Industrial Master Plans: International Comparison of Contents and Structure

Kenichi Ohno (GRIPS) November 2009

Master Plan Types

- Overall industrial (covering multiple sectors)
- Sector-specific (electronics, garment, etc.)
- Issue-specific (SMEs, TVET, etc)
- Regional development plans
- Technical blueprints

We will discuss only the first three types.
Vision

- A statement of importance, role, positioning of industry in question.

“Thailand is the automotive production base in Asia which creates more value added to the country with strong automotive parts industry.” (Thai Automotive)

“Motorcycles should continue to be used to ensure people’s mobility and reducing infrastructure cost per year, provided that problems of traffic congestion, traffic accidents, environment, and industrial property rights are solved...” (Vietnamese Motorcycles)
Targets

- Long- and/or medium-term targets, both qualitative and quantitative.
- What and how many targets should be set depends critically on sector characteristics, private capability, and policy capacity.

“By 2006, (i) produce 1 million cars with 40% exported; (ii) produce 2 million motorcycles with 40% exported; (iii) export 200 billion baht of high-quality spare parts; (iv) localization of 60%” (Thai Automotive)

Situation Analysis

- Current status, future potentials, and impediments to growth.
- (Optional) general features of industry, global trend, international comparators
- The amount of situation analysis depends on the existing knowledge of stakeholders.

Ex. past performance, capacity, export and import, localization, domestic products and producers, quality, cost, productivity, competitiveness, demand forecasts, etc.
Analysis of Policy Issues

- In-depth analyses of a small number of key issues as background to the action plan (action plan must solve these problems).

Ex. Human resource, technology, cost reduction, quality improvement, forward and backward linkage, marketing, material procurement, export promotion, infrastructure services, etc.

Action Plan Matrix or Action Mechanism

- An action plan matrix is a large table that specifies actions in detail and in advance (part of the main text or separate volume)
- High-level monthly committee chaired by top leader (only for a few important issues)
- Annual budgets and projects coordinated by a strong hub organization

While process-oriented approaches are more flexible, they require strong leadership or hub organization.
Standard Format of Action Plan Matrix

Triangle of Hope Project, Zambia, 2007 (excerpts)

<table>
<thead>
<tr>
<th>Recommendation (action)</th>
<th>Activities (sub-action)</th>
<th>Status</th>
<th>Expected output</th>
<th>Status</th>
<th>Activity period</th>
<th>Responsibility</th>
<th>Monitoring indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promote investment in cotton production by allocating land to appropriate producers</td>
<td>1. Identify land to be held in MACO trust</td>
<td>Little progress</td>
<td>Land for cotton production identified and secured</td>
<td>Not yet started</td>
<td>Jun. 2007</td>
<td>MACO (main), MoL (sub)</td>
<td>Monthly report</td>
</tr>
<tr>
<td></td>
<td>2. Write to MoL for title deed</td>
<td>Not yet started</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Develop admin mechanism for farm blocks</td>
<td>Done</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- This approach requires much effort in constructing and monitoring the matrix. It is suitable for countries lacking strong industry leaders or hub organizations.
- Effective mechanisms for *drafting* and *monitoring* must be established.

Optional Materials

Other materials can be cited in main text, or placed in appendix or background papers.

- General explanation of the industry, global trend
- Performance review (past master plan results)
- SWOT, benchmarking, competitiveness index, HRV trees, other country rankings.
- Surveys, empirical studies, etc.

*These should not be the main part of the master plan.*
Required Features

- Targets should be ambitious but realistic.
- For compactness, *relevance* should be the criterion for inclusion of any materials.
- All components should be logically linked.
- Flexibility and adaptability—because all industries and countries are different.
- Implementability is crucial.
- Effective, not superficial, stakeholder involvement in the entire process.

Relative Scope of Government versus Market

- Proper domain of government depends on (i) industry characteristics, (ii) private sector capability; and (iii) policy capability.
- For each sector and at each point in time, policy reach should be defined pragmatically – state and market must be mixed but with varying weights.
### General Rules

<table>
<thead>
<tr>
<th>Setting targets and specifying products, producers, investment, technology, location, markets, etc.</th>
<th>Greater scope for government</th>
<th>Greater scope for markets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial capital investment (sunk cost)</td>
<td>Large</td>
<td>Small</td>
</tr>
<tr>
<td>Gestation period</td>
<td>Long</td>
<td>Short</td>
</tr>
<tr>
<td>Market volatility</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Product type</td>
<td>Industrial inputs</td>
<td>Consumer goods</td>
</tr>
<tr>
<td>Private sector maturity and dynamism</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Government policy capability</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Trust between government and business</td>
<td>High</td>
<td>Low</td>
</tr>
</tbody>
</table>

Note: this table shows general tendencies. Government scope may be larger when many conditions on the left are met, and market scope may be expanded when many conditions on the right are satisfied. There is no need to have all conditions satisfied for either conclusion.

### Comparison of Master Plan Structure

![Comparison of Master Plan Structure Diagram]

- **Vision**
- **Targets**
- **Situation analysis**
- **Policy issues**
- **Action plans**

**Countries and Plans:**
- Malaysia: Third Industrial Master Plan
- Thailand: First Automotive Industry ES
- Thailand: Second Automotive Industry ES
- Thailand: Second Automotive Industry
- Thailand: Small and Medium Enterprises
- Thailand: Supporting Industries ES
- Thailand: Food Industry ES
- Thailand: Leather, leather goods, footwear ES
- Indonesia: National Industrial Dev. Policy
- India: National Strategy for Manufacturing
- India: Industrial Policy of Maharashtra State
General Remarks

- All master plans are different; it is difficult to find one prototype for all countries to emulate.
- Vision and targets usually take up 5-15%.
- Some M/Ps mainly provide situation and issue analyses; others carry a large action plan section.
- Executive summaries are sometimes used more often and therefore more important than the main text.

Thailand Automotive M/P 2007-2011

- Vision 2011 ➔ 4 Objectives ➔ 5 Strategies ➔ 12 Action Plans
- Strong coordination by Mr. Vallop of Thailand Automotive Institute
- Effective stakeholder networking – FDI, local producers, government, donors
- Process-based action mechanism – annual budget and projects for implementing actions (no matrix)
Thai Automotive Strategies and Action Plans

- Strategy 4: Human Resources in the Industrial Sector
  - 9. Personnel Development
  - 10. Personnel Training Development in the Educational Sector

- Strategy 1: Productivity Thrust
  1. Parts Manufacturer Development
  2. Lean Supply Chain
  3. Best Practice Benchmarking

- Strategy 2: Market Expansion Thrust
  4. Local Market Development
  5. Export Promotion
  6. Fundamental Structure System and ITS Development

- Strategy 3: Engineering Thrust
  7. Technology Road Map and Development
  8. Test and Engineering Centers of Excellence

- Strategy 5: Investment and Linkages Thrust
  11. Domestic and Overseas Investment Promotion
  12. Industry Linkage Development

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Thailand Supporting Industry Promotion M/P 1995

- Thai supporting industries = component suppliers of automobiles and electronics.
- Master plan drafted in 1995 – still used as a checklist of policy actions and their relations.
- Action plan summary (3 pages only)
Table III-1 SUMMARY OF PROPOSED PROGRAM

<table>
<thead>
<tr>
<th>Proposed Programs</th>
<th>Objectives</th>
<th>Supporting Measures</th>
<th>Operational Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Policy &amp; Legislation</td>
<td>Unification of SMEs' policies, Subcontracting promotion and improvement of subcontracting</td>
<td>Establishment of basic law</td>
<td>Parliament, DIP, MOI, DIP, DOW &amp; concerned</td>
</tr>
<tr>
<td>2. Market Development</td>
<td>Subcontracting intermediation</td>
<td>Information supply, market fair, existing export enterprises, etc.</td>
<td>BOI, DIP (NSIDP), DIP, DIP (NSIDP) FTI</td>
</tr>
<tr>
<td>3. Technology Upgrading</td>
<td>Improvement of soft work in production &amp; quality control skill</td>
<td>Providing clinic service</td>
<td>DIP, FII, DIP</td>
</tr>
<tr>
<td>4. Financial Support</td>
<td>Expansion of SMEs financing scheme</td>
<td>Promoting loan agents network</td>
<td>SPFC, IFC, etc.</td>
</tr>
<tr>
<td>5. Upgrading of Management</td>
<td>Improvement of management skill in manufacturing</td>
<td>Training management by cost analysis method</td>
<td>DIP, KMITT, DIP</td>
</tr>
<tr>
<td>6. Investment Promotion</td>
<td>Investment attraction of foreign SMEs</td>
<td>Assistance for new investors'</td>
<td>BOI, DIP, DIP</td>
</tr>
</tbody>
</table>

Table III-2 INTERRELATION BETWEEN PROPOSED PROGRAMS AND AREAS OF ASSISTANCE

<table>
<thead>
<tr>
<th>(Remark)</th>
<th>XX</th>
<th>X</th>
<th>Area related to an involved in the program</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Policy &amp; Legislation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1 Basic law of SMEs development</td>
<td>XX</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.2 Improvement of SMEs development</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>1.3 Improvement of SMEs financing scheme</td>
<td></td>
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<tr>
<td>1.4 Preparation of industrial statistics</td>
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<td></td>
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</tr>
<tr>
<td>2. Market Development</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1 Expansion of SMEs activities</td>
<td>XX</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>2.2 Subcontracting assistance program</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Technology Upgrading</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.1 Technical assistance service program</td>
<td>XX</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>3.2 Expansion of SMEs technology standards system</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>3.3 Public technical centers activation program</td>
<td></td>
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<tr>
<td>4. Financial Support</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.1 Improvement of SMEs financing schemes</td>
<td>XX</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.2 Assistance for SMEs in managed training</td>
<td></td>
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</tr>
<tr>
<td>5. Upgrading of Management</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.1 Entrepreneur re-education program</td>
<td>XX</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.2 Continuation of Entrepreneur Development Project</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.3 Expansion of SMEs technology standards system</td>
<td></td>
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<tr>
<td>5.4 Public technical centers activation program</td>
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<tr>
<td>6. Investment Promotion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.1 Grouped investors attraction program</td>
<td>XX</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.2 Entrepreneurial promotion program</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.3 Assistance for new investors'</td>
<td>XX</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Mr. Panuwat Triyangkulsri, Thai Ministry of Industry, Department of Industrial Promotion
Ethiopia: Leather and Leather Product M/P 2005 (2 volumes)

- “Master Plan” – situation analysis, vision (TDA), targets and actions
- “Business Plan” – detailed targets and actions for footwear, garment, leather goods
- Too many numerical targets – policy domain should be reduced.
Ethiopia: Basic Metal and Engineering M/P

- General industry information ➔ situation analysis ➔ “gap analysis” (capacity vs. demand forecasts) ➔ vision/mission/goals ➔ action plan matrix
- Structure is simple and reasonable.
- General industry information is appropriate.
- The question is quality and concrete contents of strategies, goals, and action plans. More information and analyses are needed to upgrade them.

Recommendations for Ethiopia

- Priority industry M/Ps should be drafted or revised over medium term (PASDEP II period and beyond).
- About 10 industrial M/Ps at maximum.
- Relatively compact M/Ps (50-100 pages).
- Action plan matrix with reasonable size (not too large) with proper monitoring mechanism.
Suggested Master Plan Structure for Ethiopia

- Introductory materials (brief)
- Overview – vision, goals, positioning (5-10%)
- Situation analysis, past and current (20-30%)
- Analysis of selected policy issues (20-30%)
- Implementation procedure (brief)
- Action plan matrix (40-45%)

Background papers containing surveys, technical appendix, etc. may be prepared in separate volume.