Regional economic planning and industrial policy – global status quo

INTERNATIONAL CONFERENCE
“THEORY AND PRACTICE OF REGIONAL DEVELOPMENT"

Development Paths for Mongolian regions

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Structure of the presentation

- **Industrial policy – theory and background**
- Disruptions and innovations
- Industrial policy in regional planning
- Example Accession to the EU
- Example Strategy for Industrial Development in the Ukraine
- GIZ and UNIDO joining forces to support
A brief historical reminder on industrial policy

- Import substitution of the 1950s-70s
- Washington Consensus (Augmented Washington Consensus) of the 1980s-2000s
- Post-2008 revival of industrial policies (old or new?)

Arguments in favour and against IP

<table>
<thead>
<tr>
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<th>Against</th>
<th>In favour</th>
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<tbody>
<tr>
<td>Innate ability</td>
<td>Governments cannot ‘pick winners.’</td>
<td>Government can cut losses short once mistakes have been made</td>
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<tr>
<td>Competent bureaucracy</td>
<td>Countries lack the competent bureaucracies to render effective industrial policy</td>
<td>Countries do have (or can build) pockets of bureaucratic competence</td>
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<tr>
<td>State Capture</td>
<td>Industrial interventions are prone to political capture and corruption</td>
<td>Marketization policies like privatization are the source of state capture</td>
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<td>Evidence</td>
<td>Little evidence that industrial policies work</td>
<td>Many winners in a developing world are product of industrial policies of some sort</td>
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<tr>
<td>Desirable policy</td>
<td>A strong preference for horizontal as opposed to vertical industrial policies</td>
<td>Horizontal industrial policies are implicitly selective and industry-biased</td>
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Source: Radošević, adapted based on Rodrik (2004)
Key conceptual features of new industrial policy (NIP)

1. No actor has a full understanding of the situation > policy outcomes are unknowable ex ante > get the policy process right

2. The aim is to design policies that match institutional capacities > ‘Embedded autonomy’ institutional context

3. Require at least some elements of ‘experimentalist governance’

4. NIPs are ‘market friendly’ and pro-competition

5. Oriented towards both horizontal and vertical policy instruments

6. Guided by market and system failure rationales

7. Centres around the private sector and innovation ecosystem actors

8. Global Value Chains are considered as levers of technology upgrading

9. 7+ variations of NIP, I will show only 2 examples
Example: 2010 Product space maps

Source: Maragarita Kalmova, OECD, after Radosevic
Limitations of the product space method

- Trade data is only a proxy for the productive structure of an economy, and in some cases can substantially deviate from actual sectoral contributions to GDP.
- Differences in market structure across countries make export performance a better or worse estimate of productive capacities depending on trade openness, domestic market size, and other related factors.
- The potential importance of services exports in fostering economic growth is not accounted for.
- Trade data may not reflect actual value added of final exports due to geographically dispersed assembly industries (e.g. maquila) which could overstate the actual productive capacities of a country.

Source: OECD, 2012
What is Smart Specialisation?

- evidence-based: all assets
- no top-down decision, but
dynamic/entrepreneurial discovery
process inv. key stakeholders
- global perspective on potential
competitive advantage & potential
for cooperation
- source-in knowledge, & technologies
etc. rather than re-inventing the
wheel

= priority setting in times of scarce
resources
= getting better / excel with something
specific
= focus investments on regional
comparative advantage
= accumulation of critical mass
= not necessarily focus on a single sector,
but cross-fertilisations

Source: Landabasso (2013) after Radojevic
Smart specialization

- A policy concept to reconcile two logics
  - Vertical (not horizontal) prioritization
  - Dynamism, entry and competition, entrepreneurship
- Policy design matters
- Entrepreneurial discovery & new activities
  - Entrepreneurial knowledge
  - Discovery
  - Spillovers
  - Neither sectors nor individual firms are prioritised but new activities
- Structural changes
- Inclusiveness
The Policy Cycle

Institutional setup

Diagnosis

Strategy

M&E

Implementation

Policy

Institutional Setup

- State-Society relations
- Hegemony & embedded autonomy
- Institutional Setup analysis
- Typology: the four dimensions

Industrial diagnosis

- Baseline
- Benchmarks
- Threats and opportunities
- Policy feedback (M&E)

Industrial strategy

- Goals clarified, prioritised, quantified (desired impacts)
- Realistic timelines

Industrial policy

- Intervention areas
- Policy instruments
- Budget, responsibility
- Legitimisation, laws
Principle 1: Self-Determination

Situation: The task of developing an industrial strategy

Two options: 1) hire someone else to do it
2) do it yourself

Why you should DO INDUSTRIAL POLICY YOURSELF:

1. Relying on others to develop strategy/policy is expensive, not in line with national context and no one in the country will fully understand and appreciate

2. Doing it yourself may not result in the “prettiest documents” but will enhance effectiveness, feasibility and sustainability

Take Control of your Development
Benefits of an Objective-Oriented IP Approach

- Improves government transparency and legitimacy by providing a clear and persuasive rational for industrial policies
- Helps policy makers to craft a persuasive industrial policy vision that can garner the social and political support needed for effective industrial policy
- Ensures a context-appropriate industrial policy package which is aligned to national priorities
- Provides a framework for assessing a country’s current industrial policies in accordance with broader national development objectives
Institutional Setup as the Framework for Industrial Policy
Figure 5: Tradables and nontradables in resource-rich economies

Primary Sector
(Agriculture, Fishing, Forestry)

Secondary Sector
(Industry at large)

Tertiary Sector
(Services)

Non-Tradables

Agrarian Products, traded in local markets, not internationally
Internationally traded agrarian produce
Globally traded manufacturing industry products
Oil, gas, mining products, some energy products
International trade, logistics, transport, communication, IT and some financial services
Retail trade, national transport, construction services, retail banking, government services

Tradables

not concerned or grows
shrinks
shrinks
grows
shrinks
Tertiarisation of the economy

Contraction of modern agriculture
De-Industrialisation

Grows
Grows
Grows
Industrialisation in resource-rich countries

- Ongoing mineral resource dependence is part of the problem of most resource-rich countries with a lack of diversified industry and a lack of manufacturing employment.
- Resource-rich countries need industrial policy as much as / even more than resource-poor countries, but potentially have the resources for the purpose.
- Triple industrial policy needed (Helmut Asche)
  - „within“;
  - „in proximity“;
  - „at a distance“
- All three mandatory.
Exports from Special Economic Zones in selected Countries

→ African SEZ on a low growth path
Lessons learned

- SEZs remain controversial. They have had a mixed record of success to date regarding economic, environmental and social dimensions.
- A political framework has to be developed.
- The policy design should be established by a dynamic approach.
- The better a SEZ is planned, developed and managed the more likely it is to become a success. Therefore, the “SEZ lifecycle” reflects different stages in the lifetime of a SEZ which have to be performed adequately.
- The establishment of a SEZ requires a sufficient state capacity and concentrated political will.
- SEZ need to establish clear social and environmental standards.
- SEZ can’t be used as a short-term economic policy instrument. It has to be embedded into the national development strategy to minimize negative effects and generate economic benefits.

Homm, Sebastian GIZ, 3/16/2018
Lessons Learned: Lessons from Chinese SEZ

- Strong commitment of the government and accompanying by specific agencies, sometimes with private participation → Adaptation of the programme to the situation (in the beginning high FDI share, later strengthening of national investments)

- Provision of a well functioning infrastructure + Business Services (Seed Grants, Advisory services on legal and financing issues, import/export)

- Integration of the Diaspora to attract FDI

- Formulate clear benchmarks and targets to strengthen competition between Zones

- Right Location + Comparative Advantage are important (infrastructure, proximity to deliverers/raw materials/harbor) → SEZ don’t fit for rural economic development
SDG 9, target 9.2: Despite steady improvements in manufacturing output and employment, renewed investment will be needed in the least developed countries to build needed infrastructure and ensure the doubling of industry’s share of GDP in those countries by 2030.
Premature deindustrialization: Countries start deindustrialising at lower peak levels of industrialization

Peak manufacturing levels

GDP per capita when peak reached (1990 international $)

peak share of manufacturing employment

Rodrik (2013)
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• GIZ and UNIDO joining forces to support
Wealth of the digital economy

- **Internet economy:**

<table>
<thead>
<tr>
<th>Year</th>
<th>Share of global GDP</th>
</tr>
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<tbody>
<tr>
<td>2010</td>
<td>4.10%</td>
</tr>
<tr>
<td>2016</td>
<td>5.30%</td>
</tr>
</tbody>
</table>

- In some countries (like the US) 8% (2010) or even 12.4 % (2016)
- Forecasts vary a lot, in some cases even a negative development is predicted
Speed of digital change

• The global data volume in the landlines doubles every 40 Months, in mobile nets every 18 Months
• 2014 718 billion gigabytes, 2019 2000 billion gigabytes

• End of 2015: 3.2 billion ...
• Today 3.6 billion „online“ ...
... out of 7.5 billion people

• 90% of the people that are still „offline“ live in developing countries
Definition

“Industry 4.0 is the current trend of automation and data exchange in manufacturing technologies. It includes cyber-physical systems, the Internet of things and cloud computing.”

Production of a handlebar of a bicycle

First step: configurator
Stellt den Wunsch-Lenker zusammen und legt mit sämtlichen Informationen rund um den Lenker die Datengrundlage für alle weiteren Schritte.

Second step: call for offers
Findet passende mögliche Zulieferer, die den Lenker produzieren können.

Third step: selection of supplier
Algorithmus findet den geeigneten Zulieferer.

Fourth step: placement of order
Vergibt den Auftrag automatisch an den Zulieferer, der den Auftrag autonom annimmt.

Fifth step: fabrication
Zulieferer fertigt automatisiert den Fahrradlenker und liefert ihn an den Fahrradhersteller aus.

Abbildung 2: Die einzelnen Prozessschritte im Überblick

Abbildung 3: Peter Meiers Wunsch-Lenker
Figure 1. Leading Countries, Value Added in Manufacturing

Billion dollars, 2014

Figure 8. Average Monthly Wages for Selected Countries: 2000-2014
(U.S. dollars)

Source: Economist Intelligence Unit.
Notes: Because data are listed in U.S. dollars rather than local currency, changes to monthly wages may also partially reflect changes to exchange rates with the U.S. dollar. However, such data reflect average labor costs that U.S.-invested firms might face in their overseas operations.
Human Development Index & Ecological Footprint per person for nations

What is needed ...

World Biocapacity per person in 1961
World Biocapacity per person in 2011

Development: All people living well? U.N. Human Development Index (HDI)

Source: Global Footprint Network

Altenburg 2018
Energy sector

Electric power: Radical change in new investments

Sixty percent of new capacity in the last two years

IRENA 2016
Energy system transformation also in developing countries

**CAPACITY ADDITION IN LEADING INTERNATIONAL MARKETS**

- **US (GW)**
- **Japan**
- **China**
- **Germany**
- **India**

Solar energy capacity addition

Bridge to India, 2017 Report
Transport sector transformation taking off

Figure 1 • Evolution of the global electric car stock, 2010-16

Source: IEA
Environment-related patent applications to EPO, 1980–2010

Source: European Environment Agency
Other markets are growing, too:

Total U.S. Organic Sales and Growth, 2006–2015

Source: Organic Trade Association
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Steps to RIS3: Overly linear view of the process? Alternatives?

Step 1: Analysis of regional potential for innovation-driven differentiation

Step 2: RIS 3 design and governance – ensuring participation & ownership

Step 3: Elaboration of an overall vision for the future of the region

Step 4: Selection of priorities for RIS3 + definition of objectives

Step 5: Definition of coherent policy mix, roadmaps and action plan

Step 6: Integration of monitoring and evaluation mechanisms

(Radošević 2018)
Areas of competence in Bavaria

- Automobile
- Medical engineering
- Biotech and pharma
- Information & Communication
- Electronics
- Aerospace Industry
- Engineering
- Venture Capital
North Rhine-Westphalia in a nutshell

Satellite picture with light emitted by London, Paris and Ruhr region, courtesy of RUHR.2010

<table>
<thead>
<tr>
<th>NRW</th>
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<tbody>
<tr>
<td>Area</td>
<td>34,088 km</td>
</tr>
<tr>
<td>Population</td>
<td>18 million</td>
</tr>
<tr>
<td>Population density</td>
<td>526/km</td>
</tr>
<tr>
<td>GDP</td>
<td>522 billion €</td>
</tr>
<tr>
<td>Universities</td>
<td>68</td>
</tr>
<tr>
<td>Non-univ. research facilities</td>
<td>54</td>
</tr>
<tr>
<td>Technology centres/incubators</td>
<td>50</td>
</tr>
<tr>
<td>Technology transfer units</td>
<td>30</td>
</tr>
<tr>
<td>SMEs</td>
<td>763,000</td>
</tr>
<tr>
<td>Clusters</td>
<td>16</td>
</tr>
</tbody>
</table>

2009 Source: IT.NRW
16 clusters in NRW

http://www.exzellenz.nrw.de/
Structure

- Germany is a federal republic comprising 16 federal states (Länder)

- Berlin and the federal states are responsible for research and innovation policy (Economics and Research – 2 at national level and 2x16 in the individual states = 34 entities!)

- National and regional levels together finance the public part of the innovation system (1/3 public - 2/3 private)

- Most technology transfer structures (incubators, technology centres, clusters) are financed by the Länder and local district authorities

- The private sector undertakes its own research activities independently and cooperates with public structures if and when necessary

- -> A very complex structure!
Players

- Universities are a key element of the German innovation system (research and higher education)

- The most important non-university research institutions are:
  - Max Planck institutes (basic research)
  - Fraunhofer Society (applied research)
  - Helmholtz institutes (large-scale research facilities)

- Financers:
  - National Ministry of Research (BMBF)
  - Federal state ministries
  - German Research Society (DFG) which finances university R&D projects
  - Foundations, e.g. Alexander von Humboldt Stiftung (researcher mobility)
  - European Union
  - ...
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Accession to the European Union: Acquis communautaire

Chapter 20: Enterprise and industrial policy

EU industrial policy seeks to promote industrial strategies enhancing competitiveness by speeding up adjustment to structural change, encouraging an environment favourable to business creation and growth throughout the EU as well as domestic and foreign investments. It also aims to improve the overall business environment in which small and medium sized enterprises (SMEs) operate. It involves privatisation and restructuring (see also Chapter 8 – Competition policy).

EU industrial policy mainly consists of policy principles and industrial policy communications. EU consultation forums and Community programmes, as well as communications, recommendations and exchanges of best practices relating to SMEs aim to improve the formulation and coordination of enterprise policy across the internal market on the basis of a common definition of SMEs. The implementation of enterprise and industrial policy requires adequate administrative capacity at the national, regional and local level.
Accession to the European Union: Acquis communautaire

Chapter 22: Regional policy and coordination of structural instruments

The acquis under this chapter consists mostly of framework and implementing regulations, which do not require transposition into national legislation. They define the rules for drawing up, approving and implementing Structural Funds and Cohesion Fund programmes reflecting each country’s territorial organisation. These programmes are negotiated and agreed with the Commission, but implementation is the responsibility of the Member States. Member States must respect EU legislation in general, for example in the areas of public procurement, competition and environment, when selecting and implementing projects. Member States must have an institutional framework in place and adequate administrative capacity to ensure programming, implementation, monitoring and evaluation in a sound and cost-effective manner from the point of view of management and financial control.
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The EQuIP process for drafting the Industrial Strategy for Ukraine includes a variety of work tasks & formats:

- **Expert Group Meetings**
  - Facilitated by EQuIP policy process and tools
  - Lectures & Group Work
  - Stakeholder involvement
  - Open discussions

- **Core Drafting Group Meetings**
  - Consolidation of conclusions from EGM
  - Additional technical elaborations
  - Agreement on work tasks and responsibilities for drafting
  - Learning-by-doing

- **Preparatory work (before meetings)**
  - Propose concrete expectations and detailed agenda for EGM
  - Prepare content for EGM
  - Conduct preliminary analysis
  - Review relevant documents

- **Follow-up work (after meetings)**
  - Conducting additional analysis
  - Proposing priorities/focus
  - Drafting sections
  - Getting draft sections validated by decision makers in MEDT
Objectives of the Strategy

The analysis of the national development goals and the expected contribution of industry in their achievement as well as a search for solutions to the key problems of industrial development have made it possible to identify the following objectives of the Strategy of industrial development which can be considered as inter-sectorial priorities of Ukraine’s industrial policy in the mid-term run:

1. Modernisation and growth of industrial production
2. Regional industrial development
3. Improvement of the resource efficiency of the industry
2.1. *Increase of industrial production and processing volumes, especially in underdeveloped regions*, which should contribute to the *increase of the total production volume* in Ukraine, *improve the social situation and prevent the migration of workforce*. Presently, there are many partially or completely closed manufacturing facilities in many regions which could be *re-launched with lower starting costs* (thanks to the available buildings, infrastructure, local workforce etc.). At the same time, conditions are available for the *build-up of new production sites in different sectors* which can serve the domestic as well as international market.
2.2. Strengthening regional production chains

Participation of companies in regional and inter-regional production cooperation would have a synergy effect for the participants of such production chains due to strengthening or establishing integrated businesses aiming to manufacture products with a higher degree of processing, to operate infrastructure objects jointly etc. This process would require more workforce and thus have a positive impact on the social situation in regions as well as in the whole country.
Example Ukraine: new Strategy for Industrial Development

Areas of the Strategy implementation
“Modernisation and growth of industrial production”

• Attraction of foreign and domestic investments for industry
• Simplification of industrial activities (effective regulation)
• Reform of the technical regulation, standardisation and metrology system
• Creation of conditions for the development of competition in the industrial sector
• Improvement of the system of public-private partnership in industry
• Vocational training in line with the needs of industry
• Promotion of the digitalisation of industry
Example Ukraine: new Strategy for Industrial Development

*Areas of the Strategy implementation*

*“Regional industrial development”*

- Implementation of the industrial policy taking into account the economic and innovative *specialisation of regions*
- Development of *cluster* cooperation in the industry
- Dissemination of modern *organisational forms* for the support of business projects and innovation in the industrial sector
- Development of the *infrastructure* according to the needs of industry taking into account regional specifics
- Simplifying access to *raw materials* and ensuring their deeper processing
Example Ukraine: new Strategy for Industrial Development

Areas of the Strategy implementation
“Improving the resource efficiency of industry”

- **Awareness raising** for companies regarding available resource-efficient technologies
- **Promoting innovations and simplifying access** to investments for resource-saving technologies
- Implementation of efficient **regulation** in resource saving and use of renewable energy
- Implementation of efficient practices in **waste management** and the principles of **circular economy**
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EQuIP Goals

• Inclusive and sustainable industrial development
  → Including tools on employment promotion and energy efficiency
    • Enable countries to manage their own future
      • Move from supply-driven to demand-driven IP
      • Non-deterministic and transparent
      • Building local capacities for public policy
    • Evidence-based IP decisions
      • Address practical challenges with appropriate tools
      • Help make sure different policies are aligned
    • Holistic notion of development
EQuIP Tools

Institutional Setup

Economic Performance

Tool 1: Industrial capacity and growth domestic and export dimensions

Tool 2: Sub-sector competitive performance

Tool 3: Industrial and Export Upgrading

Tool 4: Diversification domestic and export dimensions

Tool 7: Global Value Chains

Social Performance

Tool 5: Industrial Employment and Poverty Alleviation

Tool 6: Greening Industry
- Energy Efficiency Module
- Material Efficiency Module

Drivers of Performance

Tool 9: Industrial capabilities indicators

Tool 8: Industrial Organisation and Firm Profiling at Sub-sector Level

Instruments for Implementation
Instruments for implementation as the Backbone for Industrial Policy

- Economic Growth
- Social Equality
- Poverty Alleviation
- High Employment
- Democratic Stability
- Universal Education
- A Healthy Society
- Green Economy

- Agriculture Policy
- Industrial Policy
- Labour Policy
- Health Policy
- Education Policy
- Internal Affairs
- Environment Policy

- Increase productive activities
- Deepen global market integration
- Maximize domestic value capture
- Generate productive employment
- Improve quality of employment
- Promote self-sufficiency
- Reduce Pollution
- Improve resource efficiency
- Ensure inclusive production

- Preferential Loans for newly registered businesses
- Study on land use planning
- Guideline for long-term policy planning
- Insurance for SMEs
- Consumption / Food Vouchers
- Unemployment schemes
- Competition Legislation
- Pension system
- Work guarantee
- Public Agency (Development Bank)
- Requirement for minimum export prices
- Tax incentive for firms located in target regions
- Export quota for basic consumer goods
- Permits for natural resource extraction
- Cluster Development for SMEs
- Information Services on Business Incubation
- Infrastructure Forecasting Systems
- Data Bank on hazard mapping

NATIONAL DEVELOPMENT GOALS
INDUSTRIAL POLICY
OBJECTIVES
INSTRUMENTS
Thank You for Your Attention

www.equip-project.org

Training of Trainers, 16.7.-27.7.18 in Bonn:

https://institute.unido.org/equip-training-of-trainers

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