Kaizen as an Industrial Policy: Towards Economic Transformation of Africa

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Associate Professor, University of Shizuoka
Visiting Scholar, Columbia University

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Current Positions
• Associate Professor of Economics, School of International Relations, the University of Shizuoka, Japan. (April 2015 – Present).
• Visiting Scholar, Columbia University. (March 2013 – Present)
• Visiting Scholar, Research Institute of JICA (April 2015 – Present).
• Adjunct Researcher, Waseda University. (October 2014 – Present).

Academic Qualification
• Ph.D., 2014, Waseda University, Tokyo, Japan.
• M.A. Economics with Distinction, 1999, School of Economic Studies, the University of Manchester, UK

Professional Experience
• Senior Research Fellow, JICA Research Institute, Tokyo. 2013 – 2015
• Director, Research Program Division, JICA Research Institute, Tokyo. 2011 – 2013
• Director, Private Sector Development Division, Department of Industrial Development and Public Policy, JICA, Tokyo. 2008 – 2011.
• Special Assistant to the President, Office of President, JICA, Tokyo. 2007 – 2008.
Major Publications in 2015 and 2016

(2016)


(2015)

RECENT PUBLICATIONS

INDUSTRIAL POLICY and ECONOMIC TRANSFORMATION in AFRICA
Akbar Noman & Joseph E. Stiglitz, Editors

THE LAST MILE IN ENDING EXTREME POVERTY
Laurence Chandy, Hiroshi Kato, and Homi Kharas, Editors
AGENDA

1. Why Economic Transformation?

2. How does Kaizen contribute to the transformation? - Kaizen as a part of Industrial Policy

3. What is the role of the government? - Preliminary findings from a Kaizen project in Latin America
WHY ECONOMIC TRANSFORMATION?
1. JOB CREATION FOR YOUTH IS THE KEY

Size of the working-age\(^1\) population

Million

- Africa
- India
- China
- Southeast Asia
- Latin America
- Europe
- North America
- Japan

1  Population aged 15–64.

SOURCE: United Nations World Population Prospect; McKinsey Global Institute
2. A DECLINING TRENDS OF MANUFACTURING SECTOR

Manufacturing as a percentage of GDP in Sub-Saharan Africa

A premature shift to service industries (retail trade and distribution)

(Modified by author based on John Page (2013))
(Shimada 2016, based on Gronnengen Africa Sector database as reported by deVries, Timmer, and deVries (2013).
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KENYA: VALUE ADDED SHARE

(Shimada 2016, based on Gronnengen Africa Sector database as reported by deVries, Timmer, and deVries (2013).)
ETHIOPIA: VALUE ADDED SHARE

(Shimada 2016, based on Gronnengen Africa Sector database as reported by deVries, Timmer, and deVries (2013).
ETHIOPIA: LABOR SHARE (EXCLD. AGRICULTURE)

(Shimada 2016, based on Gronnengen Africa Sector database as reported by deVries, Timmer, and deVries (2013).)
3. PEOPLE ARE MISALLOCATED

Labour productivity by sector in Africa
2005, 100=average productivity across all sectors

- Agriculture
- Trade
- Other services
- Construction
- Manufacturing
- Transport
- Finance
- Utilities
- Mining

Source: “What is driving the ‘African growth miracle?’” by M. McMillan and K. Harttgen, April 2014

Economist.com
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SPEED AND GRADUALISM: PREPARATION FOR NEXT STAGE

- Shoemaking
- Leather processing
- Floriculture

SMEs Support
Share of SMEs in Japan

- **small**: 86.5%
- **medium**: 13.2%
- **large**: 0.3%

(Source: Author based on the data by SMEs Agency of Japan)

<table>
<thead>
<tr>
<th>Country</th>
<th>Total</th>
<th>% SME</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU-28</td>
<td>22 346 729</td>
<td>99.8</td>
</tr>
<tr>
<td>Belgium</td>
<td>566 006</td>
<td>99.8</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>312 608</td>
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<tr>
<td>Czech Republic</td>
<td>1 007 441</td>
<td>99.9</td>
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<tr>
<td>Denmark</td>
<td>213 358</td>
<td>99.7</td>
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<tr>
<td>Germany</td>
<td>2 189 737</td>
<td>99.5</td>
</tr>
<tr>
<td>Estonia</td>
<td>58 408</td>
<td>99.7</td>
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<tr>
<td>Ireland</td>
<td>146 741</td>
<td>99.7</td>
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<tr>
<td>Greece</td>
<td>726 581</td>
<td>99.9</td>
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<td>Spain</td>
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<td>France</td>
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<td>Italy</td>
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<td>99.5</td>
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<tr>
<td>Cyprus</td>
<td>46 139</td>
<td>99.9</td>
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<td>Latvia</td>
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<td>99.8</td>
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<td>Luxembourg</td>
<td>29 265</td>
<td>99.5</td>
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<tr>
<td>Hungary</td>
<td>528 519</td>
<td>99.7</td>
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<tr>
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<td>26 796</td>
<td>99.8</td>
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<td>Netherlands</td>
<td>862 697</td>
<td>99.8</td>
</tr>
<tr>
<td>Austria</td>
<td>308 411</td>
<td>99.7</td>
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<tr>
<td>Poland</td>
<td>1 519 904</td>
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<tr>
<td>Portugal</td>
<td>793 235</td>
<td>99.9</td>
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<tr>
<td>Romania</td>
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<tr>
<td>Slovenia</td>
<td>119 644</td>
<td>99.8</td>
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<tr>
<td>Slovakia</td>
<td>398 392</td>
<td>99.9</td>
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<tr>
<td>Finland</td>
<td>226 373</td>
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<td>Sweden</td>
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<td>99.8</td>
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<tr>
<td>United Kingdom</td>
<td>1 703 562</td>
<td>99.7</td>
</tr>
<tr>
<td>Norway</td>
<td>278 899</td>
<td>99.8</td>
</tr>
</tbody>
</table>

(Source: EU 2016)
FORWARD/BACKWARD LINKAGES

KAIZEN: FOUNDATION OF QUALITY

Working Practice

Innovation and Technological Know-how

Level of Sophistication

(Modified by this author based on John Sutton 2013)
THE GENESIS

Tokyo after WWII

• Hyper-inflation due to short supply of goods

• Policy priority: Increase production
PRIORITY PRODUCTION SYSTEM

• There was no coal available for industrial production.

• Allocate necessary resources to produce coal (70% of the government finances went to this sector alone).

• With increased production of coal, basic goods, fertilizer and electricity were produced.

• Further enhance the production of coal.
HORIZONTAL AND VERTICAL SPILLOVER

Spillover and crowding-in effects among sectors (Iron, Coal, Ship building, Electricity, Infrastructure....)

Spillover to supporting industries
Soon after the war, the GHQ released communist leaders from prison to liberate Japan.

However, the labor movement became too active and combative, and spread all over Japan.

In 1946, more than 300,000 workers joined a strike.

In 1955, the Japan Productivity Center (JPC) was established to receive aid from the US; however, labor union was against the movement.

(For more detail, refer to Shimada (forthcoming))
THREE PRINCIPLES

• Three guiding principles of Japan’s productivity movement
  1. Expansion of employment
  2. Cooperation between labor and management
  3. Fair distribution of the fruits of productivity

• 1955-1961: Aid from the US: 3,986 people trained in the US.
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   1) Prepare for Next Stage: Speed and Gradualism
   2) Forward and Backward Linkages
   3) Three guiding principles

3. What is the role of the government? - Preliminary findings from a Kaizen project in Latin America
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WHAT IS THE ROLE OF GOVERNMENT?

• **Researchers**: Go Shimada and Prof. Tetsushi Sonobe (GRIPS)

• **Project**:
  – A Kaizen project in Central America and Caribbean Region ("CEFOF project")

• **94 companies in 8 countries**:
  – Guatemala, Belize, Honduras, El Salvador, Nicaragua, Panama, Dominican Republic, Costa Rica

• **Project period**: 2009-2013
PRELIMINARY FINDINGS

1. Kaizen is useful, but managers are not necessarily convinced of its usefulness from the beginning.
2. Three principles were achieved.
   1) Employment increased
   2) Good management-employee relationship was generated
   3) Wage raised
3. It is not always easy for companies to introduce Kaizen. The governments need to support them.

(The detail results of tables will be available as a journal paper soon)
ASYMMETRY OF INFORMATION

- Asymmetry of information leads to economic inefficiency (Parate optimality not achieved).
- New management introduction = high cost (including opportunity cost)
- Under the asymmetry of information, the amount of investment will become much less than optimal level.
CONCLUSION

1. It is essential for Africa to transform its economy to manufacturing sector for sustainable growth in the future.

2. *Kazien* provides a platform for macroeconomic growth in the future, promoting SMEs.

3. Government support is key for SMEs to introduce *kaizen*.
   1) Kaizen is useful.
   2) Employment increased, wage raised
   3) **It is not always easy for SMEs to introduce *kaizen* without support.**
Finally, *Kaizen* makes you happy!

<table>
<thead>
<tr>
<th>Do you think Kaizen made you happy??</th>
<th>Managers</th>
<th>Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>90 (100%)</td>
<td>84 (96.6%)</td>
</tr>
<tr>
<td>No</td>
<td>0 (0%)</td>
<td>3 (3.4%)</td>
</tr>
</tbody>
</table>
Thank you!