

outlines iron-steel industry as highly polluting industry, significantly delayed environment clearance is restricting the possibilities of commercially mobilising proven and potential resource bases. It is this limitation that justifies installation of production capacities by Arcelor Mittal in Bokaro with Steel Authority and Gumla as its indigenous plants.

(ii). ALUMINIUM

This metallurgical industry though marked its genesis during the colonial times, most of the attempts proved to be abortive in the sequential time frame. This sector therefore is formally taken to have been initiated from the second plan period. Locationally, this metallurgical industry reveals raw material orientation and as more than 60% of input-cost correlating to electricity, it makes cheap electricity orientation as its characteristics. Among the major producers, near

balancing status of public and private players are outlined. In the public sector, Indian Aluminium Company (INDALCO) with its functioning plant at Hirakud (OD), commissioned in second plan period; and youngest and largest aluminium producer National Aluminium Company (NALCO) with its functioning plants in Angul and Koraput (Odisha) are included. Additionally bauxite-oriented Ratnagiri Plant of Bharat Aluminium (BALCO) with majority stake of union government also represent the function public sector enterprise.

In the private sector, Hindustan Aluminium Company (HINDALCO) acquired by Aditya Birla Group of Companies with functioning plant at Renukut (UP) along with Bharat Aluminium Company (BALCO) - Korba Plant (CH), and Madras Aluminium Company (MALCO) - Mettur Plant (TN), acquired by Sterlite Group of

Companies, are included

Aluminium as the versatile metal plays significant role in the overall development of economy. Designated as universally accepted metal, it is used primarily in generation & transmission of electricity, manufacturing of aeroplanes, rail-coaches, bus-bodies; is utilised in building defence, nuclear and space technology accessories, part from its utilisation in construction, utensil-making as traditional activities. Since 1991, de-licensing of the sector made cascading increase in the private participation leading to market-oriented growth. As a leading producer of aluminium, India represent diversified and large market along with rich potential reserve of bauxite. The sector however reveals absence of coal linkages with law-and-order trouble in the bauxite mining areas as fundamental challenges

along with scarcity of electricity as the sector reveals electricity-oriented characteristics. Mobilisation of this sector is thus more focussed towards inclusive and mutualistic growth orientations.

Sterlite Group of Companies as the dominating private player have voluntarily picked up the Corporate Social Responsibility in devoting max<sup>m</sup> of 5% of the annual profit towards the well being and economic growth of the local dwellers in its bauxite mining areas. The mutualistic orientation is best interpreted in the long term agreement between Tata Power and Sterlite, and Jaya Prakash Hydro and Aditya Birla Group of Companies in sustaining each others requirement.

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#### INDUSTRIAL REGIONS & COMPLEXES IN INDIA

These regions include :-

- (i) NCR - Rohilkhand Cluster
- (ii) Mumbai - Pune Cluster
- (iii) Ahmedabad - Vadodara Cluster

(iv) Chota Nagpur Cluster

(v) Hooghly Cluster

(vi) Southern Indian Cluster

### INDIA - ROHILKHAND

- Interstate location
- Benefits of centrality
- Large northern Indian market
- Rich agrarian hinterland
- Developed industries :
  - Food processing
  - Textile
  - Consumer Durables
  - Petrochemicals
  - Pharmaceuticals
  - Automobile
  - Mini-steel
  - Sugar
  - Paper
- Prominent industrial cities :
  - Delhi
  - Gurgaon
  - Ghaziabad
  - Noida
  - Mathura
  - Moradabad
  - Meerut
  - Muzaffarnagar
  - Saharanpur

## MUMBAI-PUNE

- Intra-state in nature
- Involves benefit of Mumbai Sea Port, Suez Canal Route, crude oil, natural gas reserves, rich agrarian hinterland and one of the most developed industrial infrastructure
- Nature of developed industries :-
  - Oil Processing
  - Chemicals
  - Pharmaceuticals
  - Fruits processing
  - Sugar
  - Ship building
  - Automobile
  - Textile
  - Paper
  - Diverse range of consumer durables assemblage
- Important industrial cities :
  - Mumbai
  - Nasik
  - Kalyan
  - Bombay
  - Satara
  - Pune
  - Thane
  - Pimpri
  - Kolhapur

\* The industrial complexes of NCR-Rohilkhand Cluster includes :

- (a) Punjab Complex
- (b) Gorakhpur Complex

### a. Punjab Complex

- Benefit of richest diverse agriculture development and dense market
- Developed industries :-
  - Pharma
  - Automobile
  - Locomotives
  - Hosiery
  - Cotton textile
  - Fertilizers
  - Sports Goods
  - Range of food processing
  - Consumer durables assemblage
- Important industrial cities :
  - Amritsar
  - Roopnagar
  - Kapurthala
  - Jalandhar

### b. Gorakhpur Complex

- Smaller and less diversified
  - Benefit is pipeline infrastructure & rich agrarian hinterland
  - Developed industry is prominently :
    - textile - jute, cotton
    - Sugar
    - Paper
    - Fertilizer
  - Industrial cities :-
    - Gorakhpur
    - Basti
    - Azamgarh
    - Deoria
- } Eastern UP

## \* The Central Indian Industrial Complex : (Mumbai - Pune Cluster)

- Inter-state in location
- Centred around Nagpur (Mini Mumbai)
- Involves benefit of mineral resources, agricultural hinterland, efficient transport connectivity to both eastern Vishakhapatnam and western Mumbai port cities.
- Developed industries :=
  - Iron-Steel
  - Textile
  - Copper Smelting
  - Sugar
  - Paper
  - Cement
- Important cities :=
  - Nagpur , Bandra : MH
  - Bhilai , Surg : CH
  - Balaghat , Seoni : MP

### (iii) AHMEDABAD - VADODARA CLUSTER

- Genesis due to agglomeration diseconomies of Mumbai - Pune Cluster
- Intra-state location
- Benefits of most mobilised minor sea ports, rich reserves of oil and natural gas, rich & diverse

## agriculture and industrial infrastructure

### - Developed industries :=

- Petrochemicals
- Cement
- Sugar
- Pharma
- Cotton Textile
- Paper

- Big range of consumer durables with cascading envdred

Sarad (Detroit of Ahmedabad)

Sarad is known as the DETROIT of Ahmedabad (automobile)

### - Industrial Cities :=

- Gandhinagar
- Vadodara
- Kalol
- Anand
- Hazira
- Valsad
- Ahmedabad
- Surat
- Nadiad
- Bharuch
- Koyali

- \* The region includes well-integrated complex called Southern Kathiawar Complex benefitting from minor ports, hinterland, limestone reserves and agricultural hinterland.

### - Developed industries :=

- Salt Production
- Cement

• Textile

• Sugar

• Tobacco Processing

- Important Cities:

• Okha

• Porbandar

• Veraval

• Bhavnagar

• Amreli

### RAIPUR NAGPUR CLUSTER

- Locationally inter-state

- Benefitting from Shauwar and Gondwana coal with earliest mobilisation of core sector industrial infrastructure

- Developed industries:

• Iron-Steel

• Cement

• Automobile

• Locomotive

• Food processing

• Market based consumer durables assemblage

- Industrial Cities:

• Bokaro

• Dhanbad

• Sindri

• Jamshedpur

• Tharia

• Giridih

• Surgapur

• Buxarpur

• Ranigarh

• Chittaranjan

• Rowkela

• Sundergarh

} JH

} WB

} OD

## HOOGHLY DISTRICT

- Locationally intra-state
- Narrow belt of southern Hooghly
- Benefitting from Kolkata port, agrarian hinterland and navigable R. Hooghly
- Developed industries :

- |                   |                                             |
|-------------------|---------------------------------------------|
| • Petrochemicals  | • Automobile                                |
| • Fertilizer      | • Pharmaceutical                            |
| • Ship-building   | • Cotton, Jute, Silk textile                |
| • Food processing | • Big range of consumer durables assemblage |

### - Cities :

- |            |                           |
|------------|---------------------------|
| • Haldia   | • Kolkata                 |
| • Aligarh  | • Haora                   |
| • Titagarh | • Barrackpore • Chunchura |

\* The industrial complex Utkal Complex relates both to CN and Hooghly clusters. Benefit of Paradwip port hinterland, agrarian hinterland, coal and mineral reserves. Developed industry is iron-steel, fertilizer, pharmaceutical, aluminium,

jute and cotton textile, silk textile and range of market-oriented consumer durables assemblage.

Cities include Paradwip, Bhubaneswar, Talcher

Amugul, Cuttak and Dhamra.

Map: 27

Date: 02/05/2014

MEGACITIES (53)

- # J & K - Srinagar (received megacity status this census)
- # HP & UK - do not have megacity
- # Chandigarh, NCT Delhi
- # Haryana - Faridabad
- # Punjab - Amritsar, Ludhiana
- # RJ - Jaipur, Jodhpur, Kota
- # GJ - Ahmedabad, Vadodra, Surat, Rajkot

Date  
08/05/2014  
(vi)

## Lecture 72

### Southern PENINSULAR CLUSTER

- Largest industrial region
- Locationally interstate
- Benefits include peninsular Indian resources, 3 major port cities and southern Indian market.
- Important industries:  
Entire range of agro-processing, textile, sugar, metal-smelting, petrochemicals, pharmaceutical, fertilisers with range of market-oriented consumer durables assemblage
- S<sup>n</sup> Indian Detroit - Bangalore & Chennai
- Cities:

|             |           |              |      |
|-------------|-----------|--------------|------|
| • Mangalore | • Hassan  | • Mysore     | } KA |
| • Bangalore | • Mandya  | • Kolar      |      |
| • Chennai   | • Ennore  | • Coimbatore | } TN |
| • Salem     | • Tirupur | • Trichy     |      |
| • Dindigul  | • Madurai |              |      |

\* The industrial region relates to well-developed complex called Kochi Complex benefitting from this major port with petrochemicals, largest ship-building, fertiliser as imp. industries. Rubber and spices processing, paper

are other important industries. Ernakulam, Kottayam & Kochi are imp industrial cities.

## ROAD TRANSPORT

The primary category in surface transport network, road transport, in the country relates to one of the longest road length in the world. The nodal ministry — Ministry of Road Transport & Highways <sup>(MORTH)</sup> — correlates to the planning, implementation and monitoring of the road development programs in the country. Road sector is classified into 4 major categories called primary roads, secondary roads, rural roads and border roads.

It is primary roads that though accounts for ~2% of the total length correlates to more than 60% of the passenger & freight movement.

It is this sector that is in direct domain of MORTH and is referred as National Highways.

The secondary roads including State Highways and District Roads falls in the administrative control of the concerned state govts.

Rural roads accounting for 80% of total road network formally falls in the jurisdiction of the grassroots administration. It is since 1960's that the commissioning of Border Road Organisation have resulted in the demarcation of Border Roads that involves primary, secondary & even rural roads along 15200 kms of the land frontier of the country. Being strategically important, this category of roads are provided with similar level of priority as is with primary roads. The development of road sector in the country though is traced back since independence, commercial mobilisation in the development of global standard of road network is traced back from 1998-99.

The year marked absolute change in the road development policy and orientation, with mobilisation of BOT (Build, Operate & Transfer) participants in road development. The amendments incorporated

in the National Highway Policy included declaration of roadways as industry to facilitate ready-market borrowing ; complete removal of environment clearance obligation, progressive provisions of tax holidays, acquiring the land to develop roadside amenity by corridor developer along with financial participation of Highway Authority of India to upto 40% of the revamping cost of highways. These progressive provisions accelerated private participation and cascading growth of road sector. presently :-

- (i) NHDP (National Highway Development Project )
- (ii) PMBTY (Pradhan Mantri Bharat Jodo Yojana)
- (iii) PMRRP (Prime Minister's Road Reconstruction Plan for J&K)  
belongs to primary roads.
- (iv) RRP (Road Requirement Plan)
- (v) SARDP-NE (Special Accelerated Road Dev. Program for NE)  
belonging both to primary & secondary roads.

(vi) PMGSY (Pradhan Mantri Gram Sadak Yojana) for rural

In ~~road~~, development of expressways have been formally mobilised in the country involving Golden Quadrilateral i.e. expressway link between 4 megacity involving NH 8, NH 4 (46), NH 5 and NH 2; N-S & E-W Corridor under construction with ~ length of 7000 kms of expressway links between extreme cardinals of the country. The North-South Corridor from Srinagar to Kanyakumari & Kochi involves NH 1A, NH 1, NH 26, NH 7 & NH 47 as major constituents. The East-West Corridor from Silchar to Porbandar includes smaller lengths of large number of NHs with NH 31, NH 31C, NH 76, NH 8A, NH 8B being important. The major ports connectivity to expressway is also under construction & involves NH 8A (Kandla), NH 4A (Marmagao), NH 48 (Mangalore), NH 7A (Tuticorin), NH 5A (Paradwip) with ~ length of 500 kms.

The other mobilised components of NHDP supported by JBIC (Japanese Bank for Int'l Cooperation) & ADB (Asian Development Bank) primarily involves construction of bypasses, overbridges with 6 to 8 lanes in already developed expressways.

### PMBJY (प्रधानमंत्री भारत जोड़ो योजना)

Initiated in 2005, this road development program is mobilised in PPP (Public Private Partnership) mode with 14000 kms of recognised length of the NHs. that are not being mobilised under NHDP.

It includes the objective of developing efficient connectivity b/w the state capitals, district headquarters, imp. economic centres and tourist destinations, with selection of corridors on the basis of traffic density.

### PMRRP (Prime Minister's Reconstruction Plan for J&K)

For the state of J&K, involves Border Road Organisation with the efficient pavement construction of NH1A (Uri to Srinagar),

NH1B (Anartrag to Kishtwar) , NH1C (Uri to LOC)  
NH1D (Srinagar to Leh via Kargil)

### RRDP

Mobilised on the time-bound priority domain of motorable road connectivity in the Left Wing Extremism Affected States, involving both primary and secondary roads. ~5500 kms of length to be developed by MORTH by 2015 involving the states of AP, MH, OD, MP, CH, JH, BR and UP.

### SARDP-NE

Also includes primary and secondary roads with 2 to 4 laning to enhance efficient connectivity of capital cities, district headquarters and other economic cities to enhance all weather efficient connectivity of NE to rest of the country.

Mobilised length is ~7000 kms.

### PMGSY

The flagship program for rural road development as cent percent centre sponsored programme integrated with Bharat Nirman - the priority program for rural infrastructure development.

In all these programs mobilised with different orientations and partnerships, roadways have evolved as commercially more sound surface transport means in the country compared to railways.

### MARITIME REVOLUTION

Cascading growth of oceanic trade shipping lines, seaport infrastructure and inland waterways is collectively referred as maritime revolution.

In the wake of liberalisation, open economic setup with growing global interdependence as multiplying the trade directions, there was the multiplication in requirement of fleet capacity.

In India, in the domain of Shipping Corporation of India Limited, one of the largest shipping fleet among the developing countries is developed and maintained. Shipping Corporation of India is in the jurisdiction of Ministry of Shipping involves Kochi Shipyard, Hindustan Shipyard (Vishakhapatnam) and Hooghly Dock & Engineers Limited as the

major PSEs. From among these, Kochi Shipyard Limited the fully owned subsidiary of Shipping Corporation has largest ship-building and ship-repair capacity in the country. The oldest ship builder Garden Reach Factory, Kolkata is being non-operational due to the infrastructure modernisation. In the category of minor PSEs, Mazagon Dock and Goa Shipyard are included. Among the prominent private players in ship-building LNT, Bharti Shipyard and Aditya Birla Shipyard are included.

The second component of maritime revolution correlates to ~~Sea port infrastructure~~ development.

Sea-ports in the country are classified as :

<A> Major Seaports

<B> Minor Seaports

A. The Major Seaports

Accounting for 75% of the trade share of the country is confined along mainland shoreline and falls in the jurisdiction of union govt., under the provisions of Major Port Trust Act.

Locationally major seaports are distinguished as western and eastern seaports. W<sup>r</sup> Seaports commonly are the beneficiary of Suez Canal Trade Route and forms the examples of natural harbours. Specifications of the developed major ports adds to the diversity as Kochi relates to the benefits of the lagoon lake, Mangalore is capable of handling only small cargo vessels, Mormagaon is riverine port located at the mouth of R. Zuari, Nava Sheva (JNPT) forms the first seaport developed on BOT participation, Kandla benefitting from its navigable Gulf of Kutchch and Mumbai, the commercial capital of the country with the largest hinterland from among the major western port cities.

### E<sup>n</sup> Ports

The eastern port cities are commonly the beneficiary of Strait of Malacca Trade Route. Moreover, they all represent the examples

of artificial harbours. Individually, Chennai - the oldest artificial harbour; Vishakhapatnam - deepest artificial harbour; Kolkata, Haldia - riverine ports; Ennore - the first corporate port of the country reveals distinction. The other two seaports Paradwip & Tuticorin commonly reveals small hinterlands with Kolkata & Haldia involving largest hinterland from among the eastern seaports of the country.

#### B. MINOR SEAPORTS

The minor seaports falling in the jurisdiction of concerned state governments presently accounts for not more than 25% of the trade movements from the country. Correlating to entire length of shoreline (7516 kms), including islands, there are more than 200 minor seaports in the country, with near 170 still being paper operational.

Maharashtra have the largest no. of minor seaports but it is Gujarat State Maritime Board that have most efficiently mobilised the

minor seaports. Salaya, Mandvi, Okha, Bhavnagar makes important examples. Ratnagiri in Maharashtra, Karwar in KA, Kakinada in AP, Sharnu in OD, are the other important examples. Comparative analysis of seaport infrastructure development justifies minor seaports to be more favourable than major counterparts as the BOT participants in the development of container terminals are regulated by central tariff authority making major seaports attracting BOT players only on the grounds of Indian locational benefits.

Thro'out the 11<sup>th</sup> Plan period, therefore, minor seaports have registered convincing volume increase in the cargo movements.

### Inland Waterways

Inland Waterways Authority of India

commissioned in 1986 is the nodal authority for developing & maintaining inland waterways.

In India, potentialities of navigation is

highly restricted due to major regime fluctuations and cascading courses of peninsular rivers.

Of the mobilised National Waterways of the country, minor development have been achieved out of the referred potential of near 15000 kms. The developed National Waterways includes:

- (i) NW 1 : Bhagirathi - Hooghly River System, ~1600 kms ;  
From Allahabad to Haldia and is natural navigable track.
- (ii) NW 2 : Brahmaputra river system, some 890 kms from Dibrugarh to Dhubri ; naturally navigable track.
- (iii) NW 3 : West Coast Canal ; ~200 kms of length b/w Kollam to Kottayam ; first artificial waterway of the country.
- (iv) NW 4 : Kakirada - Puducherry Link Canal , ~1900 kms longest artificial waterway interconnecting Godavari, Krishna, Pennar and Palar rivers with Kolleru, the freshwater lake.
- (v) NW 5 : East Coast Canal ; ~600 kms ; Brahmani - Mahanadi - Talcher - Shamsha link canal ; artificial.

UP = Kanpur

Lucknow

Allahabad

Varanasi

Ghaziabad

Meerut

Agra

} Rohilkhand

Bihar = Patna

JH = Ranchi

Jamshedpur

Dhanbad

NE States = None

W.B. = Kolkata

Asansol

OD = None

MP = Indore

Bhopal

Jabalpur

Gwalior

CH = Raipur

Durg

MH = Mumbai

Pune

Nagpur

Thane with Vasai

Nashik and

Aurangabad

AP = Hyderabad

Vishakhapatnam

Vijayawada

KA = Bangalore (2011)

TN = Chennai

Coimbatore

Madurai

Tiruchirapalli

KR = (3rd most densely clustered state)

Kannur

Kozhikode

Malappuram

Thrissur

Kochi

Kollam

Thiruvananthapuram

Date  
06/05/2014

LECTURE # 74

GEOGRAPHY

INDIAN TRADE: TRENDS & PATTERNS

EXPORT PROMOTION MEASURES

The dominating service sector of the country, Indian external economies have evolved on consistent profile largely in the effect of globalisation and opening up of country's economic setup. The data analysis on the external economy for the last 3 FYs proves that among the developing & emerging economies Indian exports have maintained one of the highest growth rate quite at par with Chinese export growth rate. In addition though India is maintaining traditional constituents in the export and import segments there has been favourable commercial transition noticed in the recent past. Among the export constituents there is continuous decline in the share of primary products with continuous increase in the share of manufactured goods.

reflecting Value Addition Retention Capacity sustained in the country. Among the consistent constituent of exports from the country, gems & jewellery and petro-products have shown significant increase. In comparison, the import constituents mark significant decline in the electronic goods and capital goods imports though there is continuous increase in imports of precious metals (gold & silver) along with crude oil.

#### PATTERN

The trading channels from the country since 11<sup>th</sup> Plan period have marked up major modification compared to previous plan periods. In region-wise perspective EU and USA are depicting consistent decrease in the dominating status in the Indian external economy with continuous increase in the prominence of Asian & African countries.

In specific country-wise domain, >60% of Indian trade in terms of value correlates to

the countries like China, UAE, USA, Saudi Arabia, Switzerland, Singapore, Germany, Hong Kong, Indonesia, Iraq, Japan, Belgium, S. Korea, Kuwait & Nigeria.

In these patterns, enlarged negotiations and implementations of variable trade arrangements, India has engaged herself in, <sup>are</sup> reflected.

Among the important examples, EPA (Economic Partnership Agreement) b/w India and Japan, Comprehensive Economic & Cooperative Partnership Agreement b/w India & S. Korea and Bay of Bengal Initiative for Multi-sectoral technical and economic Cooperation (BIMSTEC) are the instruments of Indian presence.

#### # INDIAN TRADE

Indian trade in the state-wise profile largely reflects dominating status of states like MH, GT, TN, AP & KA which collectively accounts for ~65% of the trade share of the country.

However compared to EAG states these major players are presently reflecting stagnation with converging growth noticed in the case of

PB, OD & RT. In enhancing the participation of all the administrative blocks in the Indian trade ASIDE i.e. Assistant to States for developing Export Infrastructure & Allied Activities Scheme have been given priority in the 12th plan with primary focus on NE<sup>st</sup> states. In the other export promotion measures, <sup>following</sup> are prominent <sup>at</sup> present :-

- (A) SEZs (Special Economic Zone)
- (B) FTPMs (Foreign Trade Promotion Measures), 2012-13.

### SEZ

The Special Economic Zones were notified in the country as per SEZ Act-2005 that came into force from 2006. India has been one of the first countries to have recognised effectiveness of such zones and thereby declare Export Processing Zones (EPZs) way back in 1960s with Kandla being the first EPZ of Asia. These zones however failed to emerge as effective instruments in enlarging Indian

trade credentials because of multiple control, absence of desired infrastructure & instable fiscal regime. With SEZ Act (2005) implementation of these zones were induced as duty-free enclaves treated to be foreign territory within the country. In the initial phase all the notified EPZs at Kandla Surat Kochi Chennai Vishakhapatnam Santa Cruise (Mumbai) , Falta (Kolkata) and Noida (Dry Port, Delhi) were converted as SEZs. It makes one of the successful model in Indian export promotion with ever increasing number of proposed and notified SEZs. The development of these zones is now being cautiously demarcated in the areas that are non-conducive for forest, forestry or agriculture purpose that is ~40% of land area of the country.

### FTPMs

FTPM (2012-13) primarily incorporate continuation of export promotion capital goods scheme

along with introduction of support for export of green technique products, incentive for promoting labour-intensive sector, market & product diversification & enlargement of e-commerce.

### EPCGS : ¶

In the provision of zero duty export Promotion Capital Goods Scheme, the export obligation has been made to 25% of the normal export obligation for the exports of the products from NE<sup>n</sup> states along with notified industrially backward regions of the country.

### GTP :

In the support for export of Green Technique Products, 16 green technique products have been identified with export obligation for the manufacturing of these products has been reduced to 75% of normal export obligation.

### SPILIS

Support for promoting investments in labour intensive sector involves the important addition of upto 10% of the value of scrips to be

utilised by the exporters for duty free imports of reqd. products for cost-effective prodn.

### MPD

It represents enlargement of focussed-market and focussed-product schemes with enlargement of Vishesh Krishi Upaj Yojana and Gram Udyog Yojana.

### E-Commerce

With introduction of e-BRC (Bank-export Realisation Certificate), it involves the electronic transmission of foreign exchange realisation from the respective banks to the directorate general of foreign trade on daily basis.

# Geographical Thought

## I. Man-Environment Relation

(Dualism)

Determinism

German School

Possibilism

French School

## II. Quantitative Methodological Revolution (1960s)

↳ Came because Geography was becoming less scientific/more descriptive

↳ human behaviour was completely sidelined

## III. Behaviour Studies

Behaviouralism

Humanism

- Idealism

- Phenomenology

- ~~Existentialism~~ Existentialism

## IV. Radicalism (1970s)

↳ Welfare approach in Geography.

## V. \* Systems Analysis

## VI. \* Regional Synthesis (with Areal Differentiation).

## DUALISM IN GEOGRAPHY

Multi-disciplinary subject geography marked its beginning with the beginning of scientific-enquiry credited to pre-historic scholars. In the course of its development, it evolved diverse methods and ideologies generating Dualism. Among the identified Dualism with practical significance :-

- Human Vs Physical
- Contemporary Vs Historical
- Regional Vs Systematic
- Idiographic Vs Nomothetic
- Determinism Vs Possibilism, are included.

Among these, determinism vs possibilism makes the only ideological dualism relating to genesis and development of geography as a contemporary discipline. Development of these ideas are traced back to pre-historic times. However in formal orientations it corresponds to the first definition of geography i.e. the discipline engaged in analysing

man-environment relation. This definition involved determinism which treats nature to be more dominating in man-environment relation and possibilism which treats human capacity to be stronger than nature dictates.

### DETERMINISM

This ideology of man-environment relation identifies nature to be determining human course of action and man as a puppet following the dictates of nature with no capacity to overrule such dictates. Directly correlated to human technological capacity, determinism is identified with long-term existence among the two approaches of man-environment relation. The evolution of this approach is chronologically segregated into:-

- (i) Environmentalism
- (ii) Classical / Geographical Determinism
- (iii) Social Darwinism
- (iv) Neo-Determinism
- (v) Social / Cultural Determinism.

## Environmentalism

The passive phase of determinism largely correlating to pre-historic contributors involves extremely rigid analysis of man-environment relation with nature being provided with absolute dictating role reflecting the reality due to the lesser technological capacity possessed by human population. Among the contributors, Hecataeus (Father of Geography), Herodotus (Father of History) form the Greek scholars who attempted the analysis of tribal life in accordance to climate & relief of the location. This was enlarged by Strabo, the Roman Scholar, who in his 17 volumes of Geographic Treatise compared the tribal life of all the three known continents - Europe, Asia and Libya. In distinctive domain Eratosthenes and Aristotle analysed habitability to be regulated by climate in projecting that with increasing distance from

equator habitability ↑ . It is, however, Arab Scholar Ibn Khaldun, author of Muquadimah, who is considered to be first environmental determinist as he analysed rise and decline of human society and empire in absolute accordance to prevailing natural conditions.

Following him, one of the pillars of modern geography, German Scholar Kant, who contributed to environmentalism in describing human attitude to be regulated by environment with people of extreme climate being lazy & timid.

## ii. Classical / Geographical Determinism

2 out of 4 pillars of modern geography, German scholars Humboldt and Ritter propounded classical determinism. They defined determinism to be that approach of man-environment relation where environment involves stronger capacity in dictating human course of action. This formal

beginning of determinism also involved the beginning of distinction approach as Humbolt strongly supporting empirical inductive method of geographical enquiry emphasized that "regions bounded in similarity of natural conditions will have similarity in human response". Distinguished from him, Ritter who strongly followed empirical deductive method outlined "ANTHROPOCENTRIC" Determinism i.e. regions bounded in unity of natural conditions can have disparities in human response within the permissible limits of nature. This approach is also called 'Unity in Diversity'.

MAP =

Industry of the Country

06/05/14

Pharmaceutical :

Delhi

Mumbai

Kolkata

Kanpur

IDPL - largest pharma PSE

↳ Hrishikesh

↳ Gurgaon

↳ Hyderabad

Fully owned subsidiary :

(i) \* Bihar - Muzaffarpur (on E-W Corridor)

BDCL }

↳ Highway 57

(ii) \* IDPL - TN, Chennai

JV Sector Companies of IDPL

ODCL - Bhubhaneshwar

RDPL - Jaipur

# 2nd PSE : Hindustan Antibiotic Plant (Pune)

3 JV → MAPL : Nagpur

KAPL : Bangalore

MSDPL : Manipur State Drug & Pharma Ltd.  
in Imphal

# Other 3 PSE :

Kolkata :

BPCL

→ (Kanpur + Mumbai also)

BIL

Smith Stan Street Ltd.