

# Strategy of Cluster-Based Development: KAIZEN, Microfinance, and Infrastructure

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# Economic Growth in Tanzania

- Tanzania has made incessant efforts in **state building** while some other countries have paid little attention to it.
- In terms of economic prosperity, Tanzania lagged behind many other countries.
- In recent years, however, Tanzanian economy has grown faster than many other economies.
- Moreover, economic growth in Tanzania has been more **inclusive**; that is, it has been more equitable and benefitting greater part of the population than many other developing countries.
- But some critics say that inclusiveness has not increased as much as expected. What to do to make the rapid economic growth more inclusive?

# Key to Rapid and Inclusive Growth

- it is **job creation** (not just for college graduates but) **for everybody**.
- So, let the **labor-intensive industries** grow.
  - Labor-intensive industries include not just garment industry, footwear industry, and other **light manufacturing industries**,
  - but also **some service industries**, such as hospitality services (restaurants and hotels), health care services, transportation services (probably lawyers and accountants are not included).

# Cluster-Based Development is Inclusive

- To start a business, one has to know how to produce the product, where to procure materials, and where to sell product ...
- These things are mysteries for laypersons.
- **In clusters**, however, “**the mysteries of the trade become no mystery but as it were in the air**” (Alfred Marshall).
- Anyone can easily start a business there.
- And this is why clusters attract new businesses.
- In other words, cluster-based development is **inclusive**.

# Entrepreneurs know why profitability has declined, but ...

- In clusters, however, profitability will decline as an increasingly large number of enterprises produce and sell the same low-quality product.
- Entrepreneurs know that they need to produce higher quality products, or produce the same products more efficiently, or do both, but they fail to do either.
- Instead they complain, “my uneducated rough workers do not know how to handle better materials necessary to produce a higher quality product.”  
“Why don’t you teach?”  
“They would not listen to me ...”



# Workers should learn skills

- To improve product quality or production efficiency (that is, productivity), enterprises need to use better materials and better machines.
- In order for such inputs to make a difference, they must be handled and maintained properly.
- Otherwise the use of expensive materials and machines will not make any profits but make losses.
- So, workers must learn about proper material handling and machine maintenance.
- But, where and from whom can they learn ?

# Where to learn skills?

- Workers' skill formation is achieved by
  1. On-the-job training: training within enterprise and
  2. Off-the-job training: outside training at vocational school, polytechnic, SIDO's training programs, and other training institutes.
- Off-the-job training is useful, but
- even for workers who have received off-the-job training, on-the-job training is indispensable.

# Managers should learn management

- But even if workers have acquired enough skills, they may not work hard. Moreover, their work motivation may be so low that they learn nothing on the job.
- Business owners and managers should be able to motivate their workers.
- But many owners and managers do not know how to motivate and workers.
- So, they should learn **management**.
- The questions arise as to how to learn management and what kind of management to learn.





# Everybody should learn in order to achieve rapid and inclusive growth

- To achieve rapid and inclusive growth, jobs should be amply created.
- For this purpose, labor-intensive industries, in which a large number of owners, managers, and workers are engaged, should be developed.
- To develop such industries, the capabilities of these people should be **improved**. This is why learning is so important.
- And to make the rapid and inclusive growth **sustainable**, the capabilities of the people engaged should be **improved continuously**.
- In the Japanese language, continuous improvement is **kaizen**.

# KAIZEN as an approach to improving capabilities

- It is the wisdom accumulated over generations in Japan to achieve further and further improvement of the capability of working people, who are not necessarily highly educated.
- KAIZEN is not exclusively for highly educated people, but it is friendly to everyone.
- Because it can improve the ability of everyone to earn income, KAIZEN is an **inclusive** approach.

# KAIZEN is human-friendly

- KAIZEN is more human-friendly than other approaches for productivity improvement.
- KAIZEN starts with neither lengthy speech nor hard training, but it starts with everyone in an office or workshop pausing in their labor and cleaning up their workplace.

# An example: A Garment Enterprises in China







Whiteboard with a schedule or production plan. The text is partially illegible but appears to include a header and a table of numbers.

Schedule	
1	2
3	4
5	6
7	8
9	10
11	12
13	14
15	16
17	18
19	20
21	22
23	24
25	26
27	28
29	30
31	32

700 12 11





# Start of 5S











'00 2 14

Rip  
M...















# Before



After a few hours (this is the very beginning)



# Beginning of Continuous Improvement

- While cleaning up the workplace, everyone wonders what chaotic place they have been working in.
- After cleaning up, everyone finds it is easier to work if things are put in order.
- They begin looking for a way to make their workplace neater and tidier so that they can work more comfortably and efficiently.
- So, KAIZEN is easy to start and a kind of fun. Everyone is motivated to go further and further.
- This is the beginning of the process of continuous improvement.



# An Example of the KAIZEN WAY of Thinking

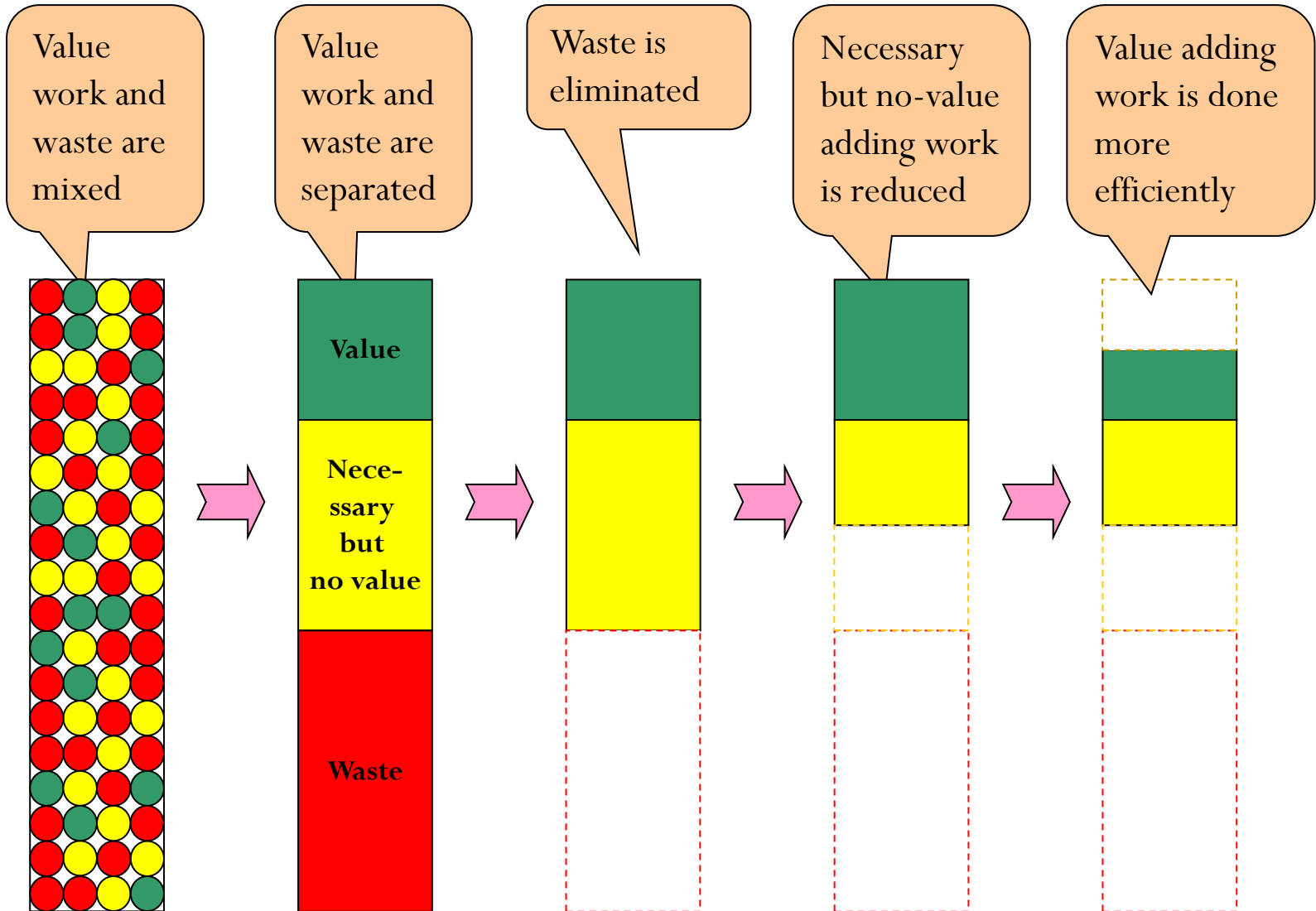
- **Value-adding operation**
  - Operations creating value for customers.
  - e.g., cutting, sewing, fabricating, ironing, packing,
- **Non-value adding operation**
  - Operations creating no value for customers.
  - e.g., transporting, walking, searching, repairing, waiting, material handling, quality inspection.
- Time and money spent in these non-value adding operations are wastes.
- **KAIZEN reduces and eventually eliminates such wasteful use of time and money (or MUDA).**







# Steps of Work Improvement



# KAIZEN is a Bottom-Up Approach

- KAIZEN is often said to be a bottom-up approach.
- It means that KAIZEN encourages workers to propose improvements and the owner and managers to listen to them.
- It is true that quick decision making is very important in every business.
- But it is also true that there are cases in which workers know better than the top where wastes exist and how to eliminate them.
- So, both top-down and bottom-up decision-making should coexist.
- KAIZEN facilitates the bottom-up flow of useful information.

# Our Evidence for KAIZEN

- We have assessed the impacts of KAIZEN training programs on the treated enterprises in Ghana (twice), Ethiopia (twice), Kenya (once), Tanzania (once), and Vietnam (in two places).

# Classroom training for garment entrepreneurs in 2010



# Improvements in management practices

The management score measures the degree to which firms use basic management practices. Scores are based on an evaluation of 24 basic management practices. The highest possible score is 24.

	<b>Both</b>	<b>Classroom only</b>	<b>On-site only</b>	<b>Control</b>
Before training (April 2010)	12.4	11.2	10.9	10.2
After classroom training and before on-site training	18.3	16.8	12.6	11.8
After training (March 2011)	18.8	17.3	15.5	14.4



# Some Success Stories such as

**Cherie Blair, the founder of CBFW and the wife of the former UK prime minister Tony Blair, observed how Rose Makoyola, a participant in the GRIPS/World Bank training program, benefited from KAIZEN (1 July 2013)**



# Garment industry in Dar es Salaam



# The same room before the training





# Changes in business performance

	Sales (in USD)	Value added (= sales – material costs)	Material cost divided by value added
Before training (Jan – Mar 2010)	1,993	1,069	0.86
After training (Jan – Mar 2011)	3,670	2,296	0.60

- This table does not distinguish training participants from non-participants because even non-participants benefitted from the training through knowledge spillovers (meaning imitation).
- The increase in the average of sales revenues and value added of our sample enterprises may be just due to a better market after the training program.
- Note, however, that value added increased more than proportionally, probably because the wasteful use of materials was reduced.

# Common Findings

- In all of these impact evaluation studies, we find the following:
- The majority of trained enterprises adopted KAIZEN practices.
- The majority of them had much higher opinion of KAIZEN after the training than before.
- The training tended to improve the business performance in terms of profits of the treated enterprises (relative to the business performance of the untreated enterprises), even though there were some cases in which the improvement was statistically insignificant.

For reference: Results of the Ethiopia KAIZEN Project Phase I, in which 30 large firms received intensive training for two months in 2009.

	<b>Treated</b>	<b>Comparison</b>	<b>DID</b>	<b>DID in log</b>
Value added before	25.2	14.8		
Value added after	69.6	20.7	$t = 5.1$	$t = 4.7$
Gross profit before	20.5	12.5		
Gross profit after	63.6	18.3	$t = 5.0$	$t = 4.6$

(Million ETB. 1 USD = 12.5 ETB in 2010)

# KAIZEN is a first step

- Arguably the adoption of KAIZEN is the best, if not only, first step toward continuous improvement in productivity.
- Nonetheless it is merely the first step.
- Note that KAIZEN is deep. There is always more to learn about KAIZEN.
- Note also that there are important things to do other than KAIZEN for cluster-based industrial development.

# Take TOYOTA as an example

- To see what is important other than KAIZEN, look at TOYOTA.
- TOYOTA is known as a best user of KAIZEN. It is also well known that TOYOTA added a lot of new ideas to KAIZEN.
- While KAIZEN is a way to improve productivity without spending money because it reduces and eliminates wastes, TOYOTA pours a lot of money when it finds money helps to improve productivity! For example, TOYOTA purchases very expensive machinery.
- This is because TOYOTA has no room for reducing wastes (MUDA) further.



# Equipment Investment

- One should not be too happy when he or she finishes MUDA elimination.
- Equipment investment should follow.
- Installment of new equipment does not automatically guarantee the realization of its potential.
- The new equipment expands the production capacity of the workshop. Until this new capacity is fully utilized, the gap between the new capacity and actual output is a kind of waste.
- Thus, one has to start MUDA elimination again.
- The cycle of MUDA elimination → Profitable operation → Investment → MUDA elimination → ... should be repeated.

# Expansion and Relocation

- With KAIZEN, enterprises do not necessarily have to borrow money when they invest in equipment.
- As their businesses expand and their workshops or factories in their clusters become too crowded, however, they will have to be relocated to more spacious sites, build greater premises, and install machinery, which is likely to require them to borrow money.
- There are two important questions:
  1. How to finance relocation-cum-expansion?
  2. Where to move in?

# Financing relocation and expansion

- Lending money to those enterprises whose performance is so good that they seek relocation and expansion should be profitable.
- So, private financial institutions should finance large part of these enterprises' investments.
- In other words, if KAIZEN is widely diffused and if most borrowers practice KAIZEN, the role of the government in financing their investments should be small. (It will be limited to, for example, the provision of long-term credits, at which private financial institutions are relatively weak.)

# Combining KAIZEN training and Microfinance

- Many business people in Africa do not know the importance of learning and adopting KAIZEN yet.
- Even if the government subsidizes KAIZEN training programs, the diffusion of KAIZEN may take time because those who should receive training do not know the value of the training.
- But what about if participation in KAIZEN training is a prerequisite for access to microfinance?

# Microfinance (continued)

- In many developing countries, a number of microfinance institutions provide business training before lending money.
- It must be possible to replace conventional business training by KAIZEN training and to turn microfinance institutions into the agent for KAIZEN dissemination.
- We hope that the government can persuade microfinance institutions.

# Where to move in?

- Those enterprises which have so successfully implemented KAIZEN and think of moving to somewhere else than their clusters will take it into account that if they go out, they will no longer enjoy the benefit of operating in the cluster.
- But they will never consider the benefit that they themselves give to other enterprises in the cluster.
- As the successfully growing enterprises move away from the cluster, the benefits of the cluster will be lost.
- So, it would be desirable for such enterprises to move to spacious places
  1. equipped with infrastructure and
  2. near to other successfully growing enterprises in the same or related trade so that they can enjoy the benefit of clustering.



# Infrastructure

- The government can create such new clusters of successfully growing enterprises in the same or related trade,
- generating the benefit of being clustered,
- by developing **industrial zones** or parks or estates equipped with sufficient **power supply** and **water supply**, good **access to good roads** to a **seaport** or an **airport** and a major city, and water treatment and other facilities if needed.

# Infrastructure (continued)

- Note that there are many industrial zones in a country.
- The size of each industrial zone does not have to be large because each zone should be specialized in one or a few industries.
- For example, a big city in China that we visited in 2000 and 2001 had about 80 industrial zones. Apart from these industrial zones run by city government, each of the townships within the city had several zones, and each village within a township had one or a few zones. This is why China has been so successful in industrial development.
- Tanzania can follow suit.

**Thank you for your attention!**

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