6

***Kaizen* as a Key Ingredient of Industrial Development Policy**

Keiji Otsuka

Eradication of poverty in the world is one of the main goals of international society. Indeed, included among the United Nation's the Millennium Development Goals (MDGs) was the goal to cut the poverty ratio in half from 1995 to 2015. Some of the eight development goals, including halving poverty, were achieved, but some other goals were not. Hence, the Sustainable Development Goals (SDGs) were announced in 2016, with 17 goals and 169 targets, with an unchanged or even increasing emphasis on reducing the incidence of poverty. Although we fully support the idea of setting up such goals, they are not very useful unless we find strategies to achieve them. Yet, to the best of our knowledge, there has been little discussion about effective development strategies to

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K. Otsuka (✉)

Graduate School of Economics, Kobe University, Kobe, Japan

e-mail: otsuka@econ.kobe-u.ac.jp

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achieve the MDGs and SDGs. Thus, there is no universally accepted effective strategy to develop industries.¹

In order to reduce poverty, build peace in conflict-affected countries, and rehabilitate the devastated economy in disaster areas, it is imperative to create decent employment opportunities for the poor and the vulnerable by developing labor-intensive manufacturing industries. Furthermore, the creation of factory jobs for women tends to improve women's economic and social status (Heath and Mobarak 2015). Thus, the development of industries ought to be a central theme of development issues.²

So far in this book, we have stressed the importance of *Kaizen* in stimulating industrial development in SSA, by proving the theoretical background and empirical evidence of its impact in Chap. 1, reviewing important roles played by *Kaizen* in Japan's Official Development Assistance (ODA) in Chap. 2, showing the general impacts of *Kaizen* in Chap. 3 and in Ethiopia in particular in Chap. 5, and proposing standardized and practical *Kaizen* useful for SSA in Chap. 4. We do not mean to imply, however, that a thorough implementation of *Kaizen* is sufficient for successful industrial development. Actually, it is not. The point we want to emphasize is that *Kaizen* is a central and indispensable ingredient of industrial development policies. There is no question that beyond competent entrepreneurs, basic infrastructure and credit are needed for successful industrial development. We simply argue that *Kaizen* is an excellent entry point, the most effective first step toward industrial development that is badly needed for sustainable development, particularly when foreign direct investment (FDI) is made. The sole purpose of this final chapter is to specify an effective strategy to develop industries for poverty reduction and inclusive income growth in SSA, while recognizing the decisively important role played by *Kaizen* in the process of industrial development in SSA.

¹ For example, World Bank (2012) discusses the importance of creating productive jobs, but not a strategy to do so.

² Needless to say, the development of agriculture is also a critical development issue in SSA (Otsuka and Larson 2013, 2016; Otsuka et al. 2016). Agriculture, however, does not offer ample employment opportunities for the poor (David and Otsuka 1994; Otsuka et al. 2009; Estudillo and Otsuka 2016), so the development of the nonfarm sector is indispensable for inclusive economic development.

The rest of this chapter is organized as follows. In Sect. 6.1 we explain why our approach, which emphasizes *Kaizen* as an entry point to industrial development, is recommended. In this section, we also compare our approach with those recommended by the emerging literature on industrial policies in SSA. We discuss why the sequence of policy measures from *Kaizen* to industrial parks and financial support is expected to be effective for industrial development in Sect. 6.2. We clarify the role of *Kaizen* in attracting FDI and facilitating learning from FDI in Sect. 6.3. We conclude this chapter by making a proposal to realize the industrial development in SSA in Sect. 6.4.

6.1 *Kaizen* as an Entry Point to Industrial Development

We propose a logical sequence of support measures beginning with *Kaizen* training of entrepreneurs followed by investment in infrastructure and financial support, with the aim of attracting foreign direct investment (FDI) and facilitating learning from FDI. We call our strategy—consisting of training, infrastructure investment, and financial supports—TIF, which is portrayed in Fig. 6.1. We recommend the TIF strategy, because the rates of return on investment in infrastructure including industrial parks as well as physical capital will be low, if there are few promising entrepreneurs. Thus, investment in human capital of entrepreneurs should precede investment in infrastructure. While we do not argue that training workers is unimportant, we believe that the training of entrepreneurs, who are major decision makers, has often been neglected in the past, even though it is likely to be more important than worker training. We also do not argue that the proposed sequences must always be followed strictly in a step-by-step way over time. In practice, training, investment in infrastructure, and financial support may be carried out simultaneously. In other words, the proposed sequence is logical, but not intended to be strictly followed as discrete steps. We simply would like to emphasize that the rates of return on investment in infrastructure and physical capital tend to be high when the ability of potentially promising entrepreneurs has been enhanced.

Fig. 6.1 A recommended logical sequence of industrial development policies. (Source: Prepared by the author)

We would also like to emphasize that training of entrepreneurs is useful not only for improving the ability of entrepreneurs but also for identifying promising and non-promising entrepreneurs. Thus, targeted support for admitting promising enterprises to industrial parks and providing financial support to them becomes feasible after the training of entrepreneurs. This is another reason to conduct *Kaizen* training at the outset of the industrial development process.

More fundamentally, we advocate this approach because (1) adequate training of entrepreneurs and investments in infrastructure are not amenable to market mechanisms, (2) there is a room for the government and aid agencies to provide financial support considering the underdevelop-

ment of financial sectors in developing economies, and (3) the TIF approach is likely to play the role of vanguard in attracting FDI by establishing a favorable production climate for FDI. The spectacular impact of training of 130 newly recruited employees for garment production in Bangladesh by the Daewoo Corporation of Korea is well-known (Mottaleb and Sonobe 2011). Within two years, after eight months of training in Korea, almost all of them left to start their own garment businesses, which has resulted in unprecedented jump-start of a gigantic new industry. This incidence clearly indicates that private entrepreneurs do not have adequate incentives to invest in human capital of their employees because of the possibility of labor turnover.

We must also note that FDI does not immediately lead to the development of industries in developing countries because foreign enterprises have incentives to protect production and management know-how from competing enterprises. In order to facilitate learning from FDI, further investments in human capital of entrepreneurs as well as workers are required, so as to enhance the absorptive capacity of the local enterprises.

We recommend developing labor-intensive industries in SSA, where unskilled workers are abundantly available. Lin (2014) argues that to be successful, industrial development must follow the comparative advantage of the economy, whereas Chang (Lin and Chang 2009) argues that developing countries should adopt proactive industrial policy, which takes into account a dynamically changing comparative advantage. We fully agree with their arguments that industrial policy should support the development of industries that have and will continue to have comparative advantages. However, it is not clear how to identify such industries in practice or whether the government can find them without major failures (Kruger 2011). Yet, in principle, we advocate the development of labor-intensive industries in SSA.

Lin appears to assume implicitly that there are no spontaneously developed industries in SSA, suggesting that promising industries are missing in SSA. According to our own as well as others' research in SSA (Sonobe and Otsuka 2011; Higuchi et al. 2016; Mano et al. 2012; Oyeyinka and McCormick 2007), however, there are a large number of informal industrial clusters in SSA. They have spontaneously formed and, hence, are obviously market-led. Many of them are slowly developing, but the fact

that such industrial clusters have emerged without any support from the government implies that these clustered industries have clear comparative advantages. We argue that we should support the development of such clustered industries, which we believe have the potential to grow and become formal sectors. Our argument is in line with the finding of Hidalgo et al. (2007) that industrial development entails continuous processes of upgrading the quality of products and production processes and developing slightly new products, rather than the sudden emergence of new industries.

Without any doubt, a major source of industrial development, particularly in developing countries, is technological progress, which in turn depends on learning useful knowledge from abroad. Since acquired useful knowledge spills over, the private benefit of knowledge acquisition is exceeded by the social benefit. Since the private benefit is lower than social benefit, the incentives to acquire useful knowledge are lower than social optimum, resulting in socially inadequate learning with “missing knowledge.” Thus, Noman and Stiglitz (2015, 2016) recommend that governments in developing countries should play the role of catalyst in facilitating learning useful knowledge from abroad. We agree with this and further argue that the efficient management of enterprises is critically “missing” knowledge, based on our own empirical research in SSA (Sonobe and Otsuka 2011, 2014). The acquisition of such missing knowledge will promote a structural change in Africa from a lower productivity sector to a higher productivity sector (Page 2015).

It is true that not only management knowledge but also a trained workforce, infrastructure, and efficient credit markets are missing in most developing countries. There is no question that such missing factors are constraints on growth. Thus, it appears useful to remove major constraints, as is argued by Hausmann, Rodrick, and Velasco (2008). We must recognize, however, that if we remove one constraint, other constraints appear, so we have to anticipate changes in major constraints when we formulate an effective industrial policy. For example, the lack of infrastructure may not be a major constraint when there are no growing firms. It becomes a major constraint, however, when a number of trained entrepreneurs plan to expand their operations, resulting in congestion. According to our research, training of entrepreneurs has high payoffs

even without investing in infrastructure and providing cheap credit, because trained entrepreneurs use the existing resources more efficiently, as was argued in Chaps. 1 and 3 (also see Sonobe and Otsuka 2011, 2014; Higuchi et al. 2016; Mano et al. 2012). Subsequently, those entrepreneurs who wish to expand their businesses face such constraints as congestion, the lack of spacious industrial parks, and the lack of credit for constructing new factories. That is why we argue for the logical sequence of investing in entrepreneurial talents particularly by *Kaizen* training, infrastructure or industrial parks, and a credit system, which are key to successful industrial development.

6.2 From *Kaizen* to Industrial Parks and Financial Support

Although we advocate logically sequential support for industrial development from *Kaizen* training of entrepreneurs to infrastructure investments and financial support, we do not argue that investment in infrastructure or financial support should be delayed until the *Kaizen* training of entrepreneurs is completed. Our proposed sequence is logically sequential but may overlap or may even be reversed over time. Thus, training, infrastructure investment, and financial support may be made in parallel, or additional training may be required after investments in infrastructure are made because an inadequate supply of entrepreneurial talent is later found to be a major bottleneck on further development. The important point is that the *Kaizen* training of entrepreneurs confers substantial benefits even without improving infrastructure and providing financial support (Mano et al. 2012; Sonobe and Otsuka 2014; Suzuki et al. 2014; Higuchi et al. 2015, 2016). Furthermore, we expect that such training will enhance payoffs to investments in infrastructure and the provision of financial support by enhancing the ability of entrepreneurs and making it possible to identify promising and non-promising entrepreneurs. Thus, the training of entrepreneurs ought to be an effective entry point to industrial development.

Competent entrepreneurs who take the *Kaizen* training program will likely want to apply newly learned management policies and adopt progressive management plans, for example, employing more workers, installing more machines, and moving to industrial parks to construct new larger factories. It then becomes possible to offer targeted support for them by providing space in industrial parks and financial support for the construction of new factories. Thus, the TIF approach relies on complementarity between *Kaizen* training and investment in infrastructure as well as financial support.

6.2.1 Investment in *Kaizen* Training

A variety of human resources with different skills, knowledge, and talents are required for economic development. For example, distribution systems must develop alongside the economy to transport goods from one place to another, and hence there must be competent staff capable of managing ports, airports, transportation and communication systems, and storage and distribution centers. This illustrates how important it is to invest in human resources for economic development. We believe that particularly scarce but critically important human resources in developing countries are competent managers and owners of enterprises, whom we refer to as entrepreneurs (Bruhn et al. 2010). They are major decision makers and must play the role of innovators.

To be innovative, entrepreneurs must invest in their human capital. A lot of time, effort, and resources are needed for such investments. However, they cannot know in advance the quality of trainers, instructors, and teachers from whom they will learn and, hence, returns on human capital investments are uncertain. Moreover, employers may not be interested in investing in hired managers who have the potential to become capable entrepreneurs, because they may quit their current jobs in the future. Therefore, we cannot assume that market forces lead to adequate investment in entrepreneurial human capital. Governments in developing countries should guarantee the quality of trainers, nurture a number of *Kaizen* experts, and support the training of entrepreneurs in a sustainable fashion, as we argued in Chaps. 1 and 5. If the government is

not prepared to play such a role, donor agencies and international organizations should assist the investment in entrepreneurial human capital.

A useful lesson may be learned from the successful experience of Thailand's Eastern Seaboard Development Plan (1982–95). This was a regional development plan based on the construction of harbors, highways, and industrial parks with aims of reducing congestion in Bangkok due to successful industrialization and utilizing natural gas deposit discovered in Gulf of Thailand. The government of Japan supported the design of a development plan, provided loans, and assisted with FDI of Japanese companies in industrial parks. Furthermore, Japan invested in managers of infrastructure and employees of Japanese companies, particularly engineers and middle-level managers. As a result, huge industrial clusters of automobile production have been built with a large number of local enterprises and ample employment opportunities. According to ex-post assessment of the plan (Ariga and Ejima 2000), 30,000 new jobs were created in Laem Chabang City, which is located in the middle of the Eastern Seaboard, and more than 10,000 new jobs were created in Map Ta Phut Industrial Estate in the 1990s when the plan was completed. The success was attributed to the coordination of investments in human capital, infrastructure, and factory buildings and other physical capital. Also noteworthy is the dissemination of *Kaizen*, which emphasizes a participatory approach of workers to production management and quality control.

The quality of management has increasingly received the attention of development economists as a major factor affecting the performance of enterprises in developing countries, because it is found that firms in low-income countries are significantly more likely to suffer from poor management than their counterparts in high-income countries (Bloom et al. 2016). Thus, it is recommended that aid agencies and international organizations assist governments in developing countries in institutional building toward the goal of spreading good management practices. Indeed, there have been a number of such projects and programs. The Ethiopian *Kaizen* Institute is an excellent example of institutional innovation (Chap. 5). The World Bank and International Labor Organization nurtured a number of trainers who can provide business development

services and master trainers who can train trainers in a large number of developing countries. There has also been assistance given directly to local firms, not through the government, such as the provision of training programs for entrepreneurs under the names of women entrepreneur programs and micro and small enterprise (MSE) training programs. Microfinance institutions have also provided business development services for their potential clients.

In recent years, there has been a considerable increase in interest among development economists in assessing the impacts of these kinds of management training programs on the trained enterprises by using randomized controlled trials (RCTs). Almost all such studies find that training has favorable effects on management practices, and several studies also find that training improved business performance measured in sales revenue, profits, productivity, and so on. Nonetheless, to our knowledge such assistance programs and projects have not led to the kind of notable industrial development in which a number of training participants grow into large firms, thereby creating a large number of jobs, nor has there been industrial development comparable to that on the Eastern Seaboard in Thailand. Presumably, the reason is that the assistance is intended to help those who start small or self-employed business and those who want to sustain their businesses. Little assistance is intended to help those who have been successful and are interested in substantially expanding their businesses by employing a large number of workers. Instead, they focused on financial literacy, how to make a business plan, elementary marketing, and entrepreneurship. Knowledge of these items is useful for any size of businesses, but it does not help entrepreneurs solve problems they would face when increasing the number of their employees. It is especially difficult to nurture an efficient workforce with workers who are not educated, not accustomed to working as part of a team, or who do not aspire to acquire new skills. In industrial clusters or cities in developed countries in which a number of medium and large enterprises are located, small business owners can easily invite a former manager of a larger firm to teach them how to cope with the problems that arise from the expansion of operation and employment size. For the majority of entrepreneurs in low-income countries, however, such experienced advisors are unavailable and, hence, it is difficult for them to learn how to manage larger enterprises.

Low-income countries in SSA potentially have a comparative advantage in labor-intensive industries due to the abundance of those who cannot earn high incomes and would accept the offer of low-wage jobs. Actually, however, such a potential advantage has not been realized because it is difficult to turn these people into efficient workers who supply effective labor at a low wage. For a low-income country to achieve industrial development on a large scale, the potential comparative advantage in labor-intensive industries must be actualized. It is true that the development of labor-intensive industries is not indispensable for high growth. It may be easy to raise the economic growth rate by making the country a focal point of outsourcing of call center services, data entry services, and other back office services from developed countries. As experienced already by India and the Philippines, however, this type of economic growth may end up with jobless growth that offers jobs to college graduates, but not to the less educated population.

To achieve economic growth with equity, low-income countries ought to seek the development of labor-intensive industries, which in turn necessitate the dissemination of management practices and skills that allow firms to employ a large number of employees and turn them into an effective labor force. Fortunately, there is an inexpensive, human-friendly approach to such management, as has been discussed intensively in this volume (see particularly Chap. 3). It is called *Kaizen*. According to the Oxford Dictionary of English, this is “a Japanese business philosophy of continuous improvement of working practices, personal efficiency, etc.” It is not just philosophical but also scientific,³ in the sense that it has been developed through observations and experiments by a number of firms.

Kaizen is designed to facilitate coordination of the division of labor between managers and workers, between production divisions, and between workers. The total quality control achieved through joint participation of managers and workers is just one of many successful examples of *Kaizen* activities. Indeed, an RCT (randomized controlled trial) of *Kaizen* for medium-size enterprises in the textile industry in India found a significant impact of *Kaizen* training on management practices and enterprise performance (Bloom et al. 2013). Similarly an RCT in the

³ See Chap. 1 on the definition of *Kaizen*.

garment industry in Vietnam also found a significant impact of *Kaizen* training on management practices and performance (Suzuki et al. 2014).

SSA has in general a comparative advantage in labor-intensive industries such as the textile, garment, leather shoe, and simple metal-processing industries, where *Kaizen* training is found to have profound impacts on management practices and enterprise performance (Mano et al. 2012; Higuchi et al. 2015). Yet, the fact that many of these industries failed to develop strongly indicates the severe lack of managerial human capital in the area, capable of managing a number of workers in a participatory fashion (Sonobe and Otsuka 2014).

As is demonstrated in Fig. 1.4, the results of an RCT in the garment industry in Tanzania by Higuchi et al. (2016), where not only classroom lectures but also on-site training by instructors was offered, are instructive. It is clear that improved management practices, measured by a management score,⁴ were increasingly adopted more or less equally for a while after the training by the groups receiving both classroom and on-site training, only classroom training, and only on-site training. The control group receiving no training also adopted some improved management practices due to imitation. The management score, however, began declining 1.5 years after the training, presumably because the trainees sorted out irrelevant practices. A major finding is that only the group receiving both classroom and on-site training continued to increase value added, which indicates that the combination of conceptual training in the classroom and practical training on-site leads to the sustainable growth of enterprises.

The finding of RCTs that *Kaizen* training improves enterprise performance by improving management practices, even without improving infrastructure and providing subsidized credit, strongly indicates that the *Kaizen* training is an effective first step for industrial development. Thus, it seems clear that it is desirable to train a number of specialists in *Kaizen* and offer a number of *Kaizen* training courses, thereby increasing the number of competent entrepreneurs. This is what has been happening in Ethiopia, where the government established the Ethiopian *Kaizen* Institute, where Japanese *Kaizen* experts have been sent to train selected Ethiopians who will later be dispatched to factories and training centers (see Chap. 5).

⁴This is measured by the number of improved management practices out of 27 recommended ones.

If competent entrepreneurs are nurtured by the management training, many enterprises will develop, which will lead to congestion in the existing industrial clusters as well as in other original locations. Then the demand for industrial parks in the suburbs of cities will increase. Investment in industrial parks will have high returns if the government allocates space to promising entrepreneurs. If the government also provides financial support only to those promising entrepreneurs, the risk of failure in the allocation of investment funds will be reduced. In this way, the TIF approach is likely to significantly enhance the likelihood of success of industrial development.⁵

Finally, it should be stressed that the policy of increasing the number of competent entrepreneurs by means of *Kaizen* training will contribute to the establishment of competitive markets, which, in turn, is expected to reduce corruption and preferential treatment of specific industries and enterprises (Otsuka and Sonobe 2011).

6.2.2 Investment in Industrial Parks

Industries tend to be concentrated geographically. This is because of the benefits of agglomeration economies, including savings on transaction costs between enterprises due to the locational proximity, development of labor markets of skilled workers, and spillovers of useful information, such as innovative new ideas (Sonobe and Otsuka 2006). Indeed, there are many promising informal industrial clusters in SSA, such as a car repair-cum-metal processing cluster in Kumasi in Ghana, a leather shoe cluster in Addis Ababa in Ethiopia, and garment clusters in Dar es Salaam in Tanzania (Sonobe and Otsuka 2011). In addition to the agglomeration economies, clustering contributes to saving investment costs in infrastructure, because the construction of industrial parks equipped with transportation and communication infrastructures and water and sewage facilities is less costly than investments in such infrastructures over wide areas. Thus, the establishment of industrial parks which house enterprises

⁵ Although we did not discuss it explicitly, general education of the labor force particularly through schooling is extremely important. We did not take up this issue, as it is a part of overall economic and social policies, rather than specifically industrial development policy.

producing similar and related products, for example, part suppliers and assemblers, ought to be a part of effective strategy to develop manufacturing industries.⁶

The establishment of industrial parks, however, may fail to invite domestic enterprises to the parks unless there are growing enterprises looking for larger spaces to expand the operation of their businesses. This is why we advocate the training of entrepreneurs as a first step for industrialization. It is also worth emphasizing that the success of Thailand's Eastern Seaboard Development Plan (ESDP), which was alluded to before, rested on the fact that the construction of industrial parks and other infrastructure coincided with the congestion of industrialized areas in Bangkok and the transformation process of the entire economy from light- to heavy-industry-centered structures, which created huge demand for production space with a sufficient supply of infrastructure (Ariga and Ejima 2000).⁷ According to our own observations, industrial parks were constructed outside of the old urban industrial centers, when the original locations became congested due to the expansion and development of clustered enterprises in China and Taiwan. The relocation of the production bases to industrial parks led to the transformation from informal to formal clusters in these countries.

The establishment of industrial parks will help attract FDI, which is widely recognized as a conduit to transfer improved production technologies and management practices from developed to developing countries. FDI, however, will not be attracted without the availability of disciplined workers, experienced middle-level managers, suppliers of simple parts and components, and the more than minimum development of supporting industries, such as machine repair sectors. FDI policies also need to be

⁶According to Hashino and Otsuka (2016), producer associations play an important role in introducing new technologies and assuring the product quality in dynamically growing clusters. If such producer associations exist, support for and cooperation with them can be an effective way to develop industrial clusters.

⁷According to Mieno (2013), ESDP was initially designed with two major aims in accordance with the fourth and fifth Five Year Plan in the 1970s: to reduce the excessive concentration of industries in the Bangkok metropolitan area by shifting growing light industries to the Laem Chabang port area and to construct a government-led petrochemical industry utilizing natural gas in the Gulf of Thailand, based in Map Ta Phut port. Industrialization since the mid-1980s has oriented to FDI-led machinery industry, which is different from the envisaged initial plans to develop light industries and government-led petrochemical industries.

liberalized and further supports for FDI implemented. The quality of industrial parks also matters. Since construction companies and general trading companies in Japan have accumulated experience in the construction of industrial parks, public-private partnerships can be deployed for the construction of industrial parks in SSA. Such partnerships will stimulate FDI of private manufacturing companies.

ODA is expected to help attract FDI. This is particularly the case in Japanese ODA (Kimura and Todo 2010). In order to do so, ODA must be allocated to human capital development and the establishment of infrastructure, which are not amenable to market mechanisms. In particular, we advocate the *Kaizen* training of entrepreneurs and the construction of industrial parks, because these are expected to be cost effective and conducive to industrial development.

6.2.3 Financial Support

Since the main function of financial intermediation is to allocate an appropriate amount of investment funds, the development of a financial system is indispensable for the development of the entire economy. In order to achieve this function, the financial sector needs the capacity to assess the potential performance of enterprises and the profitability of their projects. While information asymmetry generally impedes efficient transactions in the credit market, financial institutions must reduce inefficiency by means of information processing.

The development of the financial sector is slow in many developing countries, which means that the problem of asymmetric information is not overcome in a number of countries. Consequently, the financial sector fails to allocate enough funds to promising investments. In order to improve management of the financial sector, human resources must be trained and, at the same time, continuous and long-term lending experience needs to be accumulated. Furthermore, legal and institutional governance systems must be in place to facilitate efficient financial transactions. In addition, monopolistic elements of the financial sector by large conglomerates, if any, must be removed to reduce distortions in financial markets.

Therefore, on the one hand, the general support for the development of the financial sector can be efficiency-improving. On the other hand, it may be desirable to introduce selective financial support by aid agencies and international organizations, which supplement the insufficient function of the underdeveloped financial sector. In particular, selective support for promising entrepreneurs within a context of the TIF approach can be highly desirable.

Japan has developed a two-step loan program for the purpose of targeted financial support.⁸ Under this program, Japan provides loans to development-oriented public or semi-public financial organizations in developing countries, which, in turn, provide loans to end-users who would not otherwise have access to formal loans. Prior to the 1990s, the main end-users used to be small-scale farmers in Southeast Asia. Since then, loans to small and medium-sized enterprises (SMEs) through public-sector organizations increased, as increases in FDI raised the demand for such loans. It is critically important to recognize that the two-step loan is one way to support SMEs, whose production and management efficiency can be improved by the training of managers.

Although there are many successful two-step loan programs, the reasons for their success are not necessarily clear (Hayashi 1995). One possible though unlikely explanation is that local financial institutions possess sufficient capacity to identify promising enterprises and projects, and the two-step loan programs simply utilize their latent capacity. Another possibility, which we believe is more plausible, is that the two-step loan provides opportunities for local financial institutions to accumulate lending experience to new loan users and thereby develop their abilities to find promising projects that otherwise would not have been supported.

⁸ As another attempt to apply Japan's experience of SME financial support to developing countries, credit guarantee schemes also seem promising. Recently, the schemes are being applied to a few Southeast Asian countries (e.g., Yoshino and Taghizadeh-Hesary 2016). Apart from Japan's experience, the International Finance Corporation (IFC) launched the SME Ventures Program in 2007 in order to create jobs and promote robust economic growth by providing the risk capital and strategic advice to SMEs in developing countries. For example, one of the IFC's projects, Central Africa SME Fund (CASF) targeting the Central African Republic (CAR) and the Democratic Republic of the Congo (DRC), provided the risk capital of debt and equity to over 30 companies during the period from 2011 to 2015, which resulted in the creation of some 500 jobs at the targeted companies. This IFC program is worth analyzing further. <http://xsmcapital.com/funds/central-africa-sme-fund/>

Recently, variants in two-step loans have arisen. For example, offering a package of loans and management training to SMEs run by the Small Business Finance Corporation is now being widely applied in Asian countries. This attests the complementarity between loans and management training which is consistent with the TIF approach. In other words, we recommend providing two-step loans to those competent entrepreneurs who have participated in *Kaizen* training programs. Since Japanese SMEs also launch production in developing countries, the two-step loans are used to support them. Recently, not only public-sector financial institutions but also private institutions have become involved in two-step loan programs. In any case, we recommend the use of two-step loans as a part of a package of industrial development policies. At the same time, we must recognize that the economic rationale for the success of two-step loans as an aid scheme is not yet completely understood. Therefore, further academic research in this field is called for.⁹

In the literature on finance in developing countries, there is a debate as to whether market-based or bank-based financial systems work better to facilitate economic development (La Porta et al. 1998; Levine 2002). The history of development of financial sectors in developing countries in Asia, however, strongly suggests that the first priority should be the development of a financial intermediary rather than a capital market. This is because commercial banks do not function well in providing loans to SMEs and, as a result, informal inter-business trade credit plays a major role in promoting their development (McMillan and Woodruff 1999; Allen et al. 2005). To build a better functioning financial system particularly for SMEs, shifting from informal trade credit to formal bank credit by enhancing the capacity of the commercial banking sector is key, and a relevant policy scheme is vital (i.e., Hellman, Murdock and Stiglitz 1997). On the other hand, it may not be unrealistic that in the long-term process of developing a financial system, well-targeted two-step loan programs can assist both the development of banking sectors and the TIF approach to industrial development.

⁹The loan program discussed here must be distinguished from microfinance, which is designed to reduce poverty at the household level without regard to the industrial development.

6.3 *Kaizen* for Attracting and Taking Advantage of FDI

Globally the amount of FDI has been increasing dramatically since the mid-1980s, as has FDI from Japan (Ito and Kruger 2000; Lall and Urata 2003). Both deregulation of financial transactions in developed countries and the liberalization of FDI policies in developing countries have contributed to this expansion. Japanese FDI also increased because of the appreciation of the Japanese yen, which led to the relocation of production bases to other Asian countries. Interestingly, Japanese FDI is highly concentrated in the manufacturing sector, which reflects the comparative advantage of Japanese multi-national enterprises (MNEs) in manufacturing sectors in developing countries.

One reason for the rapid increase in FDI is the shift from exports to local production for sale in developing countries. Another is the fragmentation of production processes in which the best production locations across country borders are selected, in order to create global value chains. In this globalization process, the role of domestic enterprises as partners of MNEs has become increasingly important.

The TIF approach is useful to lay foundations for attracting FDI. In fact, FDI is attracted to developing countries that have competent entrepreneurs, disciplined workers, and well-equipped industrial parks. Considering that the amount of FDI is nine times as large as ODA as of 2014,¹⁰ and that foreign firms bring about improved technologies and management practices, it is of utmost importance for developing countries to attract FDI (Crespo and Fontoura 2007). Anticipating FDI in the future, it is highly desirable to let MNEs participate from the beginning in the design and implementation of the *Kaizen* training programs for entrepreneurs.

It is a mistake to assume that once FDI is made, domestic enterprises automatically learn advanced technologies and management methods, as horizontal knowledge spillovers from MNEs to domestic enterprises in the same industry are limited. The major beneficiaries from MNEs are domestic enterprises in upstream industries, which provide parts and

¹⁰ FDI amounted to US\$136 billion, whereas ODA amounted to US\$16 billion in 2014 (<https://www.jetro.go.jp/world/japan/stats/fdi.html>; <http://www.mofa.go.jp/mofaj/gaiko/oda/files/000137908.pdf>).

components to foreign affiliates (Javorcik 2014). This means that while foreign firms effectively protect know-how from their rival firms, they order the production of specific parts and components by local enterprises with instructions detailing the production methods. In other words, the initial effect of FDI is to stimulate the development of industrial sectors producing parts and components. The other side of the same coin is that in order to attract FDI, the development of part-supplying industries is very important.

Typically such part suppliers are subcontractors who receive orders from foreign affiliates as well as materials and production instructions. In order to secure cheap, high-quality parts, foreign affiliates have incentives to provide production training for entrepreneurs and workers in such domestic enterprises. But if these domestic enterprises passively receive orders and produce parts and components without undertaking market research, technology choice, procurement of materials, production designs, and marketing, they are unlikely to make sizable profits or grow. Such passive entrepreneurs are termed as captive suppliers by Gereffi et al. (2005). Pre- and post-production activities are known to be core competencies of leading MNEs and a major source of profits (Humphrey and Schmitz 2002). In other words, the management abilities of local entrepreneurs do matter. Managerially competent entrepreneurs will try to absorb not only the knowledge of production methods but also knowledge of management, encompassing pre- and post-production activities. Only if local entrepreneurs learn advanced management methods can their enterprises become independent and earn a large share of profits. This view on the importance of management ability for the absorption of advanced knowledge is consistent with the recent literature referenced earlier, which argues that what is really missing in developing countries is managerial human capital (Bloom et al. 2013, 2016; Bruhn et al. 2010; Sonobe and Otsuka 2014).

We must clearly recognize that foreign companies are willing to provide training in production, but not in management. This means that the attraction of FDI is not the end of industrial policy but the beginning of a new phase of industrial development in which management ability must play a key role. Therefore, the TIF approach aims not only to attract FDI but also to strengthen the absorptive capacity and management abilities of

domestic enterprises. Indeed, we recommend the provision of advanced *Kaizen* training programs by the government and aid agencies to enhance the absorptive capacity of local enterprises (see Fig. 6.1). Such training may lead to “imitative innovation,” which can have ground-breaking impacts on productivity growth of local enterprises and industrial development in developing countries (Sonobe and Otsuka 2006, 2011). In order to realize such industrial development, it is of utmost importance to generate a new cohort of highly competent management consultants knowledgeable about *Kaizen* in SSA.

6.4 Conclusions and Implications

Unlike modern service sectors, such as those related to information and communication technology (ICT) and the financial sectors that employ highly educated workers, light manufacturing industries are capable of providing ample employment opportunities for the uneducated, women, and youth, thereby making it possible to achieve inclusive growth. The starting point of our proposal is the recognition that there are many spontaneously developed industrial clusters in SSA, producing garments, textile, shoes, processed foods, furniture, metal products, and simple machineries. Their development is market-led and obviously in line with their comparative advantage. In our view, these industries fail to develop because of the market failures, ranging from socially inadequate investment in managerial human capital and infrastructure to the absence of efficient financial markets. Thus, our proposal aims to correct these market failures by supporting management training, investments in infrastructure, and the provision of credit.

Our second premise is that the transfer of useful technology and management knowledge from advanced countries is the prerequisite for industrial development in SSA. Based on Japan's experience of supporting the miraculous development of East Asian economies and empirical evidence accumulated in SSA, we propose to disseminate *Kaizen* in this area.

Our proposal is unique in its recognition of the complementarities among policy measures. It seems obvious to us that rates of return on investment in industrial parks will be very low unless there are many

promising and growing local enterprises. Similarly, the provision of cheap credit does not make sense if there are only a small number of promising enterprises, or if promising entrepreneurs cannot be identified. In contrast, empirical evidence clearly shows that *Kaizen* training of entrepreneurs is effective even without any other policy supports. Thus, we recommend the TIF approach, beginning with the *Kaizen* training of entrepreneurs, which is useful not only for enhancing entrepreneurial abilities but also for identifying promising entrepreneurs, followed by targeted supports for promising enterprises by means of investments in industrial parks and the provision of credit (see Fig. 6.1).

Considering the increasing importance of FDI as a conduit to transfer advanced technologies and improved management practices from developed to developing countries, we propose that the TIF approach should be designed to attract FDI from the beginning. For this purpose, we recommend private enterprises interested in FDI, practitioners of foreign aid, and development economists participate in designing the TIF approach in practice.

It is a mistake to assume that once FDI is made, local enterprises will learn useful knowledge and grow accordingly. While the presence of FDI provides an opportunity to learn, whether the host country enterprises learn useful knowledge and grow depends on their absorptive capacity. At this stage, advanced management and technological training becomes crucial. In all likelihood, if such investments are made, local enterprises will continue to grow, which will lead to the development of local industries and stimulate the development of the entire economy.

It must be stressed that practitioners, MNEs, and economists must make concerted efforts to design an effective TIF approach. Due considerations must be given to the unique features of countries in SSA, which can be significantly different from those of Asian countries. Furthermore, success or failure in each step of the TIF approach, including investment in infrastructure and financial support for competent entrepreneurs, hinges on the development of human resources capable of effective operation and maintenance. If concerted efforts are made successfully, we are wholly confident that the TIF strategy, which is deeply based on the diffusion of *Kaizen*, will lead to sustainable and inclusive industrial development in SSA.

Because of the confidence of all the contributors to this volume that *Kaizen* ought to play a central role in promoting the development of industries in SSA, we explained why *Kaizen* is so important in Chap. 1, its role in Japan's ODA policy in Chap. 2, the impacts of *Kaizen* in Chap. 3, how the standardization of *Kaizen* is related to *Kaizen* training programs offered by Japan International Cooperation Agency (JICA) in SSA in Chap. 4, and the importance of institutionalizing *Kaizen* dissemination activities and customizing them to suit particular environments of developing countries in Chap. 5. In order to implement the TIF strategy successfully, it is critically important at the outset to boost entrepreneurs' awareness of *Kaizen*, multiply the number of competent *Kaizen* experts, maintain the quality of *Kaizen* training, and customize the contents of *Kaizen*. These points were discussed in previous chapters, and it is hoped that those countries interested in getting started on *Kaizen* dissemination can learn enormously from this book.

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