Key messages of the chapters of the book titled
"Workers, Managers, Productivity – Kaizen in Developing Countries"

Chapter 1 (Overview)

Chapter 2 (by Page) Industrial Policy, Firm Capability

- There is increasing recognition that the market imperfections on which theoretical arguments for industrial policies rest are widespread in low-income countries.
- An important objective of industrial policy in developing countries is to reduce the long "left-hand tail" of poorly performing firms.
- This Chapter considers the role that firm-level training programs, such as *Kaizen,* can play in low-income countries by building firm capabilities.
- Firm capabilities are shorthand for the knowledge and practices used by firms in the course of production and in developing new products.
- Productivity and quality depend on the knowledge possessed by the individuals who make up the firm, both managers and workers.
- *Kaizen* – "continuous improvement" – is a uniquely Japanese approach to building firm capabilities.
- It is incremental, continuous and involves all levels of workers within the firm, from top management to the factory floor.

Chapter 3 (by Hosono) Learning, Transformation and High-Growth

- Kaizen differs from other approaches to achieving better quality and productivity, because of its distinctive focus on inclusive and participatory learning. Other approaches to improving productivity include, as typical examples, employers turning to monetary incentives – performance pay and bonuses – or even the threat of dismissal. Nevertheless, any increase in productivity resulting from these approaches over a short period is normally not accompanied by learning. Where Kaizen differs from these other approaches is in its process for achieving better quality and productivity through its focus on inclusive and participatory learning. The case studies suggest that, by including all members of the firm in the process of learning and problem-solving, Kaizen promotes the exchange of information between workers, managers, and engineers and helps to develop "learning organizations" or learning firms.
- In Thailand, scaling-up of supporting industries for automobile industry was facilitated by the development of small and medium parts industries that benefited from, among other things, Kaizen and related approaches such as TPS. Kaizen and related approaches could facilitate the participation of local firms in global value chains (GVCs). Trade through GVCs is different from 'standard trade' carried out in anonymous market. GVCs typically involve long-term firm-to-firm relationships. This relational nature of GVCs makes them a particularly powerful vehicle for technological transfer along the value chain. Firms have shared interests in specializing in specific tasks, exchanging technology, and learning from each other

(World Bank. 2019. *World Development Report 2020*). Kaizen is an effective approach to facilitate this process.

- Kaizen and related approaches are intrinsically inclusive, because they are approaches in which participation by all and their learning are essential. They are also able to contribute to sustainable growth because they reduce use of materials and improve energy efficiency by eradicating muda (waste) as demonstrated by Japanese experiences after oil shock. Such approaches improve security and safety for workers as well through elimination of muri (overloading), mura (inconsistency), and so forth. Therefore, Kaizen, TQM, and related approaches can contribute to the achievement of Goal 8 of SDGs and improvement of quality of growth by facilitating directly and indirectly sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work. Case studies included in this book provide relevant insights related to these aspects.

Chapter 4 (by Shimada) Social Innovation

- Under the current rising inequality with globalization, this chapter tries to answer how we can make industrial development work for the poor, looking back at Japan's experience after the World War II.
- Japan created a social innovation through introducing Kaizen, establishing constructive labor relations, which once was very combative, to share the profits equitably. This innovation not only improved the lives of workers but also strengthened the competitiveness of firms.
- This is not technological innovation, but an innovation to boost firm performance and, hence, economic growth. This win-win situation, achieving economic growth and equality, was a social innovation. Developing countries, as well as developed countries, need this social innovation to tackle the issue of inequality in the age of globalization and rapid economic growth. Kaizen is an essential knowledge, a missing piece to achieve equitable growth.

Chapter 5 (by Jin) Ethiopia

- The Ethiopian government has been showing strong ownership and has been proactive to establish promotion organizations, allocate resources and organize public campaigns, guided by its clear vision that *Kaizen* needs to be promoted by the public sector instead of leaving it to the market mechanism.
- The majority of practitioners of *Kaizen* in private companies applied 5S, QC Circle and *muda* elimination, which are basic and common *Kaizen* tools. They are effective to change the mindset of workers, particularly strengthening motivation toward teamwork, communication and learning attitudes, which are appreciated by people as positive changes in each workplace.
- The practitioners have also observed spill-over effects of *Kaizen* outside of their workplace, particularly at the residence of workers. No one is really affected negatively by *Kaizen* especially with regard to job security in contrast with other reform processes.

Chapter 6 (by Homma) Malaysia, Indonesia, Myanmar

- This chapter examines the dissemination of Kaizen in Southeast Asia. It compares the experiences of Malaysia, Indonesia, and Myanmar.
- Malaysia represents government-led dissemination, while Indonesia demonstrates private sector-led dissemination in automobile industry supply chain and other private sector channels.
- This chapter sets up Kaizen dissemination models, focusing on two aspects: the relationship among stakeholders and the five-stage path of Kaizen dissemination.

Chapter 7 (by Suzuki & Sakamaki) Ethiopia and South Africa

- Individuals are most employable when they have appropriate knowledge (understandings), skills, and attitudes (personal qualities).
- Core employability skills are built upon and strengthen competencies such as knowledge, skills, and attitudes. They overlap with one another and develop through a spiral process.
- In Ethiopia and in South Africa there is an effort to enhance students' core employability skills such as willingness to learn, teamwork, communication and problem solving.
- The case of Ethiopia where Kaizen courses are introduced in TVET to enhance students' attitudes shows that Kaizen courses in TVET foster learning to learn, teamwork, but not so much of problem solving.
- In South Africa, trainings using Kaizen methods were provided to university students. The training had some impact on the awareness of skills especially self management (learning to learn), communication, teamwork, and critical/logical thinking (problem solving).
- The Kaizen training during education period provides students with simulated experience of workplace at an early stage. These experiences are precious in developing countries compared to more advanced economies.

Chapter 8 (by Katai) Mexico

- The widening and deepening of the Global Value Chain (GVC) is providing new opportunities for developing countries to promote industrialization.
- This chapter focuses on the firm capabilities and analyzes whether Kaizen can promote domestic firms to join the GVC, using the Mexican automotive industry as case study.
- This chapter introduced the concept of GVC Stages and tested the hypothesis that Kaizen has positive impact on automotive parts suppliers for upgrading in GVC Stages and then to business expansion.
- The results showed that the majority suppliers, which received Kaizen training, improved or maintained positions in the GVC when compared with other suppliers.

Chapter 9 (by Ishigame) South Africa

- This chapter aims to measure the impact of Kaizen, known as Toyota Production System to automotive suppliers in South Africa, where JICA project has been

implemented.

- The findings indicate Kaizen enhanced the competitiveness of suppliers through an improvement in quality and productivity. The findings also indicate the impact of Kaizen differed among the suppliers. The contributory factors of Kaizen implementation are management commitment, resource allocation and continuous training.
- The findings suggest that Kaizen had a positive impact on learning. Kaizen support the learning capabilities in firms by promoting operators and managers to identify and resolve production and quality problems. These results contribute to understanding how to promote successful implementation of Kaizen.

Chapter 10 (by Lage de Sousa et al) Brazil

- Main Determinant: Competition is a key driver for Kaizen adoption in the Brazilian case.
- Short-term effect: After implementing Kaizen, chances for introducing a new process increases by 17% and a new product by 4%.
- Long-term effect: Productivity premiums for Kaizen adopters are 14% in labor productivity and 8% in total factor productivity.

Chapter 11 (by Nam et al) Vietnam

- Specific training in Kaizen management improves Kaizen management practices of small and medium sized enterprises in the rural area of Vietnam.
- Kaizen management training can be conducted through local trainers training. Good management practices spill over to other enterprises through their dense social networks. As a result, the provision of Kaizen management training can be spread out.

Chapter 12 (by Ackah et al) Ghana

- National Board of Small Scale Industry (NBSSI) together with JICA introduced Kaizen techniques through training to manufacturing enterprises in Ghana. Our results of the study show that Kaizen had significant impact on key performance indicators of the enterprises which adopted the techniques.
- We also observed significant differences in behavioral/ process indicators between the treated firms and their counterparts who were not trained and had not adopted Kaizen.
- Hence, we argue that factoring Kaizen into Ghana’s recent policy to establish a factory in each administrative district may yield substantial benefits.

Chapter 13 (by Tamayao et al) Philippines

- Manufacturing Productivity Extension Program (MPEX) is an embodiment of the Philippines' effort to increase the competitiveness of its MSMEs through quality and productivity recommendations, most of which embody Kaizen methods and mindset. Evidence from the Philippines indicates a positive relationship between productivity and quality and the adoption of Kaizen-like efforts.

- In firms where Kaizen-like efforts were shown to increase productivity and/or quality, it was found that employees became more empowered and managers gained valuable time to invest in other ventures (e.g., other businesses). Managers and employees manifested zest for the continuous improvement mindset. Both groups were also more engaged in decision making from day-to-day operations to identifying improvements that can benefit the company in the long-run.
- Based on two case studies, Kaizen adoption helped two enterprises increase productivity levels, meet market requirements, and reduce cost. Market requirements such as government regulation and specific delivery time requirements were successfully fulfilled leading to opportunities to gain a bigger market share. Increase in productivity enabled enterprises to meet increased demand at a lower cost.