

Section A :

Achieving balanced regional development in India : challenges and strategies.

Scene 1 : Renu had a mild fever.

A Google search showed 12 doctors clinics in her vicinity.

Ramu's ~~son's~~ 3 year old son developed a mild fever which reached very high levels by midnight. The nearest hospital which was 40kms away declared him brought dead as Acute Encephalitis syndrome requires treatment within initial hours of onset.

Scene 2 : A leading newspaper reported massive food wastages in weddings conducted in a large city. The same page carried news of 2 children who died of nutrition deficiency.

Scene 3

Renu quit her 3rd job to
'explore' new options.
Renu was forced to drop out of
his school at 8 and support his
family income by working at a
dhaba.

All these 2/ two very contrasting
pictures are from the same country.
many more moderate pictures exist in
between these two extremes.

~~In~~ ^{At} the international world level,
India is a fast growing major economy,
with an opening demographic dividend
and a huge market. However, within
itself, India holds many regional
levels of development and opportunities.

Regional disparities : A picture.

NITI Aayog's sustainable development goal achievement reports on different states presents a picture of disparity.

Differences in regional development range from achieving health parameters (in terms of physical infrastructure, human resource availability, preventive healthcare) to education and other human capital formation critical.

Education disparities are manifested in 100% literacy in Kerala to around 65% in Bihar.

Higher education is in a bigger turmoil. Most of the esteemed

Higher education centres are located in a few cities (Delhi, Mumbai, Chennai, Bangalore). Eastern and North-eastern states lag behind.

In terms of employment opportunities, large scale migration clearly points to the fact that once again Eastern and North eastern India along with some hilly states have failed to satisfy the demands.

Infrastructure development in terms of connectivity (roads, ~~rails~~, multimodal transportation), logistics also manifest disparities.

These disparities are also displayed at subregional levels

(Kutch in Gujarat, Vidarbha, Eastern UP).

Finally, all this shows a bilateral relation with governance and policy implementation. Criminalization of politics, crony capitalism, laid back citizenry governance and unaware citizenry transform itself into poor service delivery and lack of development. This again feeds into a vicious cycle of low human development and creates a culture of acceptance.

Reasons for regional disparities:-

Many current legacies can be traced back to history. Industrialization in India started with cotton mills in

Bombay - Ahmedabad Pune region.
They thus, 'inherited' prosperity and
a culture of business and industry.
Most of the North-Eastern states saw
a lot of turmoil during their integration
post independence.

Similarly, post liberalization
most of the investments flew into already
stable and developed regions, thus
raising disparities.

Literacy rates, female agency
and participation directly translate
into population growth (2.1 in Kerala,
3.2 in Bihar, NFHS-4) and human
capital formation. It also impacts
political decisions as the citizenry
starts demanding delivery of work.

Centre-state relations, political stability, type of political system (dominant political party), government policy on legal, police reforms and ease of doing business are some other factors controlling regional development.

Problems with unbalanced regional developments: why should we be bothered?

To begin with, it leads to migration in search of better facilities. Apart from causing a psychological ~~loss~~ drain, it is an extra burden on the area receiving the inflow.

It also drains the area of outflow of its much needed human capital.

This causes a ~~perpetual~~ perpetual cycle of underdevelopment in the outflow area and unplanned, haphazard outgrowths in inflow areas.

Raising individual capability levels in all areas is a natural right and a constitutional mandate.

With underdevelopment, societies as a whole are trapped in ~~stagnating~~ issues like regionalism, communalism, secessionist tendencies and in some cases, rising militancy. This raises national integrity and peace issues.

Thus, it becomes important to take everyone along on the path of development as just like Peace, "underdevelopment anywhere is a threat to development everywhere".

What are the challenges?

The biggest hurdles are the 'reasons' of disparities themselves. An area is underdeveloped because of (as identified in previous section) various loopholes in infrastructure, financing, administration, cultural and historical legacies.

High population leads to overburden on resources and is also a reason for high fertility rate growth. Thus, the multiplying the challenge.

All this also means low human capital development and combined with low physical capital, no economic growth model can predict

Perpetual growth in such a scenario.
Vote bank politics, criminaliz-
ation of politics, governance inertia
all add to challenges.

Populist pressures (loan
waivers for example) on an already
starved state exchequer add to the
misery. Financial devolution from
Centre, tied schemes, unitary tilt of
federal structure leave little space
for states to grow with innovation.
A one size fits all approach and top-
down dictats cause hindrance.

Issues in implementation of
73rd and 74th amendments - ranging
from low gram sabha participation,

State finance corporation commission,
SEC exploitation, to encroachment
of rights of local governments repeat
the centre - state story identified
above at the state - local government
level. This creates unbalanced devel-
opment within the states.

So what should be done? Strategies

Given the importance and
challenges in addressing balanced
regional development, a few strategies
can be followed...

Enhancing cooperative and
competitive federalism through

NITI Aayog.

Vijay Kelkar recommends
to grant financial powers to NITI

Attempt to balance financial federalism and reduce arbitrariness which has emerged after dissolution of Planning commission.

Similarly, a bottom up approach and revival of local self government by plugging in loopholes is a must.

Municipal bonds, ratings of urban local bodies, direct devolution from central funds, clear demarcation of their powers must be considered.

Apart from state wise data on achievements of schemes, district wise data must be collected and analyzed.

Increasing education and health budget in states as envisaged

Under the National health policy and National education policy.

International collaborations and national collaborations with eminent institutions should be considered for colleges and universities in backward areas. Faculty training, infrastructure development must be considered.

Government policy overhaul in terms of land acquisition, power, water, market linkages are needed for promoting industrial development particularly for SMEs, who depend on states for resources like cheap power, water. This would enhance productivity and growth and create employment opportunities.

States must also focus on legal facilitation of agricultural reforms. Passing Model land leasing Act, Contract farming act, Model livestock and agriculture Act, shedding APMC Acts are a must. Promoting Food processing industries, focusing on roads and other logistics infrastructure can help.

✱ Increasing female labour force participation - through maternity benefit acts, Paternity benefit Act, skill training of women would enhance overall productivity, give agency to women and address issues like fertility rise, nutrition deficiency, education and human capital formation.

Finally, raising citizen awareness to bring overhaul in election process and governance.

For example, in Kerala, showing money power can go against a politician.

An informed electorate also causes good governance as administrators are on their tips because the electorate uses its rights.

A holistic overhaul can ensure no child dies of malnutrition (opening scene 2) or ^{avoidable} health complications (opening scene 1) and Ramu, just like Ramu (opening scene 3) can choose the career of his choice.

At its 75th independence day, ~~the~~ India should aspire for regional inclusiveness.

Section B

'Ease of doing Science' needs to complement
'Ease of doing Business' for long term
growth and dynamism of the nation.

Around five centuries ago,
a small island nation in Western
Europe saw massive technological
progress. People were ~~later~~ entrepreneurial
and considered their work as
worship. Its government promoted
entrepreneurship and innovative
finances (equity) gave a financial
backup. Great Britain was to
rule the world for centuries
to come!.

^(EODS)
Ease of doing science provides
innovation, solutions to problems and
new ideas. ^(EODB)
Ease of doing business provides
a way to implement those ideas in a
viable way. Both have their importance
and complement each other.

Ease of doing science and India:

India saw a massive leap
in global innovation index and reached
52nd rank in 2018.

Rising number of publications,
research papers, patent applications,
all point towards a tilt ~~is~~ towards
a scientific bent of mind. Rising number
of individual and university based
space ventures (student satellites to begin
with), show that even sky is not the
limit.

Similarly, India jumped to 17th rank in ease of doing business. Various government efforts ranging from IBC, single window clearances, e-governance, multimodal transportation thrust helped.

India now has an ambitious target of becoming a US\$5tn economy by 2022. For this, we need to focus on improving ease of doing business, ease of doing science and finally extracting synergies from complementarities created by the two.

How do they compliment each other?

As identified in the beginning, EOS creates an idea and provides solution to a problem. EOS creates opportunities for viable implementation from that idea. Once it is successful, profits are reaped back into further research and development. This is how the industrial revolutions (3 already in operation and the 4th in transition) have worked. This is what creates a virtuous cycle of productivity and income and innovation.

Endogenous growth theories by Lucas and 2018 Noble prize winner Paul Romer point to the importance of technology and human capital formation in research and development to

ensure sustained economic growth of nations and rise in per capita incomes.

Historical experience of Britain, France, Dutch, Portuguese and point to the importance of synergies between the two.

Within India, a wave of startups, particularly in ICT point towards the fact that given ideas, a conducive ^{business} ~~work~~ environment can harness capabilities of youth and take a nation to a growth transition path.

At individual and society levels, it creates positive externalities and a culture of entrepreneurship and innovation (Silicon Valley and back home, Bangalore are examples).

Above all, it reduces a nation's dependence on foreign technology and allows it to freely manage its international relations without any constraints. ISRO is a good story of indigenous ease of doing science without foreign dependence. India faced the tyranny in initial post independence years when it was dependent on foreign imports for machinery and technical skills.

Moreover, indigenous scientific discoveries ~~can~~ can easily focus on localized needs. Carrying forward the ISRO example, EMISAT, ~~LA~~ CARTOSAT, GSAT-7 are examples of satellites launched for local Indian purposes.

Similarly, research in public necessities like drugs, medical equipments, way of teaching ensuring education in vernacular language to the inaccessible hinterland population require local research and ease of doing science.

What are the challenges?

Apart from individual challenges in both EODS and EODB, there are challenges related to creating synergies between the two.

In EODS, - low thrust on quality of research and high on quantity, low motivation and initiatives in esteemed universities, low foreign collab-

Orations, low private sector involvement, thrust on routine learning in schools and no appreciation for innovation, disincentivizing R&D (For example by DPCO, drug and medical equipment prices are capped). ~~These~~ are some of the problems.

In GODB, contract enforcement, port infrastructure, skewed transportation pattern (60% freight by road), low liquidity, labour laws, environment clearances, underdeveloped debt markets are some of the issues.

For creating synergies, mismatch between demand and supply of research, low compensation

and profitability of corporations (due to government regulations like DPCO),
overdependence on replication of
foreign research and ideas instead
of customization as per local needs,
are issues.

What should be done?

For improvement in EODS - schemes
like Atal innovation mission, Atal
tinkering labs must be promoted.

Increased seminars, competitions,
science school trips should be promoted
to create a culture of scientific tilt
in school students.

thrust on peer to peer evaluation
of research papers and foreign
collaborations must be promoted.

Incentif Incentivising private
investment in research on emerging
technologies like internet of things,
machine learning, big data analytics
to ensure India's transition to Industry
4.0.

Commercialization of space
sector with proper regulations so that
ISRO can focus on enhancing space
innovations and private sector can take
up routine work.

For improvement in GOOB:

Enhancing thrust on
e-governance, single window clearances,
real time tracking of application
status, reducing logistics cost,

modification of labor laws,
enhancing credit availability is a
must.

For creating synergy and
complimentarities between GOB and
EOS :

Industry - institute collaboration
to guide the research effort as
per the need of emerging demands
of industry.

Moving towards income based
subsidy for essentials from price
based subsidies that create market
distortion and disincentivize research.

Promoting individual research.
Renting of apparatus in Government

institutions when not in use is a step in right direction.

Enhancing IPR regime to ensure incentivized domestic R&D and also foreign technology investment when FDI comes in.

Using ICT to enhance governance for providing EODB. PRAGATI window, realtime monitoring AWAS App are examples of EODS improving EODB.

Promoting research in defence and private procurement would create employment opportunities and enhance entrepreneurship.

Similarly, commercialization of space results in EODS and EODB growing together. Team India, Shruva India are examples.

India completely skipped the gains from previous industrial revolutions. This time, it has the perfect combination of a growing and vibrant economy, strong macro-economic credentials and an opening demographic dividend for half a century. ~~As~~ As ~~the~~ Industrial Revolution 4.0 is based on technology, together promoting EODS and EODB would result in a sustained and dynamic growth pattern for India.