Reindustrialization in Northeast China:
The Good, The Bad & the Unlikely

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Overview of Northeast Reindustrialization Strategies

Evidence of successful industrial revitalization

Strength of industrialization policies

Spatial implications & key concerns

Take Away: Key Lessons
Liaoning Province, Northeast Region
Liaoning province 15 year transformation:
- Model of planned economy (mining and heavy industry base)
- 1996-2003: Declining rustbelt
- Since 2003: Rising market force
  - SOE closed or restructured
  - UE high
  - Lack of public investment to upgrade aging industrial infrastructure
- Dramatic, ongoing restructuring repositioning the region regionally, nationally and globally
- Important investment + export base
Overview of Northeast Reindustrialization Strategies
Repositioning & Restructuring

- Global and national restructuring / repositioning
  - Potential to play key role in NE Asia cross border economic development
    - Tumenjiang Cross Border Strategy (ADB)
  - 3 National Strategies
    - Northeast Revitalization
    - Shenyang 1+7 economic region
    - Liaoning Coastal Corridor

- Golden Industry Corridor: Shenyang – Liaoyang – Anshan – Yingkou
  - Promotion of port-oriented industry
Central Government Initiative

- Established revitalization strategy (2003)
- Preferential policies
- Provincial revitalization office
- Specified industrial focus for Harbin, Changchun, Shenyang and Dalian
- Designated Shenyang as NE regional financial centre
- Designated Shenyang as one of 5 national economic centres (2010)
Shenyang (1+7) Economic Zone

- Metropolitan based strategy
- Supports specialization and complementarities by node
- Shenyang gains relatively more
- Yingkou only port in eco-zone: strengthens Shenyang-Anshan-Yingkou corridor
- Reinforced by HSR routing
Liaoning Coastal Corridor

- Specialization, expansion of port activity, development of industrial zones
- Nodes linked by coastal expressway
- Yingkou is only NE city in all 3 strategies – Port for 1+7 eco-region

1. Dalian Changxingdao Port Industrial Zone
2. Yingkou Coastal Industrial Base
3. Liaoxi Jinzhou Bay Coastal Economic Zone
   - Jinzhou Xihai Industrial Zone
   - Huludao Beigang Industrial Zone
4. Liaoning Dandong Industrial Park
5. Dalian Zhuanghua Huayuankou Industrial Park
Evidence of Success
Liaoning Province: GDP Performance

Doubled GDP in last 5 years (Nominal Data)

From laggard to leader in economic growth rate
Shenyang GDP Comparison

GDP of the major city in China, 2009

GDP for 2009
GDP growth rate
All sectors growing fast

- Mfg grew 31% annually - gaining share from very high base:
  - 46% of total GDP (up from 40% in 2005)

- 2ndary sector: 52% in ’09

- Finance & real estate fastest growing sectors: 45% & 44% annualized increase (’05-’08) respectively
- Anshan largest 3rd tier city
- Yingkou growing fastest
### ‘1+7’ + Dalian Comparative Matrix...

- **Shenyang-Yingkou corridor** - highest disposable income in 1+7

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<tr>
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<th>Urban population</th>
<th>Income</th>
<th>Retail Sales</th>
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<tr>
<td></td>
<td>2008 (million persons)</td>
<td>annual growth, 2005-08</td>
<td>Urbanization Level</td>
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<tr>
<td><strong>Dalian</strong></td>
<td>34.8</td>
<td>3.1%</td>
<td>60%</td>
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<td><strong>Shenyang</strong></td>
<td>45.0</td>
<td>0.7%</td>
<td>65%</td>
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<td><strong>Anshan</strong></td>
<td>17.6</td>
<td>0.2%</td>
<td>50%</td>
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<td><strong>Yingkou</strong></td>
<td>10.3</td>
<td>1.7%</td>
<td>46%</td>
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<td><strong>Fushun</strong></td>
<td>14.9</td>
<td>-0.3%</td>
<td>66%</td>
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<td><strong>Benxi</strong></td>
<td>10.5</td>
<td>-0.2%</td>
<td>67%</td>
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<tr>
<td><strong>Liaoyang</strong></td>
<td>7.9</td>
<td>0.4%</td>
<td>44%</td>
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<td><strong>Tieling</strong></td>
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<td>0.8%</td>
<td>32%</td>
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<td><strong>Fuxin</strong></td>
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<td>0.0%</td>
<td>45%</td>
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Steady but modest population growth rates, but surprising for older industrial and highly urbanized region

- Yingkou exception - growing fastest: partly annexation effect
- Anshan & Yingkou have rural-urban migrant potential

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Strength of Industrialization Policies
Highly successful economic restructuring

- Build on traditional strengths (pillar industries), particularly metallurgy and heavy equipment manufacture

- Utilizing selective SOE restructuring and privatization
  - Allowed to fail in spite of job losses

- Joint ventures and foreign investment (113 Fortune 500 businesses)
  - Inject capital + introduce more advanced technology and products

- Extend value chain and upgrade
  - Introduce IT
  - Greater investment in R&D – Shenyang currently invests 3-7% of industrial output value
Highly successful economic restructuring

- Focus on intermediate goods to high growth industries
  - Construction, automobile and ship building, new energy

- Diversify market: development of export markets continuing to grow its domestic market;
- Government role in expanding port capacity to support its growth

- Vocational training emphasized
- Highly urbanized + migration predominantly from within NE region

- Integrated spatial + economic restructuring:
  - Spatially decentralizing + clustering by specialization within cities for deeper supply chains
  - Specialization + integration in megapolitan system
Senior government support to facilitate private investment, spatial clustering and upgrading of infrastructure within cities and networked region

- Spatial policies and preferential investment policies: 1+7 Shenyang economic zone, 1+5 coastal corridor
- Provincial Economic Revitalization Office
- SOE policies
- Accessibility improvements: Priority investment in HSR, expressways, port capacity devt, industrial facilities
- Approval of local development plans ensure convergence

North America & EU blunter instruments:
- more private sector led, democratic politics led

Aggressive provincial and municipal economic leadership
- e.g., chasing firms such as Bombardier and Cessna
Local Spatial Integration, Implications & Key Concerns
Shenyang Spatial Development Strategy

Spatial Development Strategy

- National Pilot for new industrialization (2010)
- Global Top 10 in machinery tools, Top 5 in metallurgy
- Focus on 6 spatial development clusters, specialized by industry
  - Decentralized mfg activities
  - Golden Corridor:
    - Reduce population density
    - Platform for Modern Services
- Tertiary strategy less well articulated
  - Golden Corridor, New Finance + Trade Development Zone
  - IT lags: Hdqtr of Neusoft
Population Growth Rate by District

- Slow pop growth: Municipality growing at 0.7% per year (2009)
- Relocation from core to suburban areas:
  - N & S new town growth access: Dongling & Shenbei fastest growing districts
  - Southwest mfg corridor (Tiexi)
- Diversified mfg economy attractive to NE migrants
- Retain most university graduates
Residential Market

- 60% of new transactions beyond 3\textsuperscript{rd} ring road
- Hot spots between 2\textsuperscript{nd} & 3\textsuperscript{rd}
- Prices relatively low compared to other 2\textsuperscript{nd} tier Chinese cities
- Ring road becomes important connector of suburban and economic activity

Source: DTZ
Shenyang Spatial Dynamics

Southern subcenters developing quickly

Northern subcenter could emerge around HSR

Tiexi District restructuring largely completed: strong SW industrial corridor - Metro lines to centre

New industry & population locating beyond 3rd ring road
Golden Corridor assuming necklace form - extending, especially to south

Will be reinforced by Line 2 Metro - Extending to new towns

Severe traffic congestion within 2nd ring road
East-west silver belt (Line 1) less dynamic:

Under-utilized TOD potential at Line 1&2 intersection
Anshan Development Strategy

- Positioning:
  - Key city of South-central Liaoning
  - Capital of steel, resources, & equipment machinery mfg
  - Tourism & health city, logistic center, commercial centre
  - Emulating Shenyang’s economic & spatial development strategy
Anshan Spatial Dynamics

- Corridor devt uniform
- Lacks fnal nodes

“Real” city-life axis runs
E-W: 3 urban centers

At current pop growth rate, Tanggang new town
too large & diffuse an area

New town centre
too remote

Lack of E-W connectivity
between the 3 N-S functional axes
Anshan Critical Assessment

- Spatial concept – consolidation of industry to west, amenity to east sound planning
- High confidence in strong mayor reduces development risk
- Whole urban structure in flux, making planning difficult
  - Caution should be exercised to avoid over supply
- Overbuilding:
  - Too much leapfrogging, especially South Town
- HSR access advantage: only stop for express Shenyang-Dalian HSR
  - Anchors subcenter and creates unique premium land-use opportunities
Anshan Critical Assessment ...

- City life corridor too long, linear, uniform
  - Should focus on CBD and HSR-based subcentre
  - Danger of disinvestment in CBD if relocate municipal government & promote Tanggang new town expansion
- Need to reconsider tram lines / LRT routing
  - Line 1 routing OK
  - Require 2\textsuperscript{nd} line through E-W vitality corridor: could be extended to Qianshan tourism corridor
  - Trams inappropriate for long distances & widely spaced stations
Yingkou Economic Development Strategy

- Imitates 2nd tier port city development
- Port expansion to propel economy
  - Bayuquan Container Port: One of China’s ten 100-million-ton-class port, Catching up to Dalian
  - Xianren Island Petrochemical Industry Port: Phase 1 operating
- Port based industrial production bases
- Building on traditional industries
Yingkou Spatial Development Plan

- Five-points one-line coastal oriented development: 64 km long
- New Towns/nodes linked by coastal highway & LRT
- Southern nodes on HSR & Shenyang-Dalian expressway
- Pop forecast 2015: 1.5 million urban
Urban population concentrated in 2 nodes: Yingkou City & Baiyuquan

Baiyuquan fastest growing district

Xishi District losing pop

District Population & Growth Rate

- Xishi 160,000 -2%
- Zhanqian 270,000 1%
- Laobian 130,000 0%
- Bayuquan 330,000 2%
Critical Assessment

- Significant labour cost advantage vis-à-vis Dalian
- One node too many: - Beihai
  - Danger of dilution of investment & vitality
- Recommend two-city strategy:
  - Yingkou city, includes Coastal Industrial Base and New Xishi and existing CBD (Zhanqian District)
  - Southern city focused on Baiyuquan ETDZ
- Danger of conflict between heavy industry and beach tourism
  - Need more careful planning
Third Tier cities imitating second tier despite different tertiary functions, population size

Functional Separation & Dispersal
- Future donut cities?
- Loss of intensity
- Lack of integration among functional pieces

Too much in flux?
Key Lessons: Industrial Revitalization

- Government plays bigger role in restructuring
- Spatial redevelopment integral to economic restructuring
  - Clustering + regional specialization: deepening industrial structure
  - Global + local transportation linkages
  - Modern spaces for investment
  - Urban environmental quality
- Regional urban network linkages benefit major centre (Shenyang) relatively more
  - Global Cities phenomenon on smaller scale
  - Enables higher end business, professional, personal services
- Builds on existing strengths (Porter) rather than chase hot sectors
- Local vocational and in-house training critical to continued upgrading success
  - Lack top university or first mover advantage: migrants prefer closer opportunities
Key Findings – Local Redevelopment

- Final land use separation just as N. Am & EU exploring reintegration
  - Avoid going to extremes

- Excessive New Town Development
  - Need to be based on major infrastructure advantage: port, HSR stations, airports, municipal govt relocations
  - 3rd Tier dispersal: Risk donut effect, increasing leakage to regional centres, leapfrogging and poor transportation connections

- Tertiary sector not well understood
  - Role of intensity, critical mass
  - Greater differentiation in products: e.g., expressway / ring road based big box
  - Role of ring roads as suburban connector

- Missed opportunities to use public transit to shape form
  - High intensity nodes (necklace) not uniform corridor