dear readers,

As you read this, we hope that you and your family are safe in these unprecedented times that we find ourselves in. While we are all seeking light in these darkest of times, we thought we could provide our readers with some respite by doing what we do best- deliver enjoyable economic based content. This magazine is our little attempt to help divert your minds even if it is for a little while.

With this, we bring to you, the first edition of Arthaniti’s magazine. Exploring economics in its broader sense and imparting knowledge on complex topics through your words and ideas forms the foundation of the Ordinary Mercantile.

Economics has quite often been considered as a complicated study that relies on assumptions but through this digital magazine and with your help, we would like to break that notion and explain the study to anyone even remotely interested in the subject.

The Ordinary Magazine symbolizes collaborative efforts of like-minded persons with common interests which is exactly what Arthaniti stands for as a society. We welcome your words and ideas with an open mind and give them a platform to be shared on.

We at Arthaniti are beyond excited to commence our work this semester and we are overwhelmed by the response that we have received from our members and writers.

The first edition of the Ordinary Mercantile is a result of months of tremendous efforts put in by the entire editorial team, technical and design team, as well as all the writers and students who felt that this platform is worthy of their submissions.

We are thrilled to embark on this journey with this newfound community. We hope this magazine provides its readers with an enlightening experience.

Jyot Shikhar Singh & Ruchi Yemul
Editorial Heads
Arthaniti
FOREWORD

Subhasish Ray
Faculty Advisor
Associate Professor
Jindal School of Government and Public Policy
O. P. Jindal Global University

As the faculty advisor for the Arthaniti collective, it is my pleasure to introduce the first issue of their journal, ‘The Ordinary Mercantile’. Platforms for publishing research-based undergraduate and masters’ student writing are a dime a dozen, not just in India, but globally as well. It is my fervent hope, that going forward, the Ordinary Mercantile will become an important voice in this area.

Being the frontrunner, this first issue obviously carries the difficult burden of setting high standards, and that is precisely what each of the student contributors here do. Starting off, Ruchi Yemul’s essay on the tragic reverse migration that ensued after the central government’s big bang lockdown announcement in March 2020 emphasizes the analytical value of examining this event through the lens of complexity science. This is followed by a series of essays exploring the macroeconomic implications of public policy leading up to the pandemic and in its aftermath. Muskan Bhargava explores the role of fiscal policy in the growth slowdown in India. Aakrith Harikumar outlines the contours of a post-covid economic recovery in the Indian context, whereas Jyot Shikhar Singh examines the same in the context of Brexit and the European Union. Nivrithi Kailash Kumar wonders whether the pandemic and the differential responses of emerging and advanced economies will reset the global balance of power between the two while B.S. Ashish emphasizes on the relevance of the H-O theory in modern day international trade.

Taking a step back from the contemporary moment, Surampudi Phani Datta’s essay offers a timely summary of classic studies in the area of endogenous technological change, drawing attention to India’s woeful under-presence in a recent ranking of cities based on their research output in high-quality science journals. On the subject of cities in the context of developing nations, but taking an urban planning tack, Ishita Bharadwaj uses a critical reading of Jennifer Robinson’s article, “Global and World Cities,” to give an interesting twist to Robinson’s claim that “all cities are best viewed as ordinary.”
FOREWORD

Fittingly, the issue is rounded off by a faculty contribution on complexity science. Professor Naresh Singh offers that taking complexity thinking seriously does not mean giving up on the idea of governance but embracing the bolder idea of policymaking as an iterative process, with room for course correction, continuous real time monitoring, and multiple perspectives.

I hope that together with me you will congratulate the members of Arthaniti for this wonderful initiative. To state that it is immensely challenging to do what they have done in the current circumstances is to state the obvious. They deserve our heartfelt appreciation.
The sudden imposition of a nation-wide lockdown in March last year owing to the coronavirus pandemic rendered thousands of migrant labourers helpless. These labourers are daily wage earners and with no income and permanent homes, they had no option but to return home to their native villages. According to some news sources (The Wire, 2021), this reverse migration of labourers from the informal sector is the second largest mass migration in the history of India after the partition of India back in 1947.

This mass exodus of migrant workers involved many stakeholders; right from the central government, state governments to the workers themselves.

The Ministry of Labour and Employment usually plays a key role in such scenarios, but it failed miserably. These labourers were left alone when they were desperately in need of aid. Several workers walked home, starved, and some even died. The government failed to look after its own.

The truth of the matter is that we have failed to look at these situations as complex systems. To implement effective policies in times of health and economic crises, we must start using complexity science.
How can we view migration through the lens of complexity science?

A complex system is a system wherein local interactions among several components or agents leads to the creation of a global structure. Here, we consider migration as a complex system and analyze it through the lens of complexity science.

Governance of migration is particularly difficult since it involves several actors or agents and their interactions. These interactions come with several consequences in the origin and destination countries. These interactions involve an exchange of information, goods, and services making them adaptive in nature since these agents change their behaviour based on their decisions and environmental changes thus, making it a complex adaptive system. Moreover, the pandemic was an unforeseen event bringing with it a lot of uncertainty which adds to the complexity.

Migration takes place due to the geography of better opportunities. Therefore, it also results in the creation of spatial networks. These networks encompass different communities of origin and destinations.

Thus, the flow of migrants from one place to another also triggers flows of remittances, goods, services, information and ideas within a system thus, creating a network.

Furthermore, the problem of reverse migration caused by the pandemic and subsequent lockdown can also be termed as a wicked problem- a problem that is difficult to solve because of changing requirements. While the migrant workers were forced to go back home on foot, back in their remote villages, the situation is far worse. Our villages possess rudimentary health facilities and lack proper medical equipment to fight the virus. Moreover, these workers have little to no means of earning money in the villages creating more problems for them. (Sengupta, 2021)

It is safe to say that migration has many features of a complex system. Complexity science offers a comprehensive, conceptual and analytical framework for the study and management of the complex system. (Willekens, 2012)
Government’s approach

Successful governance of migration depends on the ability to identify, understand and predict the actors and their interactions, and to anticipate the consequences for migration and society. There was no worthwhile attempt to address the massive employment loss due to the closure of lakhs of units in the informal sector in the wake of the lockdown. (Raveendran, 2021)

A day after the central government told the Parliament it had no record of the number of migrants who died or were injured during the national lockdown, the Union Home Ministry said that the migration had been triggered by “fake news” which caused panic. (Huffpost, 2021)

A 21-day lockdown was announced in March without warning which triggered this mass exodus. The lockdown was repeatedly extended until May when the government finally arranged Shramik trains to transport stranded migrants back home. The government took almost two months to arrange for this transportation service by which time, a lot of migrants had already begun to walk home.

Finance Minister Nirmala Sitharaman announced the steps taken by the government for migrants and farmers during the national lockdown, including free ration for stranded workers with the help of ‘one nation, one ration card’ but some states lacked the proper facilities for it.

The government’s delayed arrangement is not the only factor contributing to its failure to handle the situation. The government did not have data on the number of migrants who died or were injured during migration to their native places while also admitting that no data was maintained on job loss among migrant workers due to the Covid-19 crisis.

While it is easy to blame the government’s flawed approach, it is also difficult to recognize and understand the consequences of such complex situations.

Complexity approach

Public policy problems usually occur in complex situations and the government failed to recognize the pandemic as one.
The pandemic did not merely displace the migrant workers, it left them with no money, no employment opportunities, no way to reach home safely and no basic amenities like food making it a non-linear chain of events. Moreover, the announcement of the nation-wide lockdown was a tipping point in the migration situation. The local interaction among the migrant workers led to the emergence of a network of migration towards home. Migration is an inherently uncertain phenomenon that does not have a one-time solution. The government needs to keep implementing changes with changing times.

The government’s approach focused on short term goals, but it also needs to implement adaptive policies that are forward-looking with decentralized governance. For decades, India has mostly been following a top-down approach when it comes to making decisions and policymaking. A decentralized system facilitates quick actions and rapid adjustments to a crisis.

Though state governments were responsible for setting up relief camps for the migrants, the distribution of these camps was skewed with more than half the camps situated only in Kerala. The government could have ensured proper implementation with the help of local justice systems. Instead of treating all migrants the same, the government should have used the method of reductionism to look at the problems of migrants of each state separately and provide appropriate solutions accordingly.

The government is heavily relying on MNREGA schemes to solve the unemployment issues, but this does not empower the poor much.
The country focuses on urbanization and urban policies but what we really need is a concrete long-term rural development plan that uplifts the poor and improves their standard of living.

While complexity science does not provide one definitive answer, it sure does give a realistic perspective to public policy and economics wherein crises can be approached using realistic measures, unlike traditional economics which simply makes assumptions.

Ruchi Yemul is a first-year masters student of Diplomacy, Law and Business at the Jindal School of International Affairs.
References


Role of Fiscal Policy in India During the Recent Slowdown

Muskan Bhargava

John Maynard Keynes argued that nations could use spending/tax policies to stabilize the business cycle and regulate economic output. There are three components of fiscal policy:

i. Discretionary changes in the tax rate
ii. Discretionary public spending
iii. Automatic stabilizers: Government will automatically start spending according to the need of the hour.

These three components help the government to get the desired changes in aggregate demand, savings, investments, and income distribution, which influences the economic conditions. Currently, the economic conditions of India are worrisome. An economic slowdown refers to a situation where the rate of economic growth slows in an economy. Economic growth is usually measured in terms of Gross Domestic Product (GDP), which is the total value of goods and services produced in an economy during a specified period.

The economy faces two types of slowdown. Chief Economic Advisor of India- Krishnamurthy Subramanian said that “the slowdown is cyclical and not structural.” Cyclicalists believed that demonetization, Goods and Service Tax (GST), NBFC crisis, the decline in real estate and auto sector, and many other factors are responsible for an economic slowdown as it declined the aggregate demand.

In 2018, the GDP growth of our economy for the first quarter was 7.7%, and then it reduced to 6.6% in the fourth quarter. In 2019, the growth reduced to 5.8% and 5% in the first and last quarters, respectively. Our economy is slowing down as economic factors such as consumption, investment, government expenditure, and trade deficit are slowing down. The consumption is declining due to liquidity crunch, demonetization after-effects, uncertain GST rates, and fall in the automobile sector.
The investments are declining due to saving rates, the limited lending capacity of banks, and various other factors. Government expenditure declined due to revenue shortfall and increased public debts of state government. The weakening of rupee and trade war led to a trade deficit. In 2018, the country's economic growth was 6.81%, compared to the economic growth of 6.12% in 2019. Fiscal policy plays a vital role in understanding the economic slowdown.

Fiscal Responsibility and Budget Management Act, 2003 review committee proposed to replace the act with public debt to GDP ratio to frame fiscal policy in Debt Management and Fiscal Responsibility Bill, 2017. This new framework was adopted in 2018-2019, which aims to reduce debt and fiscal deficit.

In the 2019-20 Union Budget, the Medium-Term Fiscal Policy cum Fiscal Policy Strategy Statement said: “It may be noted that in the new FRBM framework, revenue deficit is no longer a targeted fiscal indicator in the FRBM Act. Effective revenue deficit (ERD), which is the difference between the revenue deficit and the grants for creation of capital assets, has also been removed as a fiscal target.”

Goods and Service Tax (GST) is the part of fiscal policy as it is a tax rate, and the tax rate helps in determining the fiscal policy. The inflation increased from 1.79% to 5.11% from January 2017 to January 2018. The inflation increased due to the impact of GST as it increased the price level leading to lowered consumption and aggregate demand of the consumers.

This graph shows that the price of the goods will increase, and the consumers' demand will decrease. Whether the consumer is poor, middle class, or rich, they all must pay the same price for the goods, which reduced their consumption. GST also increased the unemployment rate.
All this reduced economic growth. However, in the long run, it is believed that inflation would reduce as GST eliminates the cascading effect. The consumers must pay less, and the aggregate demand of the consumers will rise. The government revenues increase due to the extension of tax will, which will maintain a fiscal deficit. It will also remove the custom tax on export and FDI will increase. In 2019-20, there was an increase in the indirect taxes of 11.8%, and this was only due to an increase in GST collection. After GST and demonetization, all the money was kept in the bank.

By announcing budget 2019, the government stepped down in easing the liquidity crisis caused due to NBFC. The government will help the NBFCs meet their liabilities on time, as the government will provide a one-time six months' partial credit guarantee to public sector banks to buy assets worth Rs. One Lakh crore from NBFCs. The government also allowed NBFCs to issue debentures on public interest, which will provide more liquidity to NBFC and overcome its crisis. The government brought down its fiscal deficit from 5.2% in 2015 to 3.3% in the year 2019-2020. This mostly affected the contractors or builders who depend on government projects in the real estate sector. A decline in the fiscal deficit increased the unemployment rate causing an economic slowdown.

NBFCs invested all that money into the real estate sector, which was already facing a downturn. The NBFC crisis was one of the many reasons for the economic slowdown.

*Image: Amian Mathur, iStock photos*
The automobile sector provides more than 20% of the manufacturing GDP. The sale in the automobile industry has been declining to its peak, leading to a stoppage in manufacturing. The unemployment rate rises in the economy. The petrol prices were also hiked, which increased maintenance costs. Moreover, overproduction leads to a decline in the prices of produced cars. Though the price was declined, the consumers were not willing to purchase vehicles. The main reasons for the slowdown in the automobile industry are Bharat Stage 4 (BS-IV) emission standards and insurance regulations. Due to technical errors, the companies were frequently calling their BS-IV vehicles, and Insurance Regulatory Development Authority’s mandatory regulation of five-year insurance policy increased the on-road ownership cost of the vehicle. An increase in the unemployment rate means that the spending capacity will also be declined. Consumer demand will go down. Due to the changes in Income Tax slab by government, more money will be put in the hands of middle-class families, which might increase the sale of cars.

Due to COVID-19, Moody has forecasted India’s GDP growth at 0.2% in the year 2020. India Ratings and Research (Ind-Ra) has estimated India's GDP growth at 1.9% for the year 2020-2021. The currency market has been affected most due to COVID-19. The currency value has depreciated because of the elevated risk prevailing among investors globally. The stream of income is affected as there is negligible production during this point of time. There is also a change in the multiplier effect of consumer spending on business investment and employment generation. Due to the nation-wide lockdown, the consumers do not have the income to spend, leading to low aggregate demand. RBI has announced to inject Rs. 2.5 lakh crore in the economy.

This will then increase the aggregate demand, which will lead to hyperinflation. The government must increase its deficit to maintain the economy, i.e., the government must spend more and cut tax rates. The government is currently using expansionary fiscal policy. The government announced 20 lakh crore economic and not fiscal packages.
TDS reduction will infuse liquidity of Rs. 50,000 crores. Rs. 3500 crores will be spent on food grains supply to all the migrants. The government has allotted an additional Rs. 40,000 crores to MNREGA so that more migrant workers can get a job in their states. Rs 20,000 crore for fishermen under the Pradhan Mantri Matsya Sampadha Yojana, which was announced in the budget, will be implemented. It is expected that it will give employment to 55 lakh people. To boost demand, the government has planned to leave more money in the hands of people. The government has increased the FDI limit in defence manufacturing under the automatic route from 49% to 74% to attract more investors.

Due to Covid-19, the government’s fiscal deficit will increase as government spending has been increased, and it will not be able to earn a higher revenue. The fiscal deficit is already more than the interest rates as compared to GDP growth. If the government borrows more, than this will create pressure on the RBI and commercial banks to increase the interest rates. As the interest rates rise, the consumers will tend to save more to receive more return in the form of interests, which will decrease the spending of the consumers. The aggregate demand for goods will fall and thus, the economy will slow down.

Muskan Bharagava is a third-year law student at Jindal Global Law School.
References


Freeze the Disease: The Future of post-COVID economic Recovery

Aakrith Harikumar

There is no doubt that the COVID-19 pandemic has been one of, if not the worst global economic and health crises so far. While being a completely startling blow, it has swept the world off its feet, and not in a positive way. While there have been other crises in history like the Great Depression in the 1930s and the 2008 Global Financial Crisis, there is still one aspect that sets this abomination apart from its predecessors. While the two other economic crises were devastating, their ramifications were felt only in certain parts of the world while the coronavirus pandemic is a truly ‘global’ catastrophe. Over 114 million people in the world have lost jobs (WEF, 2021) and economies are struggling to recover. But there has been progress. At no other point in history have nations produced and globally distributed vaccines in less than a year and countries are getting back up on their feet. Nevertheless, post-pandemic economic recovery is still going to be a tedious and demanding task.

As for this short piece, it does not just seek to ponder the post-pandemic recovery challenges but to provide solutions to restore the world’s former glory, from an economic perspective, with India at the point of focus.

The Economy Now

India took the world by surprise with its comparatively efficient COVID-19 control model. With cases peaking at an average of 90,000 a day in September, only around 11,000 cases are being reported on an average every day now just five months later. Statistically, it has done a much more commendable job than even the US- the superpower of the world. Sadly, the praise stops there. Economically, the situation now is fully contradictory. In the second quarter, the nation's GDP contracted 23.9%, one of the worst reductions in the economic history of independent India (Bloomberg Quint, 2020).
To put things in perspective, Bangladesh, a nation much smaller and less developed than India, is doing significantly better, with its growth rate predicted to rise by 4% (Indian Express, 2020). Nevertheless, there is hope for our country. According to recent estimates by the Reserve Bank of India (RBI), the nation is projected to have a V-shaped recovery in this fiscal year (Economic Times, 2020). But then again, the true answer lies in the future and how India manages to control affairs till then. And now, all eyes are on the latest government budget and its unfolding.

Creating a Demand for Demand

The demand patterns in the economy, too, have been on a downturn even before the pandemic. In 2019, the growth rate of the nation was only around a measly 4%. And now the IMF projects the country’s growth rate at 11.5% (Bloomberg Quint, 2020). However, this is just a forecast. The real problem goes back to the root of Economics- ‘money.’

India has over 1.3 billion people but not enough cash to go around. With a huge unemployment crisis during the pandemic and around 12 crore people losing jobs (India Today, 2020), a healthy level of much-needed inflation in the economy is not being maintained.

Now is more important a time than ever for the country to encourage people to come forward, start investing more and establishing businesses with all the government help there is to offer.

For the nation to truly boom, spending must be encouraged, and more money must be circulated.

As of now, to truly boost more spending in the country, the nation needs more investment to grow. As the new government plans its ‘Atmanirbhar Bharat’ scheme to increase exports and become ‘self-reliant,’ consumers are going to play an increasingly significant role in contributing to growth through their investments to aid faster economic progress.
Atmanirbhar Bharat and Vaccine Diplomacy

Before globalization was integrated into India’s economic agenda in 1991, the nation was fairly isolationist and focused on techniques of import substitution. Now during the period of the pandemic, the Prime Minister introduced a scheme- Atmanirbhar Bharat. This plan seeks to make India self-reliant by increasing local production and reducing imports. Atmanirbhar Bharat has its own set of pros and cons but is still connected to the post-pandemic economic order.

India is now a more import-reliant nation with 23.6% of imports as its percentage of GDP compared to 19.7% of exports. (WITS, 2018). Therefore, transitioning to becoming a self-reliant nation is far from easy. But ensuring that the manufacturing sector is focused on, employment would increase and so will consumer demand, thereby steering the nation away from potential recession. As India has also opted out of the RCEP due to concerns about the fulfillment of its interests (Mint, 2020), it now needs an alternative.

By engaging more with its other plurilateral groupings like BRICS or the QUAD, the nation could still tread on the path towards self-reliance and increased exports.

Peculiarly, the pandemic has increased the importance and presence of India on the global stage. India has managed to be one of the few nations in the world to actively engage in vaccine diplomacy. Countries like Canada have made requests to the Indian government to export their vaccines. And now, India is set to distribute vaccines to over 14 nations, fulfilling 70% of the world’s vaccine needs (TOI, 2021). If this trend continues and India widens its export scope, there is a lot of faith for the economy in terms of trade surpluses and could contribute to bringing the nation back on the right track.

Image: File photo from PTI
India is now the largest vaccine manufacturer in the world with many nations dependent on it (WSJ, 2021). Collaborating now with the QUAD nations to send 1 billion vaccines across Asia (Business Today, 2021) will not just increase its production capacity but strengthen its international relations as well.

Therefore, the steps towards becoming a more potent force in the world are taken first at home. Atmanirbhar Bharat does not mean the severing of trade ties but for the nation to increase its trade surplus by actively supplying goods and services to other nations. Vaccine distribution, with the pandemic now, is an apt place to start and then expand going forward.

2021 and Going Forward

There is no doubt that there is a lot of hope for the future of the Indian economy. Stock market Indexes like the BSE Sensex have exceeded 50,000 points - an all-time high, vaccines are being exported and the government budget has its primary focus on infrastructure development and privatization.

Yet, every policy and decision in a time like this is conditional. An economic resolution may sound infallible and guaranteed to work on paper, but in the real world may lead to cataclysmic consequences if not applied accurately.

For as long as investment is encouraged, awareness is created and a healthy inflation level is maintained in the economy, a V-shaped recovery is not a distant dream. The bureaucracy and private sectors must ensure to work cordially to revive the economy. India must become economically independent but not at the cost of hurting its international relations. This great nation has immense potential and at the end of the day, it all comes down to three things- execution, execution, and execution!

Aakrith Harikumar is a first-year bachelors student of Global Affairs at the Jindal School of International Affairs.
References


References


WEF, (2020). COVID-19 has cost a huge amount of lost working hours. From https://www.weforum.org/agenda/2021/02/covid-employment-global-job-loss/


Challenges of Covid-19 on Brexit affected United Kingdom and European Union

Jyot Shikhar Singh

In 2019 Brexit was the centre of attention and UK firms were busy developing contingency plans for their business following EU Exit. But in 2020, as the pandemic penetrated the global economy, business attention was diverted and many of those working on Brexit were redeployed to dealing with the pervasive and immediate impact of the pandemic. As the prospect of a ‘V-shaped recovery’ ebbs away, status quo finds itself grappling with a tentative re-opening of the economy (Venkatapuram, 2021). As both the UK government and the European Commission have said, whether there is a future relationship in place post the transition period or not, there will be significant changes to the way the UK and the EU trade. And, as COVID-19 has entirely changed the economic context of Brexit, the interplay between the political and economic tangents needs to be considered. There is no doubt that the initial economic shock from COVID-19 is significantly larger than any immediate impact that will come from Brexit.

The impact on demand (both domestic and foreign) due to lockdowns has been more significant than anything seen previously. But Brexit will also have permeating and long-term effects on the European economy. Interaction between Brexit and COVID-19 depends on three critical areas- supply, labour, resourcing. Manifestation of crisis and possible solution to the demand and supply sector stands as the primary concern for both the parties.

COVID-19 and Brexit are quite distinct types of economic shocks. The former has provoked some of the steepest GDP declines in the European economies (Dayan, 2020). The path of recovery is uncertain, but it is likely that many of the impacts will eventually prove temporary, even if we come to agreement with long-term socio-economic impacts. This could include changes to supply chains or the modus operandi for future business models and trade models (TUC, 2020).
Brexit is likely to bring more predictable changes to the way the UK trades with the EU and some of its other trade partners, but these changes will be permanent.

The immediate hit to demand and growth from the pandemic is unquestionably larger than that of Brexit. But the interaction on the supply side is more nuanced and complicated.

Moreover, the supply problems became particularly acute in late December 2020 when the French government prohibited lorries from entering France from the UK after a new, apparently more infectious, strain of Covid-19 was detected in southern England (Hadjimichalis, 2020). As it stands, both the CJRS and the Covid-19 loan schemes will remain open to new applicants in the first quarter of 2021 (TUC, 2020). There are currently no plans to introduce any requirement that the employer or business has used the scheme before.

All the schemes are still on generous terms: the business loans for small and medium-sized businesses offer six months with no interest payments while the CJRS requires only minimal employer contribution (Tetlow & Pope, 2020). The business loans do require that a business has been “adversely affected by coronavirus” but this could be interpreted as a minimal requirement. As a result, many businesses affected by the end of the transition period could easily make use of these programmes. They might do so hoping that short-term disruption will ease, even though many of their jobs or businesses will not become viable again.

Uncertainty on tariffs is another big worry for businesses. Referring to the example of the previous joint automobile industry and working of UK and EU, with 53 per cent of UK-assembled car exports and 69 per cent of UK-built components exported to the EU, a 10 per cent tariff on exports is projected to cost £1.8 billion (Green, 2020).
Even if a Free Trade Agreement is agreed, dealing with new rules of origin will be complex for automotive firms given a finished vehicle can have inputs from all over the world. The shift to electrification means a higher proportion of car parts are often sourced from electronic or battery firms in Asia, meaning these cars may find it harder to reach the threshold for UK/EU content to qualify for any preferential tariff (Hadjimichalis, 2020). The UK had sought to tackle this issue by agreeing on ‘diagonal cumulation’ for countries which both the UK and EU have an FTA, which could mean that car parts from Japan for example could count towards meeting the threshold to qualify for any preferential tariff (Venkatapuram, 2021). The EU has rejected such an approach and as such, even in a deal scenario, some cars will still face tariffs.

The rationale behind this rejection is that without government intervention, many perfectly good businesses would have gone under and viable jobs would have been lost because of the effects of the pandemic and associated public health regulations. Given that the pandemic has always been expected to be temporary – albeit lasting many months – losing those businesses and jobs is likely to be a bad outcome for the UK. Allowing swathes of businesses to fail would have led not only to higher unemployment in the short term but also to unnecessary long-term damage (Glencross, 2020).

The failure of good businesses and the loss of viable jobs would delay recovery as replacement businesses would take longer to get up and running, and employers must spend time and resources finding suitable staff to fill vacant posts again. Thus, the biggest policy to support businesses and jobs is the Coronavirus Job Retention Scheme (CJRS), also known as the furlough scheme (Green, 2020). Through this programme, the government pays 80% of employees’ wages for any of their normal hours.
So, the question stands, what more can the government do in this time of surging cases and ambiguity of establishing new economy? Capitalizing on new government-backed loans for businesses, as the earlier report, Bailout for Business in a No-deal Brexit retain a role for the banking sector to assess the viability of businesses and the new loans should not be preferred to the ordinary loans that would be offered by banks, meaning that use of the new schemes should come with a fee.

Alternatively, for speed and ease, the government could allow these businesses to apply for Covid loans. However, they should be required to show a credible plan of recovery to qualify – that is, to prove that the short-term problem they face is one of cash flow rather than being more endemic. Extension of tax payment deferrals can ease cash flow constraints. The government has allowed businesses to delay the payment of VAT to help ease liquidity constraints caused by Covid-19. As it stands, VAT deferred from mid-2020, which was due by 31 March 2021 (De Lyon & Dhingra, 2020).

This could be extended further, or 2021 payments could be deferred, to help businesses affected in the short term by Brexit. Brexit and the progression of the coronavirus will affect the supply side of the economy, restricting how businesses can operate. Encouraging more consumer spending is not the answer when the problem is supply-chain disruption limiting what is available for consumers to buy. Fiscal policy is likely to be most effective by supporting businesses to weather supply-side disruption rather than stimulating demand.

Jyot Shikhar Singh is a first-year masters student of Diplomacy, Law and Business at the Jindal School of International Affairs.
References


Challenges of post-pandemic economic recovery- will the emerging economies “emerge”?

Nivrithi Kailash Kumar

With vaccines for the novel coronavirus finally being rolled out across the world, the global economy has started recovering from its worst slowdown since the Second World War. This is an arduous process and comes with many challenges, which have manifested themselves in different ways. As UN’s Chief Economist Elliot Harris said, "The depth and severity of the unprecedented crisis foreshadows a slow and painful recovery (Louis, 2021)." How do the challenges faced by the emerging and developing economies, such as India and China, compare in contrast to those faced by the developed nations? Could the post-COVID-19 global economic recovery lead to a change in the status quo between these emerging and developed economies?

Developing and emerging economies, as well as developed economies, experienced major falls in demand and income, while poverty rose.

However, recovery in most of the developing and emerging economies is better than expected.

As the world market recovers from steep contractions in the Gross Domestic Product (GDP), it is expected to grow by 5.5% in 2021 (IMF, 2021). Emerging and developing economies are expected to have a higher estimated growth rate, of 6.3%, than developed economies, which have an estimated growth rate of 4.3%, in 2021 (IMF, 2021).

Impact on Developed & Developing Economies

Developed countries can provide stimulus to their economies through greatly increased fiscal spending, but this leads to extremely high fiscal deficits, and in turn, to high debt.
According to the Manhattan Institute, the US alone will run a budget deficit of $4.2 trillion, or 19% of its GDP – the largest share since the deficit peak during WWII, which would push the US national debt held by the public to $41 trillion, or 128% of GDP, by 2030 (Aizenman, 2020). Some of the advanced economies, like America and Japan, did relatively better than others, while the western European economies fared worse. For instance, the United Kingdom still has strict restrictions, despite the vaccine roll-out, due to the spread of the new coronavirus variant, and the lockdown may be extended throughout this month.

On the other hand, developing and emerging countries have low savings and scarce government resources. They, therefore, cannot provide such monetary and fiscal stimuli. According to the International Monetary Fund, fiscal relief was equal to 24% of the gross domestic product in advanced economies, 6% in emerging middle-income countries, and 2% in low-income countries (IIP, 2021).

The travel restrictions and protectionists policies resulting from the pandemic have led to a decline in tourism and restrictions in trade, which these economies are more susceptible to. Furthermore, many of these countries lack good governance and are ridden with corruption. In the short run, things look better than expected, but in the long run, there are reasons to be very pessimistic," says Ms. Goldberg, a former chief economist at the World Bank (IIP, 2021), when talking about the recovery of developing and emerging economies.

The Potential in Emerging Economies

The recovery of emerging and developing economies may not be as bleak as it seems. Though the coronavirus had global effects, developed countries were hit the hardest, with higher cases and death toll relative to their population than developing or emerging countries (Khasru, 2020). Despite their superior healthcare system, their inability to effectively combat the crisis while developing countries such as Vietnam were able to, is ironic.
Vietnam combated the coronavirus effectively by introducing strict testing, tracing, and quarantine measures at a very early stage – something most developed countries failed to do (Khasru, 2020). The less adverse effects of the pandemic on developing countries may make their economic recoveries smoother and easier.

Trade in developing East Asian countries has declined less drastically than in most developed western countries, during the pandemic, according to the World Trade Organization (Khasru, 2020). This may be because the developing and emerging economies of East Asia tend to produce low value-added goods while the developed economies tend to produce high value-added goods (Khasru, 2020). So, as world incomes are decreasing, the demand for high-value-added goods is impacted more severely.

Due to the daunting impact of the pandemic on the developed economies, cash inflow and investment from these countries to emerging and developing economies is falling. Development financing is decreasing as these countries redirect spending to solve domestic economic problems (Khasru, 2020).

External private cash inflow and foreign direct investment to developing and emerging economies are also falling, while non-resident portfolio outflows are very high (Khasru, 2020). Though this poses a problem to the developing and emerging economies, it may also pose an opportunity for these economies to become self-reliant. For example, the Atmanirbhar Bharat Abhiyaan launched in India, is a special economic package of INR 20 lakh crores to fight the pandemic and make India self-sufficient.

The Way Forward

As major economies across the globe are faltering, given the implementation of the correct policies and stimuli, developing and emerging economies may be able to use this crisis as an opportunity. India and China in particular may step up on a global level. In fact, China was the only major economy to experience growth in 2020 (IMF, 2021). The Indian economy often referred to as the lumbering elephant, has a huge consumer base that could be used to boost recovery.
As Mr. Subbarao said, “In a setting like this, any increase in income of the bottom half will quickly turn into consumption, which will spur production, and that consumption-production cycle can potentially put India on a virtuous cycle of growth and jobs” (The Hindu, 2020). Policies which boost innovation and investment—particularly investment in infrastructure which is severely lacking in many of the emerging/developing economies—are crucial to long-term economic recovery for these nations. With the unique challenges that this crisis presents, combating these challenges effectively and using newly emerging opportunities, may lead to a shift in the global economy.

Nivrithi Kailash Kumar is a first-year law student at Jindal Global Law School
Challenges of post-pandemic economic recovery- will the emerging economies “emerge”?

References


Policy Support and Vaccines Expected to Lift Activity. (2021, January). International Monetary Fund.


Relevance of H-O Theory in Modern-Day International Trade

B.S. Ashish

Heckscher-Ohlin Theory, popularly known as the ‘H-O Theory’ is a modernised version of Ricardo’s theory of international trade that is based on the principle of “comparative advantage” between trading countries. H-O Theory basically attributes the benefits of international trade to the opportunity costs involved, developed by Eli Heckscher and Bertil Ohlin in 1933. H-O theory proposes that a good or a service must be exported by a country only if its factors of production is found in abundance in that country and vice versa. This theory is especially useful when evaluating trade equilibriums between countries with varying levels of skill and resources. (Kopp, 2020)

The H-O theory or the 2x2x2 model (two countries, two commodities and two factors of production) where the taste preferences of consumers in both the countries are identical, there is no change in technical know-how’s and there is an incomplete specialization in the production of commodities.

The H-O Theory can be elucidated with respect to two conditions – factor abundance or scarcity in terms of price, and factor abundance or scarcity in terms of physical criterion. According to H-O Theory, if capital is relatively cheap in Country A, then country A is abundant in capital; And if labour is cheap in Country B, then Country B is labour intensive or rich in labour. Therefore, H-O theory supports the export of capital-intensive good of Country A to Country B and vice versa, while Country B exports labour-intensive good to Country A.
Real life Application of H-O Theory

A few countries have extensive oil reserves but have access to little or no iron ore. Meanwhile, some countries have an easy access to precious metals and with adequate storage facilities but have less expertise in the field of agriculture. Saudi Arabia is a classic example of the former scenario. It exports oil reserves to India while it imports Iron ores and steel from India.

The Netherlands-Germany trade relationship is another example that can be explained using the H-O Theory. Netherlands had exported labour intensive goods and services worth around $506 Million USD in 2017, most of which was to Germany; compared to its import of capital-intensive goods and services worth $450 million from Germany the same year. Netherlands was assigned to export labour intensive goods and services to Germany while it imported capital-intensive goods and services from Germany as Netherlands’ capital-to-labour ratio was lesser than Germany. This H-O test proved very useful to both the countries as it maximised their trade. (Kopp, 2020)

The H-O theory stresses on the benefits of international trade and the global benefits to each individual, such as availing high-quality products at reasonable prices, when every nation invests the most effort into exporting resources that are domestically naturally abundant while importing resources that are scarce. All countries benefit when they import the resources they naturally lack. Trading internationally allows countries to adjust to capital-intensive goods production, which would not be possible if each country only sold goods internally. (Kopp, 2020)

Analysing Singapore-Malaysia Trade under ASEAN Free Trade Agreement of 1992

1. Analysis of Malaysia

Historically, Malaysia was a Protectionist State. All that changed in 1991, when the Privatisation Master Plan came into existence which empowered the private sector as the major contributor to Malaysia’s economy. This luckily coincided with ASEAN Free Trade Area initiative in which Malaysia and Singapore were also a part.
By 2007, Malaysia dropped the import tariffs from 97% to a mere 0-5% range which paid dividends as their economic trajectory went up, thereby their GDP grew by 6.3% in 2007. (Clarke & Kulkarni, 2009)

This proves the emphasis on free trade and its importance by both Adam Smith and David Ricardo.

Singapore’s strategic geographical location along with favourable tax policies and heavy government investments attracted foreign investors, thereby making Singapore a very wealthy country, with a GDP – per capita ratio of $51,142 in 2008, compared to the meagre $14,071 of Malaysia in the same year. (Clarke & Kulkarni, 2009)

2. Analysis of Singapore

Singapore is a city-state with scarce natural resources and land due to its high degree of urbanization throughout its territory. Therefore, Singapore had no other choice but to maximize a strategy of value-added manufacturing to be competitive.

Andrew Clarke and Kishore Kulkarni, in their report submitted to ‘India, China and America Institute,’ observed that Malaysia remained a labour abundant country in 2017 when compared with Singapore despite their economic might increasing over the years. Malaysia’s capital to labour ratio in 2007 was 59 (Considering that ‘capital’ of a country is five times the GDP), but Singapore has a capital to labour ratio of 297. (Clarke & Kulkarni, 2009)
Applying H-O Theory, if capital to labour ratio of Singapore > capital to labour ratio of Malaysia, Singapore is a relatively capital-intensive country while Malaysia is a relatively labour-intensive country.

After analysing the import-export pattern between these two countries and making some vital assumptions in compliance with H-O theory, Clarke and Kulkarni found that 90% of Malaysian exports to Singapore are labour-intensive products and around 68% of Singapore’s exports to Malaysia are capital-intensive goods. (Clarke & Kulkarni, 2009)

B.S. Ashish is a first-year bachelors student of Global Affairs at the Jindal School of International Affairs.
References


Essential Fact of Capitalism: Understanding the value added by Innovation

Surampudi Phani Datta

In the second half of the 20th century, there were significant advancements made in the field of economic growth theory with the introduction of endogenous growth theory. The original neoclassical growth models, which were developed by economists Robert Solow, Trevor Swan, Frank Ramsey, and others in the 1950s remained relevant for almost 3 decades. But these models could not explain why growth rates (and technical progress) may change over time since technical progress was taken to be exogenous.

It was by addressing these gaps in the study of economic growth and the neoclassical growth theory, the foundations to ‘endogenous growth model’ were laid by Paul M. Romer, for which in 2018 he was awarded the Nobel Memorial Prize in Economic Sciences.

The foundation for the same was laid by broadening the definition for what was considered capital, by including human capital and knowledge as important endogenous factors in the growth and explaining that long-run growth rate of an economy was based on internal factors and not external.

But it was Joseph Schumpeter in 1942 that first understood the key role knowledge, research and development and learning by doing play in dictating economic growth. Joseph Schumpeter in 1942, wrote in his book about the process of creative destruction, a process he referred to as the ‘essential fact about capitalism.’ (Schumpeter, 1942, p. 83) A process that has been seen throughout the humankind, but has been accelerated by the industrial age.

---

1 *Exogenous growth* theory states that economic growth arises due to influences outside the economy and independent whereas, endogenous growth theory is the concept that economic growth is due to factors that are internal to the economy and not because of external ones.
For example, with the invention of steam engine and railways, railroads were laid across the industrial countries like the United States of America and the United Kingdom, which made accessibility and transportation easier while reducing costs for firms and creating millions of jobs to maintain these railroads. But with the introduction of long-haul trucks, aeroaeroplanes, cars – the railroads in these countries gave into creative destruction. In 1920, employment in railroad peaked with around 2.1 million people earning paychecks working for the railroads, that number now is around 200,000. (Bureau of the Census, 2011)

A major contribution to understanding the role of innovation, technical change, and experience in a firm in economic growth came from Kenneth Arrow. In 1962, Kenneth Arrow wrote and published a paper called, ‘The Economic Implications of Learning by Doing’ which added the concept of ‘learning-by-doing’ in the endogenous growth model. An interesting example for the role of experience and learning-by-doing cited in this paper came from a Swedish book titled, ‘Produktivitet och räntabilitet’ (Productivity and Profitability) by Erik Lundberg, where he describes how the Swedish Horndal ironworks had seen no investment for a period of 15 years, hence no significant change in its method of production, yet the productivity of the industry rose about 2 per cent per annum. This phenomenon of increasing performance by the way of learning from experience was titled by Lundberg as the ‘Horndal effect.’ (Lundberg, 1981)

In this model of endogenous technological change given by Paul M Romer, he theorizes that the long term growth is primarily driven by the accumulation of knowledge. (Romer, 1986) An idea that he continued to advance with the paper, ‘Endogenous Technological Change’ in 1990.

Image: John Mueller, Flickr
In January 1990, Philippe Aghion and Peter Howitt published a paper wherein, they present an endogenous model of growth based on Schumpeter’s concept on creative destruction. They write how a successful innovator upon obtaining a patent becomes a monopolist in the market, but the monopoly status lasts only until an innovation breaks out in the market. According to the authors, this monopolist's objective is to maximize the profits over the interval when they have the status of monopoly. They write that “when the interval ends so do the profits. The only uncertainty concerns the length of the interval.” (Philippe Aghion, 1992, p. 328)

This paper modelled the endogenous growth based on Schumpeter’s process of creative destruction which concludes how growth is a result of technological progress which is a product of competition, as competition fuels greater research to gain a monopolistic advantage. This prospect of monopoly rents motivates the research firms to innovate.

These innovations are then used to produce the final product more efficiently while seeking monopoly rents till the next innovation is created. And the arrival of the next innovation depends on the ‘R and D’ capital.

Aghion et.al. (2005) co-authored a remarkably interesting paper that added to the research studying R&D, innovation and learning-by-doing with a paper titled, ‘Competition and innovation: An inverted-U relationship.’ The paper investigated the relationship between market competition and innovation. The study showed that the curve for the more neck-and-neck industry shows a higher level of innovation. This research is particularly interesting because it uses data to show how competition in the case of laggard firms discourages innovation while the opposite is true in neck-and-neck industries, where higher competition led to greater innovation. (Philippe Aghion, 2005) Below is figure III, (clipping from the paper) that shows the inverted-u nature of the curve to describe the relationship between innovation and competition.
India in the position it is in, needs to improve its research and development capabilities to see long-term growth. The current 2020 rankings (dated 17th December 2020) lists cities based on their science research output in 82 high-quality science journals, wherein out of the 100 cities, only two Indian cities appear on the list with Bengaluru being the highest-ranked Indian city at 97th rank, followed by Kolkata in 99. This shows the lack of research and innovation in India. (Nature Research, 2020)

The funds allocated to research have declined from 0.84 per cent of GDP in 2008 to 0.69 per cent in 2014. The new policy interventions in NEP (New Education Policy, 2020) brings in changes to improve the quality of research in India and announces the setting up of National Research Foundation (NRF) to fund academic research in science and technology, the social sciences, and the arts and humanities in line with national and state priorities, such as clean water, sanitation, and energy. (Venkatasubramanian, 2019)

Conclusion

The endogenous growth model, though relatively new, is a theory that has succeeded in explaining growth in an economy as a result of Research and Development (R&D) and innovation by private firms in a competitive market. The model taking roots from the Schumpeter’s creative Destruction and Kenneth Arrow’s Learning-by-doing models have been able to pinpoint growth to technological change.

The endogenous growth model has led countries to rethink their macroeconomic policies and implying that more openness, competition and allowing in the development of technically skilled workers can help better innovate and promote growth.
It is important for a country to take steps in fostering competition, innovation as theory and evidence from endogenous growth model shows that it has the ability to take technically skilled workers to innovate, and drive economic growth with the help of research and development and learning-by-doing.

**Surampudi Phani Datta** is a first-year masters student of Economics at the Jindal School of Government and Public Policy

*Image: Danish Siddiqui, Reuters*
References


Jennifer Robinson’s 
Global and World Cities: 
A Utopian Opinion

Ishita Bharadwaj

A common misconception that most developing countries give into, is the one-way path to becoming a developed country. We (the developing) follow the same trajectory as our idols (the developed), which stumps our possibility for innovation and does not leave room for individual experience. However, in her paper titled ‘Global and World Cities,’ Robinson critiques this theory and points out that the entire world is living in the shadow of a Western opinion of urbanisation (amongst everything else, obviously). We follow the imperialist approach, where we allow the Westerns to interpret and influence our trajectories within the comfort of their cities. Most of our future/urban theories are based on the past of Western countries, and Robinson strongly disregards this thought.

However, in the race to be the next influencers/Wests (no, not the Kim-ye West kind of West, we would be racing for doom then. I mean the ‘North, South, East, West’ West), the world is leaving behind its own heritage and individuality. As much as I love Zara, Starbucks, and McDonalds, the thought of globalisation irks me. Have we ever tried to embrace an opinion other than the western one? Not as far as I can remember. Globalisation is just Westernisation, but masked. Until we take some drastic measures with our policies, the West will always have high barriers to entry and monopolise the ‘Global Leader’ title.

So many of the third world/developing countries are extremely rich in culture and bring some innovative ideas and experiences to the table.

Image: Johnny Miller, Unequal Scenes
Surrender the dollar as the global currency, prioritise different countries in terms of trade and allies, pave our own path instead of walking on someone else's, and so on. The benefit of it all is that bullies have some major fear of rejection, so teasing them is easy, if we have the resources, (let me take this moment to give a friendly reminder that the title of this article is a “utopian” opinion) which India does for sure. Why else would we spend US$422 million on the Statue of Unity.

To simplify what I mean by “the entire world is living in the shadow of a Western opinion of urbanisation,” I'd like to quote Choplin's De-westernising Urban Theory:

While the quantity of literature and scientific meetings on the subject of Western cities continues to grow, the other cities of the world remain relatively poorly understood. While it is true that recent publications have highlighted the importance of the urban phenomenon in developing countries, they are all too often limited to major case studies such as Shanghai, Dubai, Mumbai, São Paulo, and Johannesburg (Verdeil 2012).

Other cities are rarely taken seriously in urban studies, as geographer Jennifer Robinson highlights in her work Ordinary Cities (2006). She argues for a “post colonisation” of urban studies through a deconstruction of the category of “Third-World city.” In her view, this category perpetuates a “neo-colonialist” and capitalist way of thinking: it implies that there are Western cities on the one hand, around which urban theory was forged, and Third-World cities on the other, the degree of development of which can be measured only in terms of the former. (Choplin, 2012)

Coming back to Robinson’s critique, she notes that from heights of diagrammed, cities are placed in a particular place for a reason, usually hierarchy. Robinson's main critique revolves around the hierarchy and the power dynamic between cities. To put this in perspective, think about 'The Great Wall of Ahmedabad,' which was built in February 2020. Its only purpose was to hide the poverty of Ahmedabad city, from the President of U.S.A at the time – Donald Trump. (Archana, 2020) A similar case was viewed in the Philippines. (Hindustan Times, 2012)
These are just micro level examples. Think of different countries and their attraction hubs. Delhi, Mumbai, Tokyo, New York, London, Singapore, Dubai, and you can join the dots further. He believes that we should omit these hierarchies and view all cities as ordinary cities, and honestly, I could not agree more.

The difference between equity and equality is the key to all economic problems. Similarly, if a planner views two ‘unequal’ cities as one, instead of focusing on his half of the city and bettering it, he can focus on the weaker side, and bring it to par with their developed neighbours.

As Robinson rightfully mentions, we need to decolonise our definition of cities. Most third world countries dread the resource expenditure that goes into urbanising a rural area (aka villages/outskirts of a city, etc.) and take the easy way out by building higher up on already urban lands (typically known as cities).

My obvious rebuttal to “All cities are best viewed as ordinary,” is no. My answer would vary at the beginning of urbanisation when all lands were relatively equal. The only real differentiator back then, was their soil/climate/location, etc., in short, all things natural, and no man-made hierarchy.

However, we have come a long way from that stage, and have built some impressive examples of modernity, technology, and complex structures. It is almost impossible to ignore such stark differences while viewing two cities side by side, as one. It is tempting to act ignorant and specialise in urbanising the urban (easiest way to understand this is hair removal ads where they use hairless legs).

However, another way to look at all cities as ordinary, is in terms of opportunity and equality of workspace. Instead of looking at emerging areas as a liability, planners can use these cities to rectify everything they missed earlier. They could build better roads, avoid overcrowding infrastructure, reallocate resources, and so much more.
Sometimes ordinary might be better because there’s always room for improvement. Mumbai for example, is out of land to build on, and now we must build upwards instead of outwards, which increases the density per sq. ft. Eventually, we are turning towards places like Navi Mumbai and the outskirts, to expand on. If these ‘poorer’ cities never existed, planners would be out of jobs and opportunities. Planners need to realise that no matter how much they urbanise a city, coexistence is a part of life. Villagers and outsiders seek opportunities and migrate to rich cities to make a life there.

Instead of trying to accommodate them and cause overcrowding, the sensible thing would be to improve their towns/villages/cities itself. There is only so much you can improve in developed areas. The real potential is in bettering the average.

Ishita Bharadwaj is a fellow at Jindal School of Liberal Arts & Humanities
References


Complexity and Public Policy

Dr. Naresh Singh

Complexity in the form of complex adaptive systems (CAS), or situations displaying the characteristics of complex adaptive systems are more common in everyday life than you might think. Like a school of fish, a flock of birds, a swarm of ants, the soil in the yard outside, or any large city like Delhi, Mumbai or Chandigarh are all examples. Closer to each of us, the human brain or the immune system are also examples. When we say complex adaptive systems, we mean systems that are changing dynamically, that display unpredictable patterns constantly arising from the changing behavior of their constituent members or variables. For public policy situations displaying CAS behavior, we can think of ecosystems, social systems, economic systems, complex conflicts, the stock market, and many others. The interactions among these socio-ecological systems which comprise nature-society relationships are the heart of issues like climate change, species extinction and sustainable development. These systems and situations are unusually beautiful, exciting, and always changing, never boring. From an academic view point they are fascinating to study, because although they display such phenomenal variety, they can usually be described by a common set or subset of characteristics.

CAS are characterized by non-linearity, adaptability, attractors, emergence, adjacent possible, self-organization, inherent or ontic uncertainty, feedback loops and non-Gaussian distribution. Space limitations allow the description of only a few of these. Non-linearity implies that changes in one property of the system is not proportional to changes elsewhere in the same or a coupled system.
So, a slight change could result in significant impact, like the flapping of a butterfly wings in one part of the world which could cause a hurricane somewhere else. Emergence refers to novel patterns that arise at a system level that are not predicted by the fundamental properties of the system’s constituents or the system. What emerges is beyond, outside of, and oblivious to any notion of shared intentionality. Each agent or elements of the system pursues its own path but as paths intersect and the elements interact, patterns or interaction emerge and the whole of the interactions becomes greater than the separate parts. Each emergent element—material change, product, process, idea, or organization—opens new possibilities, called “adjacent possible.” For example, widespread distribution of personal computers opened the adjacent possible of the internet and the internet social media and so on. The actualization of any adjacent possible is not entailed by the new conditions even though it is made possible by them. The actualization may itself be an instance of emergent creativity.

A system that is formed and operates through many mutually adapting constituents is called self-organizing because no entity designs it or directly controls it. Self-organizing systems will adapt autonomously to changing conditions, including changes imposed by policymakers. For example, a market operates through all the independent decisions of buyers and sellers. Prices evolve through interactions. While markets can be influenced, they cannot be directly controlled. They will make their own—sometimes surprising and undesirable—responses to direct interventions.

Feedback loops refer to mechanisms in CAS by which a change in a variable result in positive (reinforcing or amplifying) feedback or a negative (dampening or balancing) feedback of that change. In other words, positive feedback loops accelerate change while negative feedback seeks to keep the system in autopoiesis or a balanced state. Attractors are states in which CAS consistently settle after being present in other more turbulent states and sometimes persist. Examples might include the norms and customs of a society or the harmonic swing of the pendulum.
So, what does an understanding of complexity mean for public policy?

Firstly, it means that policy makers, advisers, analysts, and students of public policy must give up the false notion that these systems can be controlled by humans and their policy or project interventions. Giving up control does not mean doing nothing, instead it means thinking differently, using different tools, and acting differently to embrace complexity. As such it means working with the system rather than on or against the constantly changing adaptive system.

The implication for policy design is that policies now need to be iterative, building in room for course correction, continuous real time monitoring, and using multiple perspectives.

For example, while cost benefit analysis will continue to a useful policy appraisal tool, it will be necessary to combine this with other tools that allow the non-linear dynamics of the system to be understood.

These could include, for example agent-based models, causal loop diagrams, social network analysis, behavioral insights, and human centered design thinking. As policies seek results at some point in the future and in the face of ontic uncertainty and unpredictability, tools designed to learn into the future include scenario planning, strategic foresight, and design thinking.

Secondly, it means measuring results differently. Most public policies and programs continue to be designed using linear deterministic logical frameworks. The design logic is that inputs and activities will lead to outputs, which when used by the intended beneficiaries will lead to outcomes and desired impacts. Several simplifying assumptions must be made to allow this approach to valid. It works well in simple and even in complicated situations but not in complex situations.
This implies that we should be able to distinguish between simple situations in which cause and effect are direct and obvious like in a recipe or building a school, complicated situations in which cause and effect are correlated but separated by many steps, like sending a rocket to the moon and complex situations when cause and effect are not correlated. Here effects are seen as constantly changing patterns and outcomes are not proportional to inputs. Fortunately, there are useful sense making frameworks like the Cynefin Framework or the Stacy matrix that allow us to do this. Once we know that we are dealing with a complex adaptive systems situation then our monitoring and evaluation tools change as well as what we measure and evaluate.

**Dr. Naresh Singh** is a professor at the Jindal School of Governance and Public Policy. He is also the director of the Centre for Complexity Economics, Applied Spirituality and Public Policy.
ACKNOWLEDGEMENTS

This magazine would have been incomplete without the valuable insights and contributions made by several individuals. Thank you for helping us lay the foundation for The Ordinary Mercantile.

**Faculty Members**

Prof. Subhasish Ray (Faculty Advisor to Arthaniti)
Associate Professor, Jindal School of Government and Public Policy

Prof. Naresh Singh
Professor and Director, Centre for Complexity Economics and Applied Spirituality for Public Policy

**Student Writers**

Muskan Bhargava
Jindal Global Law School

Nivriti Kailash Kumar
Jindal Global Law School

B.S. Ashish
Jindal School of International Affairs

Ishita Bharadwaj
Jindal School of Liberal Arts and Humanities

**Arthaniti’s Tech & Design Team**

**Heads**
Surampudi Phani Datta
Nandan Borker

**Members**
Ananya Singh
Hladinee Borgohain
ACKNOWLEDGEMENTS

Arthaniti’s Editorial Team

Heads
Jyot Shikhar Singh
Ruchi Yemul

Members
Aakrith Harikumar
Advait Kandiyoor
Akshay Purandare
Avi Tyagi
Sukeerthi Vijayaraghavan
Trisha Jawahar

We would also like to thank the entire team at Arthaniti for their constant support and guidance.