

Quality and Productivity Improvement: JICA's *Kaizen* assistance

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Today's presentation

- Part 1 reviews kaizen, productivity and quality improvement.
- Part 2 shows JICA's assistance in various countries.

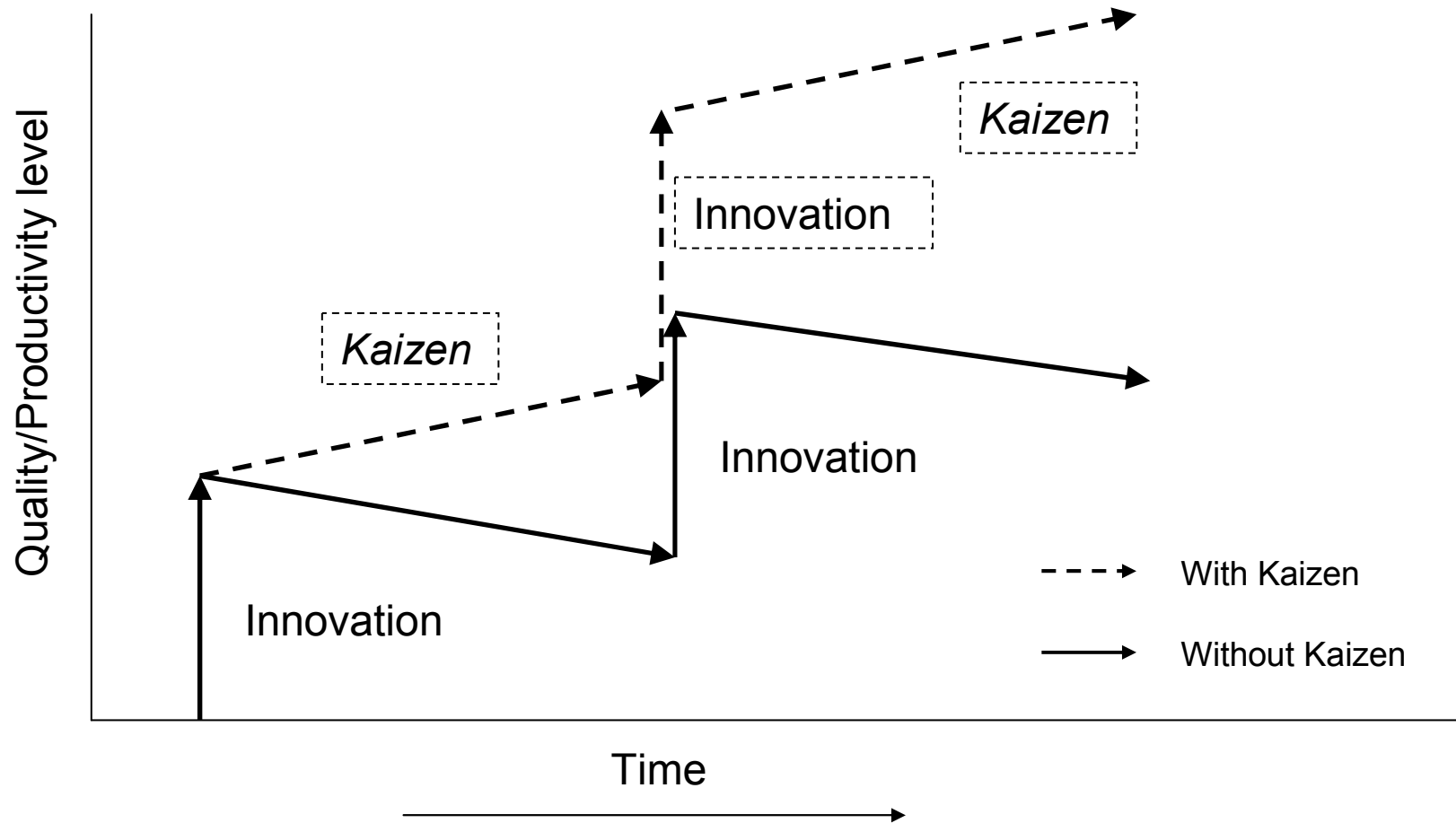
Kaizen

- A Japanese philosophy that focuses on continuous improvement through all aspects of life.
- In business: incremental & continuous improvement with the involvement of the entire workforce
 - “If no money, use your brain”: An effort to improve productivity, quality and cost without additional investment (= no new machines) first
 - Participatory: Top/senior management, middle management, supervisors, and workers – all need to participate to continuously improve.
 - Bottom-up: specific ideas of improvement come from the front-line (e.g. factory floors).
 - Emphasis on process as well as results.

Source: Masaaki Imai, “Kaizen: The Key to Japan’s Competitive Success”, McGraw-Hill/Irwin, 1986.

Kaizen & Innovation

- *Kaizen* and innovation complement each other.



Quality improvement is ...

- Drs. W. E. Deming & J. M. Juran introduced American-style (“scientific”) quality management to Japan.
 - By adopting appropriate principles of management, organizations can increase quality and simultaneously reduce costs – by reducing waste, rework, staff attrition and litigation while increasing customer loyalty.
 - The key is to practice continual improvement and think of manufacturing as a system, not as bits and pieces.
 - Introduced PDCA (= Plan-Do-Check-Act) cycle



Productivity is ...

Productivity is, above all, an attitude of mind.

It is an attitude that seeks the continuous improvement of what exists.

It is a conviction that one can do better today than yesterday, and that tomorrow shall be better than today.

Further, it requires constant efforts that adapt economic activities to ever-changing conditions, and the application of new theories and new methods. It is a firm belief in the progress of humanity.

(from the report of Rome Conference, 1958 -European Productivity Agency)

Japan's Productivity Movement

- Three principles of Japan Productivity Centre (Est. in 1955)
 - Expansion of employment
 - Cooperation of labour & management
 - Fair distribution of the fruits of productivity
 - Among employers, workers and consumers
- “Productivity movement”
 - Movement (noun): “... 3. a group of people working to advance a shared cause. 4 a series of organized actions to advance a shared cause.” (Oxford English Dictionary)

Kaizen = Quality & Productivity Improvement

Examples of *Kaizen* activities

- QC circles
 - “7 tools”
 - *Muda* (= waste) elimination
- 5S
 - = *seiri* (sort), *seiton* (systematize), *seiso* (sweep),
seiketsu (standardize), *shitsuke* (self-discipline)
- Layout improvement
- Shortening of setup times
- ... and more:
 - suggestion box, TPM, TQM, JIT, *Kanban*, TPS

JICA's assistance

- JICA has assisted in capacity development of quality/productivity organizations.
 - Start-up stage: Hungary, Brazil, Egypt
 - Development stage: Singapore
 - Transformation stage: Thailand
- Pilot/demonstration + action planning: Tunisia
- Regional: Central America (Costa Rica)
- Others
 - As a project component
 - Experts, group training

CD in start-up stage (1)

- Hungary (1995-99): Productivity Development Project
 - Hungarian Productivity Center (est. 1994)
 - Outputs:
 - In-company facilitators trained
 - Company-level cases collected
 - PR/promotion implemented
 - C/P's technical capacities upgraded
 - Network expanded
- Egypt (2007-2011): Productivity and Quality Improvement Center (= “Kaizen Center”, est. 2006) Project
 - On-going

CD in start-up stage (2)

- Brazil (1995-2000): Brazilian Institute of Quality and Productivity (IBQP-PR) Project
 - JICA support in Paraná State, one of 5 institutes est. by the Gov.
 - JICA's role: capacity building
 - Staff training: Seminars/training →OJT
 - Developed a Brazilian concept of “Systemic Productivity”
 - *Ex-post* evaluation (2004) saw positive impact.
- After the project, IBQP became a “non-profit private entity” in 2002.

CD in development stage

- Singapore (1983-90): Productivity Development Project
 - National Productivity Board (NPB; est. 1972)
 - JICA assisted in enhancing NPB capacities for:
 - Management and supervisory training;
 - Training in labour-management relations and small group activities;
 - Occupational safety and health;
 - Promotion of productivity;
 - Development of Resource Centre; and
 - Planning and research
 - Through TOT, staff upgrading & training material dev.



NPB Singapore has evolved ...

- JICA's assistance to NPB seen as a successful case of transferring “productivity technology”.
- NPB acquired capacity to provide productivity training for other countries.
 - For JICA
 - Third-country group training course on productivity delivered by NPB from 1990-95.
 - Courses on productivity management organized for 17 SADC countries from 1997-2002.
- NPB has evolved:
 - Productivity & Standards Board (PSB) in 1996
 - SPRING (Standards, Productivity & Innovation Board) in 2002

CD in transformation stage

- Thailand (1994-2001): “Quality and Productivity Improvement Project”
 - Thailand Management Development and Productivity Centre (TMDPC) (est.1962) turned into Thailand Productivity Institute (FTPI) in 1995.
 - Gained more autonomy to better serve the private sector.
 - JICA supported in enhancing FTPI staff capacity in:
 - Productivity consulting services
 - HRD & labour-management relations consultancy
 - Research
 - Productivity campaigns & promotional activities
- 1997 Asian economic crisis highlighted its importance.

Pilot/demonstration & planning

- Tunisia (2006-08): “Study on the Master Plan for Quality/Productivity Improvement”
 - Identifying pilot enterprises
 - Consultant training (incl. OJT)
 - Material development
 - Master Plan & Action Plan
 - To expand to other business processes
 - Component quality, design quality, market quality
 - To spread out
- Project on Quality/Productivity Improvement (2009-2012)

Other forms of assistance

- Long-term & short-term experts
- Training courses:
 - In Japan
 - In 3rd countries
 - Through JICA-Net
- Kaizen as a project component
 - Indonesia (to be presented by Mr. Homma)
 - Bangladesh
 - Demonstration of *Kaizen* techniques
- Regional approach
 - Central America (in Costa Rica)

Example of Kaizen results

- Bangladesh

Table 1.2-17 Summary of Improvement (%)

Company	Spinning		Weaving	
	M/C stoppage	Production	M/C stoppage	Production
A	38.8	18.4	27.7	13.0
B	24.2	13.6	11.1	15.1
C	53.8	6.2	19.8	9.8
D	65.9	5.6	35.5	15.7
Average	45.7	11.0	23.5	13.4

Note: Performance in six months from January 2008

- Tunisia

- 8 enterprises achieved more than 20% productivity increase, 3 achieved >50% increase.
- Another cut nonconformity rate from 20% to 0%
- Another reduced die replacement from 110 min. to 70 min.
Cf. out of 27 enterprises

Lessons

- Kaizen can bring about results for companies with commitment.
- Dual roles of Kaizen centres:
 - Private: Services to companies
 - Public: Propagation/dissemination (e.g. campaigns)
- Challenges:
 - Trained C/P staff could become attractive enough to be recruited by the private sector.
 - Once enough understanding formed, a public-private entity may be appropriate.
 - To better serve the private sector
 - For the management of the centre (e.g. finance, HR)
 - Need to consider how (& when) to develop and mobilize private sector consultants

In summary ...

- Kaizen is “an attitude of mind”
 - Not just a management technique
- Kaizen is participatory:
 - Frontline knows the best. → Use your brains as well as your hands.
- Various “tools” exist.
 - 5S, QC circles, ...
- JICA has provided support in capacity development.