Industrial Development: Strategic Assistance for "Japan Brand ODA"[1]*

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1. Introduction

Many countries have attempted to develop industries in a variety of fields to create employment for the poor and bring them income. Today's developed countries were those that succeeded quickly at that, while those that have only been successful more recently are the emerging countries; today's low-income countries, meanwhile, are those that have not succeeded at it yet. From the 1960s to the early 1980s, most emerging and low-income countries adopted import-substitution industrialization policies to restrict the imports of industrial products from foreign countries and foster their own industries, substituting imported products with domestic ones. Those attempts did not differ much from the infant-industry protection policies adopted by the United States and several Western European countries from the end of the 18th century through the 19th century to catch up with Britain, where the Industrial Revolution had taken place earlier (Hayami 2000). Since the protected industries failed to grow, however, the governments reinforced protection measures and got bogged down. The agricultural and small-enterprise sectors, which were not subject to industrial protection and promotion—declined. The policy was associated with increasingly rampant corruption and growing political instability. Eventually, the attempts at industrialization failed completely.[2] Developed countries have tried to support the industrialization of developing countries by extending substantial loans and transferring technology to them, but the latter did not absorb technologies that the former tried to transfer, and financial aid did not have the desired effects. For that reason, the World Bank and IMF, as well as most aid agencies in the United States and Western Europe, have concluded that the industrialization of today's developing countries—unlike those former developing countries that have become developed countries—is impossible, and that aid agencies' attempts at supporting it would be a waste of tax money (Akiyama *et al*. 2003).

Needless to say, there are exceptional donor countries, a major one of which is Japan. In Thailand, since the early 1980s, Japan has provided considerable official developmental assistance (ODA) for the industrial development of the eastern seaboard of the country, constructing the Laem Chabang Port, expressways, and industrial districts, and assisting the capacity development of administrators in charge

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of these facilities as well as training programs for the local employees of the Japanese firms that began operating in the area. Eventually, the port became the largest port in Thailand, and the area has become the largest agglomeration of the automotive industry in all Southeast Asia, giving it the name of "the Detroit of Asia." Even when other donor countries did not show any interest in industrial development, Japan has always supported it in East and Southeast Asia, and has achieved significant results.

That trend did start to change several years ago. China has been actively promoting infrastructure construction in various parts of Africa, promoting the business expansion of the country's firms in the region. Other donor countries will not simply sit back and watch that happen. Aid competition may intensify over the industrial development of low-income countries in Africa and other regions. For Japan, it is desirable to take advantage of its greater experience in industrial development assistance than other donor countries to realize what it calls "Japan Brand ODA." The question then arises as to exactly what to do.

The objective of this chapter is to answer that question. Besides its shrinking ODA budget, Japan has experienced deindustrialization, meaning that the number of international aid workers in the country specializing in industrial development is expected to decline. Also, it must be noted that Africa is further away geographically than Asia for Japanese firms. The impact of the assistance would increase if foreign direct investment is involved. Few Japanese firms, however, have yet to be interested in direct investment in Africa, so Japan needs to develop a strategy carefully. It is particularly important to consider what constitutes really effective assistance for industrial development in low-income countries, and how to make Japan's assistance appealing to the world. To do that, there must be an understanding of what holds the key to successful industrial development.

With that in mind, the author's research team conducted a number of case studies and experiments in Asia and Africa exploring the process of industrial development (Sonobe and Otsuka 2006, 2011, 2014). The findings of those studies, which will be discussed below, lead to the conclusion that for industrial development to be achieved in low-income countries, productivity should not be improved by spending large sums of money, but rather by taking advantage of the wisdom and ideas based on on-site observation and hands-on experience of workers as well as those of managers and executives. The same is also suggested by the latest results obtained by Western researchers. In low-income countries, however, little is known about the method to that effect, which is probably why productivity remains low there and industries remain underdeveloped. There are different approaches to productivity improvement, among which *Kaizen* is relatively "friendly" to those users in low-income countries in Africa and other regions. While *Kaizen* is a Japanese word meaning improvement, it also means a technique of production management and quality control that improves the productivity, safety, and working environments. It has been honed by workers as well as managers who have earnestly studied the scientific production-control method that originated in the United States and supplemented their wisdom with it based on their experiences in workplace. It is a hands-on approach emphasizing worker-driven, bottom-up decision-making, hence making it "Japanese." One may wonder if such an approach is useful in Africa, but to some extent, the results of experiments have already proved that it is. It seems important to organically combine the technical cooperation—or "soft" assistance—that disseminates *Kaizen* in developing countries and then transfers a variety of specific technologies, with the so-called "hard" assistance, including capital-investment financing, infrastructure construction, and the invitation of foreign direct investment.

The effectiveness of *Kaizen* dissemination assistance, however, will be recognized by other donor countries sooner or later. It comes as no surprise that they have started to teach a close equivalent to *Kaizen* under other names, such as "lean manufacturing." Japan may not have enough ODA money and human resources in the development field to compete with them. There is no need to worry, however.

"Japan Brand ODA" is protected if people in developing countries come to use the word *Kaizen* to describe their actions to improve productivity using their own brains.[3] If *Kaizen* becomes "common sense" and spreads, Japan's reputation will improve every time another donor country imitates Japan's assistance. Since *Kaizen* has already begun to spread in Africa and elsewhere, shouldn't we focus more on supporting its dissemination to establish that "common sense" as soon as possible? It is also important for Japan to replicate in Africa, at an early stage, a successful example of development assistance like that of the eastern Thai seaboard, so that Japanese firms will consider Africa to be one of the candidate sites for their manufacturing activities. *Kaizen* is "Japan Brand ODA," and as such should be fostered carefully. Kurosaki and Otsuka (2015) argue that an important requirement for Japan to be a smart donor—given that it cannot compete with other donors in terms of the amount of ODA resources to be mobilized—is to present excellent ideas that other donors cannot help but follow. *Kaizen* is a promising weapon to win that intellectual battle. The remainder of this article presents supportive arguments and empirical backings for those claims.

2. Japan's experience: From foreign government advisors to *Kaizen*

Although Japan's ODA was unique in terms of its continued support for Asian industrial development after World War II, another unique circumstance was the country's industrial development policy during the Meiji Era (1868-1912). Because the Meiji government could not impose customs duties on account of the "unequal treaties," Japan was unable to adopt policies to protect its infant industries. The Iwakura mission, which had traveled to the United States in the early 1870s to get the unequal treaties revised, was overwhelmed by the size of the economic disparity between that country and Japan, so after returning from the United States, Toshimichi Okubo, one of the main members of the mission, launched a policy of encouraging the growth of new industries (Ishii 1997). Initially, so-called "hired foreigners" were invited to Japan as government advisors, after which Western knowledge began to be voraciously absorbed. So many leading experts were invited at such high salaries that the national budget started to be adversely affected, but thanks to the assiduous learning by the whole country, Meiji Japan closed the technological gap with Western countries with amazing speed (Umetani 2007, Katano 2011). Interestingly, a similar phenomenon occurred in Japan after World War II, this time led by the private sector. The United States, which had greatly improved industrial productivity during the war, set up bases for the productivity movement throughout Western Europe as part of the Marshall Plan, but they did not gain steam, perhaps because there was resistance to learning from the United States. In Japan, by way of contrast, lectures given by Dr. W. Edwards Deming (1900-93) in 1950 soon inspired company managers and engineers, with enthusiastic learning taking place all over the country. In 1954, Dr. Joseph M. Juran (1904-2008) arrived in Japan, and the Japan Productivity Center (JPC) was established with the help of the US government in 1955. Overseas inspection tours planned by the JPC always attracted substantial numbers of applicants. The participants in the tours—all shouldering various problems that they wanted to confirm by seeing and hearing things for themselves—traveled to the United States, where they absorbed knowledge in an extremely energetic fashion (Mori *et al.* 2007). Japanese enthusiasm for learning foreign things is believed to have stemmed from the fact that the Japanese, immediately after the end of the war, placed high value on acquiring advanced knowledge due to their previous successful experience of fostering industrial development in the Meiji Era (Mori *et al.* 2013).

In the course of digesting new knowledge, people engaged in active learning sometimes end up creating something different from the original. Methods and theories such as statistical control and quality management—brought to Japan by Drs. Deming and Juran, among others—were essentially

transformed as they became applied to individual firms. Each firm came to develop their own systems, such as the Toyota production method, which eventually came to be known as Japanese management or Japanese quality control. The main feature of those localized systems was the way that information and decision-making not only flowed from the top to bottom of an organization, or from the center toward the periphery, but also often from the bottom to the top, in a decentralized, all-participatory approach. The 1950s, when the productivity campaign arrived in Japan, was a time when labor unions were quite active in Japan, with workers and management clashing severely. Labor unions believed that increasing productivity would reduce labor input, giving management an excuse for workers' dismissal or wage reduction. Management, however, understood that cooperation with labor was indispensable for improving productivity. Therefore, the JPC strove to bring about "enlightenment" by holding a vast number of workshops, thereby dispelling labor's fears, while securing trust from both labor and management (Shimanishi *et al*. 2012). That is also one of the reasons for the bottom-up style of Japanese management.

The United States, wanting to disseminate the productive movement throughout the rest of Asia, began to send inspection delegations from other Asian countries to Japan to inform them about the experiences there, as the movement had been introduced in Japan earlier (Mori *et al*. 2013). That can be interpreted as the precursor of the way in which Japan today implements South-South cooperation by having personnel from Africa visit Southeast Asia for training. From 1956 onwards, Japan began transferring knowledge on productivity improvement overseas. Starting in the mid-1960s, in the midst of Japan's era of rapid economic growth, the country also began to transfer Japanese management practices abroad. That was mainly handled by such organizations as the JPC, the Japan Management Association (JMA), the Union of Japanese Scientists and Engineers (JUSE), and the Association for Overseas Technical Scholarship (AOTS).

In the past few years, the author has conducted experiments to investigate its impact of providing *Kaizen* training programs for African entrepreneurs, and was involved in productivity improvement projects implemented by the Japan International Cooperation Agency (JICA) in Ethiopia. Those gave the author opportunities to observe how several Japanese consultants were teaching *Kaizen* to local consultants and enterprises. The teaching style of Japanese consultants is normally to first have students experience elementary *Kaizen* first-hand and letting them realize its effects, after which the consultants present concepts systematically. Even when they have a very limited amount of time, they use familiar examples to enable people to imagine the effects of *Kaizen* while proceeding with their talk. In rare cases, some people make the mistake of starting with abstract discussions, causing the training to end up going nowhere for a while.

According to Mori *et al*. (2013), the idea of such a teaching style started with a productivity improvement project conducted in Singapore in the 1980s. That project lasted more than seven years, including a follow-up, with a total of more than one hundred Japanese experts being dispatched. It seems to have been an extremely difficult project, with the Singaporean side complaining that the initial lectures were lacking in specificity and that the teaching materials were not always prepared well enough, so the training was ineffective. However, that difficult situation stimulated the Japanese experts to action. They improved their teaching methods, and eventually guided the project to success. From then on, the word *Kaizen* seems to have become well-known abroad. Teaching methods for the system continue to evolve as productivity improvement projects are carried out in Thailand, Latin America and Eastern Europe, with the transfer of *Kaizen* becoming a staple of Japan's ODA offerings.[4]

3. Common problems

Will *Kaizen* become accepted in low-income countries in Africa and other regions, helping their industrial development? The author and Keijiro Otsuka have jointly, conducted more than twenty case studies in about a dozen Asian and African countries (Sonobe and Otsuka 2004, 2006, 2011). The case studies econometrically analyzed the enterprise data collected through interviews at many enterprises, starting with comparing cases in Japan, China and Taiwan and then cases in Southeast Asia, South Asia and Africa. Having done so, they found that the process of development of different industries in various countries was surprisingly similar. In both Asia and Africa, most firms are micro, small, or medium-sized, with those producing the same products or parts tending to concentrate in geographically narrow areas on the town or city level, forming industrial clusters. Such accumulation is possible because—as many studies have pointed out, including those of Marshall (1920)—various advantages accrue to firms by locating adjacent to other enterprises in the same industry. Similar is the process in which a cluster is formed with an increasing number of firms. However, compared with Japan and the emerging countries of East Asia, there have been very few examples in low-income countries in Africa and elsewhere of firms growing from the micro level to the small or medium-sized level, with extremely few—if any—growing into large companies. Let us explore the reason for that.

Most industries in developing countries produce low-cost substitutes for imported goods. Whenever a pioneer takes pains to start such production and eventually finds customers and earns profits, many imitators emerge, producing an industrial cluster. Without improving either the products or production methods, they do nothing but imitate the pioneer. Although the size of each firm is small, the production of the cluster expands as the number of firms increases. However, as both the product quality and price are low, any firm that tries to sell something from a more remote location will incur transportation costs, causing it to lose money. Therefore, the market for such products is restricted to the local or national level at best. On the other hand, if new enterprises continue to enter the market and the total supply volume increases, the product price will begin to decline sooner or later, causing profitability to deteriorate, meaning that no firms will want to enter if the situation is left as is. In other words, there will be zero profit. Of course, no one simply watches over the deterioration of their profits by sitting on his or her hands, and many executives do try to restore profitability by improving products. Although many successful cases of that occur in Japan, as well as in Taiwan and emerging countries in the rest of Asia, the number of such firms in low-income countries is very few (Sonobe and Otsuka 2011).

Why is it difficult to improve product quality and thereby recover profitability? To sell improved products at a higher price, they must be differentiated from those products whose quality is not improved. That is why firms work on improving their marketing methods, such as attaching brand names to their products or selling them through sales agents. By keeping quality control in mind and continuing to supply high-quality products, the reputation of their products rises, helping to establish a brand. Although the enterprise will then finally expand the scale of production, the owners who started it from a small size come to find themselves forced to use managers for the first time (Sonobe and Otsuka 2006). That is because as the business grows, it is increasingly difficult to observe the work of each employee directly. Similarly, while all transactions of a small enterprise take place right in front of the owner, money is paid and received by a larger enterprise without its owner's knowledge. Professional management was not particularly necessary when a enterprise was small. Once the enterprise grows large, however, the actual condition of business must be grasped through reports and documents drawn up by subordinates, through which employees must be indirectly controlled. If that process cannot be executed

successfully, the enterprise will go bankrupt. The extremely limited number of small and medium-sized enterprises in low-income countries reflects the fact that the number of personnel capable of such management is very rare. Small enterprises probably can grow if they take on managers experienced in medium-sized enterprises as advisors, but such people are usually nowhere to be found. Micro-enterprises probably can grow if they take on managers experienced in small enterprises as advisors, but such people hardly exist either (Nichter and Goldmark 2009).

What about the situation, then, for large-scale firms in low-income countries? Such firms are often established by the government, foreigners, or descendants of foreigners who settled in the country, and the like, starting out as big from the very beginning. However, by the standards of developed countries, they cannot be described as "large" in terms of staff size. Many of them continue to reduce the size of their enterprises in the long run due to a decline in exports and domestic market share. Visits to those large firms and talks with their owners and other top executives reveal that those people do indeed have considerable knowledge of accounting, marketing, production technology, and labor management, unlike small business owners. Of course, such people are scarce in society as a whole, and their high salaries duly reflect that scarcity. However, a completely different impression is received when one steps out of the executive offices into the factory. The morale of the workers there is obviously low, and throughout the workspace can be found plenty of staff who call themselves "engineers"—appearing powerful with their feet spread apart, standing guard over the factory hands—but who do nothing but supervise those workers. Even without being watched over in such a way, the workers do not go about their jobs feeling a sense of reward. Indeed, one does not feel that they have the slightest inclination toward actively learning innovative ideas and acquiring new skills. In that respect, such businesses are no different from micro-enterprises. While other firms around the world are progressing toward providing better things at lower prices, it is clearly impossible for large firms in low-income countries to keep up with them in such a situation. Accordingly, they have gradually lost their market share both in the domestic and export markets, and have continued to shrink in scale.

As mentioned above, both micro and large enterprises in low-income countries are not creating a situation in which employees do their jobs while also wanting to acquire innovative ideas and skills (Sonobe and Otsuka 2014). That is an issue for management to deal with; unless such management is improved, it is generally believed that industry will not develop. In contrast, some authors, such as Sachs (2005), have a completely different diagnosis of the situation. They say that even though labor-intensive manufacturing industries necessarily need the proper tools and machinery for production, manufacturers in low-income countries do not use decent tools or machines, keeping their productivity low and preventing industry from developing. Therefore, they insist that low-interest loans and free funds be provided to allow sufficient capital investment.

However, there are already countless counterexamples disproving that position. To support industrial development in developing countries, many donor agencies and international organizations have provided low-interest loans to firms through local financial institutions, or have provided them with machines and instructed them how to use them. Nevertheless, they have hardly had any impact, because it was impossible for such firms to use the machines purchased by loans or provided for free, so the machines immediately failed and were left unrepaired. The reason why they broke down was that maintenance was not performed regularly on them using the correct procedures. That situation has been experienced by many people involved in aid. Such enterprises did not carefully use the machines they received because they were unable to discipline their employees to carry out maintenance habitually. That, precisely, is something for management to solve.

4. Where to begin

It has been argued that industrial development in low-income countries has lagged on account of such time-consuming challenges as the lack of infrastructure, the problem of governance, and the lack of functional financial markets (Bigsten and Söderbom 2006). For some reason, though, no debate has occurred about improper business management. However, it is common knowledge among management science professionals and businessmen that the quality of corporate management greatly affects productivity. In addition, empirical studies published in the past few years, such as those by Bloom and van Reenen (2007, 2010), Mas (2008) and others, have presented quite unambiguous evidence for the importance of management. Based on those studies, Bruhn *et al*. (2010) state that among the various indispensable factors for industrial development, the one most lacking is managerial resources. This author agrees fully with those findings.

Is it possible, then, to supplement the insufficient management resources? According to Japan's experience as shown in Section 2 above, the answer is "yes," as far as emerging Asian countries are concerned. But how about low-income countries in Africa and other regions? Several experiments have been conducted mainly in Latin America and Africa to investigate whether management and performance can be improved by training corporate managers.[5] With financial assistance from the World Bank and JICA, the author conducted several experiments since 2007: the metal processing industries in Ghana and Kenya (twice each), the apparel, shoes, metalworking industries in Ethiopia, the apparel industry in Tanzania, and for comparison, the apparel and metalworking industries in Vietnam. The study sites where training experiments were conducted had approximately five hundred enterprises in total.[6] Table 7.1 shows the general results of the training experiments targeting the metal processing and apparel enterprises.

The curriculum used when giving those training experiments, excluding the author's experiments and those conducted by Bloom *et al*. (2013), consisted of so-called business development services (BDS) for small and medium-sized enterprises. BDS is commonly used worldwide, and focuses on the entrepreneurial spirit, business planning, marketing, and accounting. Although BDS does include manufacturing and quality control to a certain extent, it does not emphasize them outright, and were hardly mentioned at all during the training that took place in the experiments. Instead, two weeks of the author's three-week training course included BDS-like instruction in the classroom, with a whole week devoted to *Kaizen* instruction. In addition, of the ten experiments conducted in total, four involved instructors visiting enterprises twice to conduct on-the-job training to teach *Kaizen*. The persons hired as instructors were locals with senior-level qualifications (as master trainers) from the International Labour Organization (ILO) to instruct leaders in BDS. Japanese consultants were sent to the sites to give those people instruction in how to teach *Kaizen*.

Most of the experiments followed the randomized controlled trial approach used in clinical trials. The sample enterprises were randomly divided into those that would receive management training or those which would not, and both would be compared at the end of the experiment to look for differences in their state (or the magnitude of the change in their state). This method would eliminate systematic differences between the two groups other than the fact that some received training and some did not, so any higher average performance observed in the group with training over the other could be reasonably ascribed to the effect of the training itself. However, performance naturally fluctuates for a variety of reasons, and most self-employed persons and micro-enterprises (especially those without management training) do not properly keep their books, so it is difficult to accurately grasp their performance. For that reason, there is no incontrovertible evidence of the effect of the training on performance. In contrast with

Table 7.1. Main Results of *Kaizen* Training Experiments

Countries examined	Average number of employees before training	Randomized 1)	Location of training: classroom or field	Significant improvements in quality of management	Significant improvements in performance		Knowledge spillovers 3)	Other noteworthy effects
					Earnings	Value added 2)		
Cluster of metal processing industries								
Ghana	5.9	Yes	Classroom	Yes	No	Yes	NA	Enterprise survival 4)
Kenya	7.2	No	Classroom	Yes	No	Yes	NA	
Ethiopia	72.5	Yes	Both	Yes	No	No	Yes	
Vietnam	18.7	Yes	Both	Yes	No	No	No	WTP increase 5)
Cluster of apparel industries								
Tanzania	5	Yes	Both	Yes	Yes	No	Yes	WTP increase 5)
Ethiopia: Tailor	2.6	No	Classroom	Yes	No	No	NA	
Ethiopia: Ready-made garment factories	210	No	Classroom	No	No	No	NA	WTP increase 5)
Vietnam	14.3	Yes	Both	Yes	No	Yes	No	

Notes: 1) The absence of randomization means that all the sample enterprises' owners (and/or executives) were invited to the training program and let them decide whether to participate or not. Randomization, on the other hand, means that some were randomly selected so as not to be able to participate in the training.

2) Value added was calculated by subtracting material costs, utility fees, transportation expenses, and payments to subcontractors from sales revenue.

3) Knowledge spillovers are considered to exist if a considerable number of enterprises that did not participate in a training program improved management practices probably by using knowledge that their entrepreneurs had learned from their acquaintances who participated in the program. Those cases in which such influence was insignificant or unclear were marked "No" or "NA" (not applicable), respectively.

4) This means that those enterprises that stopped operation from the end of the training program until the beginning of the survey were clearly fewer in number among the participants in a training program than among the non-participants, and, hence, it is likely that the training program had a desirable effect on enterprise survival.

5) An increased WTP (willingness to pay) means an increase in affirmative answers to the question of whether a respondent is willing to pay a certain amount of money for training. The increase strongly suggests that more people appreciate the value of the training.

these experiments where training was carried out only for a few hours over a brief period, however, salient outcomes have been achieved from serious training in *Kaizen*-like practices for two years, so perhaps it is a question of whether more time needs to be spent on instruction. Also, the training resulted in improvements for almost all the experiments, regardless of whether the practices dealt with BDS or *Kaizen*.

From the outset, the author could anticipate the results of carrying out the practices that were taught, having observed the participants in some of the experiment training programs. Despite very basic things being taught in the training, the students listened intently to the instructors' lectures, asking many ques-

tions, and unanimously saying that they had "seen the light." In other words, most enterprise owners who participated did not even know the most basic of management ABC's at the outset. In addition, though *Kaizen* is founded on quite commonsensical things such as trying to introduce tidiness and cleanliness or reducing waste, the students did not know how to press home such things on their employees. Among the various kinds of training carried out in the lessons, there was not enough time to explain to the employees what they should do. Rather, it was only possible to explain to them that performance depends on whether such commonsensical things are done properly. The effectiveness of such training was minimal, with only a fraction of what had been taught being carried out. Putting it differently, it is important to teach concrete methods—not abstract theories—to bring out employees' full potential.

As a matter of fact, the Ethiopian government has already positioned *Kaizen* at the core of the whole country's modernization movement, attempting to popularize it everywhere from large firms to micro-enterprises, as well as to incorporate it in both regular and vocational education. In response to a reporter's question about whether *Kaizen*, as a bit of Japanese culture, would be accepted in Africa, a key person implementing the policy said, "Because *Kaizen* is people-friendly, Africans will certainly love it." Of course, the vociferousness of his comment does not mean that he is right, but many students told the author something similar, at least whenever he visited training sites and participating enterprises. In addition, they repeatedly mentioned their experiences, saying that since they considered *Kaizen* to be more practical than idealistic theories, they could realize its effects immediately after starting to practice it, with livelier communication between the employees themselves, as well as between employees and management.

Of course, enterprises will not grow and industries will not develop just by practicing *Kaizen*. It is obvious that knowledge must also be absorbed about various technologies, marketing, procurement and accounting, not to mention capital investment needing to be made. However, it is difficult to implement those things before *Kaizen* takes root. On the contrary, *Kaizen* has a high possibility of success if it is patiently carried out—making employees habitualize the initial steps of keeping things tidy and maintaining machines, then gradually upgrading the equipment and facilities, later becoming able to utilize them more efficiently, and increasing communication so that employees start to make suggestions on ways to improve things—before embarking on the challenge of exploring new markets and introducing modern technology. In addition, if employees adopt a proactive stance in learning novel ideas and acquiring skills, high targets can be set for such hurdles as acquiring ISO 9000 certification, etc., and cultivating export markets. There are many things to be done in that regard, but practicing *Kaizen* is the first step towards corporate growth. Thus, for industrial development assistance to be effective, it must begin by supporting the dissemination of *Kaizen*.

5. The visible face of Japan's ODA

The tide is now running strongly in favor of industries in low-income countries. As is well known, wages are rising in China. That country has long dominated the world market for labor-intensive light industrial products, such as apparel and shoes, but the production base of its labor-intensive industries has begun to diversify away from domestic coastal areas to low-income countries around the world. Also, due to the continuing rise in commodity resource prices in the past few years, resource-rich, low-income countries in Africa have started to experience rapid economic growth. Food prices there have soared, and the number of low-income countries strong in agriculture is also increasing. With incomes in those low-income countries rising, their consumers have a greater willingness to make purchases. The expansion of those countries' markets will likely encourage the development of light industry. As direct investment for the mining of mineral resources expands, momentum is also growing to foster the metalworking in-

dustry to create extra added value locally.

Under those circumstances, both the governments and private sectors in such low-income countries are yearning for more industrial development, and will come to ask donor countries for more support. Moreover, international aid agencies, which had so far tended to shy away from supporting industrial development in low-income countries, saying it was too premature, have no choice now to shift to a more assertive posture. Japan's aid community has many years of experience in productivity improvement and institutional building to assist small and medium-sized enterprises, and the fact that the word *Kaizen* has a quintessentially Japanese ring to it is also advantageous for Japan. The Japanese-style support for industrial development, centering on *Kaizen*, has a high probability of success.

Fortunately, the tide is running in favor of that trend as well. Educational penetration has made remarkable progress in low-income countries. While referenced elsewhere (e.g., Kurosaki), the author's personal view on the relationship between education and *Kaizen* dissemination can be summarized as follows. It goes without saying that higher school admission rates and the increase in the number of young people who can read and write will encourage the development of industry. It should also be noted, though, that the improvement of education in low-income countries is not merely limited to rising school advancement rates, but also extends to improved curricula. The contents of geography lessons which older Africans used to study in school as children did not deal with their own countries, but rather with the former colonial master, Britain, as there were no textbooks published which explained the geography of their own countries. It is difficult to tell people who had learned mostly useless knowledge at school, in that way, to "discover value" in learning. However, African children are now learning the geography of their own countries at school. As their school curricula improves, people will increasingly recognize that learning knowledge is useful, giving *Kaizen* a greater likelihood of being popularized further. Also, whereas students in many low-income countries used to regard mathematics as a rote-learning subject, having memorized everything by heart, that situation has also improved more recently, thanks in part to the efforts of Japan Overseas Cooperation Volunteers (JOCVs) under JICA. The subject of mathematics ought fundamentally to give students important training in exploring the core of a problem and thinking about its solution. If students only have the awareness that answers come from others, without thinking them up themselves, they will have a challenging time carrying *Kaizen* out once they join a workplace. Improved math education will thus also likely encourage the spread of *Kaizen*.

In Ethiopia—the government of which wants to spread *Kaizen* nationwide, as mentioned previously—the government-run Ethiopia Kaizen Institute assists large and medium-sized enterprises adopt *Kaizen*, while more than four hundred vocational schools helping small businesses and micro-enterprises nationwide. Teacher training is also continuing for that. The Tanzanian Ministry for Industry and Trade's Tanzania Kaizen Unit has been training instructors, with *Kaizen* already becoming very popular in hospitals. Zambia, Kenya, and Ghana are also actively promoting efforts to disseminate *Kaizen*. JICA supports those actions, and is receiving queries from many other countries—not just African ones—to help them improve productivity. The experts in charge are thus busily traveling around the world. Japan needs to inject more development personnel and funds into such projects so as not to lose out on the favorable tide mentioned earlier, and to establish *Kaizen* as "Japan Brand ODA."

Incidentally, the second section already explained how the foreign theories and techniques of productivity improvement introduced into Japan were transformed into the uniquely Japanese management system called *Kaizen*. If so, *Kaizen* itself will further change to adapt to the culture of each place where it is introduced—a development that can probably not be prevented even if one tried to. While most Japanese consultants engaged in disseminating *Kaizen* try to accurately teach the definition of each of its

concepts individually, it is inevitable that the recipients of such instruction will naturally modify them to make it more "East African" or "Latin American," for example. Moreover, if one concentrates too much on the details when teaching *Kaizen*, the danger remains that its attractiveness will drop substantially.

After Japan popularizes *Kaizen* to a certain extent, it is hoped that other donor countries will imitate it. However, if other countries "scoop" Japan and carry it out first, major damage will be inflicted on this "Japan Brand ODA," so Japan needs to promote the popularization of *Kaizen* with a greater sense of alacrity. The situation should thus be avoided of spending too much time trying to teach *Kaizen* accurately. Besides carefully teaching *Kaizen* in classrooms, it is also important to convey its concepts to a larger audience through radio broadcasts and other media. For the time being, though, it will be a relief for Japan if people widely come to understand that *Kaizen* is the name for the process of improving productivity by having everyone in an enterprise contribute their ideas. To rephrase it extremely, it doesn't matter which donor country is teaching the details of *Kaizen* if people in low-income countries think of productivity improvement as "*Kaizen*," using the Japanese word, since that means that he or she will be associating it with Japan.

So far, the argument has been made in this article that Japan ought to focus on projects in which it has a comparative advantage and which are more or less unique to the country, but it should also be pointed out that supporting industrial development in low-income countries can obviously be a business opportunity for Japanese companies as well. First, during the process of training cooperation and institution-building for the dissemination of *Kaizen*, detailed information about promising enterprises and key persons in each country flows into the respective Japanese embassy or JICA office there. It would be foolish not to take advantage of such information when thinking about which local people to work within the import and export fields, as well as in direct investment.

Also, Japan has behaved quite modestly compared with some other countries in the competition to secure the natural resources produced by low-income countries, causing it to fall behind in that race. But it seems relatively untouched resources do remain, so it is still not too late. One should recall the success, mentioned above, of industrial development in the eastern Thai seaboard. That large project began with the extraction of natural gas. Japan did not merely extract the gas, though, but also improved harbors and developed industrial zones, attracting investment from Japanese firms, and cultivating large numbers of personnel, thereby sparing no effort in cooperating with Thailand to create an accumulation of technology-intensive industries that far exceeded the country's previous level of development. In such a way, Japan has a wealth of experience in designing and steadily implementing a massive strategic package that delivers monetary and physical support, as well as personal and intellectual support, in an effective sequence. It is possible for it to reproduce that success in Africa and elsewhere. To raise the probability of that success, though, the candidate sites should be narrowed down by gathering accurate information from many countries. Efforts to popularize *Kaizen* will thus also take on the roles of human-resource development, personal network formation, and information gathering.

While more detailed discussions of direct investment itself are made elsewhere (e.g., Urata), the author would like to emphasize here the link between *Kaizen* dissemination and foreign direct investment. When local employees working at overseas offices of Japanese firms come to Japan to be trained, they first get introductory training at AOTS, after which they study proprietary technologies at various firms. Most Asians involved with that training subsequently joined AOTS Alumni Associations after returning to their home countries, and have since maintained their relationship with Japan.[7] It is still fresh in our memory that such associations extended to the victims of the Great East Japan Earthquake of March 11, 2011, promptly after the disaster. As is evident from that example, direct investment in-

volves human exchanges, resulting in bonds between people from different countries: a diplomatically important and valuable asset for both sides. In that way, the benefits of direct investment are not restricted to just the profits earned by the individual private firms that made the original investments.

6. Conclusion

Business owners and employees must successively master recent technologies, ideas and skills for their industries to compete with the constant progress of foreign industries. However, in low-income countries, neither micro-enterprises nor large firms have managers and workers who maintain a proactive attitude toward learning, nor do they know how to do so. Among other things, the usefulness of *Kaizen* in that respect has been discussed here, as well as Japan's wealth of experience in disseminating it, and the high likelihood that it will be accepted in Africa and other cultures that are different from Japan. In addition, it was pointed out that Japan has already gained experience in emerging Asian countries with regard to providing a large-scale industrial development support package that integrates human-resource development, infrastructure construction and direct investment.

However, compared with the past, when it succeeded in supporting Asian industrial development, Japan today no longer performs much manufacturing domestically. Furthermore, those people with development-related skills specialized in industrial-development support are gradually aging. Therefore, it may be realistic to promote the spread of *Kaizen* in Africa and elsewhere by working together with organizations in emerging countries where Japan has already taught it, such as the Thai-Nichi Institute of Technology, a university in Thailand teaching Japanese-style management and engineering.

This article has never employed the phrase "industrial policy." Industrial policy is plagued by the image of giving preferential treatment to selected industries, whereas what this article has discussed is the improvement of productivity through the dissemination of *Kaizen*, in which neither the selection of industries nor the favorable treatment of particular industries, such as subsidies, is involved. Undoubtedly, the latter does represent one sort of policy intervention in the market. According to economic theory, intervention is particularly effective when markets fail seriously in efficient resource allocation. The market failure that has been dealt with in this article arises from the fact that the useful system of wisdom called *Kaizen* is yet unknown, and, hence, it is of the type of market failure due to knowledge market dysfunction. The message of this article is that correcting this failure, which will contribute to sustainable industrial development in low-income countries, will make Japan a "smart donor."

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1. This chapter is based on case studies that the author conducted jointly with many other researchers. It refers to the accounts of experiences given to him by staff and consultants belonging to the Japan International Cooperation Agency (JICA), the Overseas Human Resources and Industry Development Association (HIDA), the Japanese Ministry of Foreign Affairs (MOFA), the World Bank, and the Asian Development Bank, among others, all of which have been active in supporting the development of industries around the world. In addition, Ms. Naoko Mori of the Nippon Institute for Research Advancement (NIRA), told the author about the postwar productivity campaign. The author wishes to express his sincere appreciation to all those people. He would also like to make it clear in advance, moreover, that any errors in this chapter stemming from his misperception of the facts are entirely his responsibility.
2. In this article, the word "industrial development" was used instead of the word "industrialization" as much as possible. That is because friends from Africa advised the author that it was better not to use the word "industrialization," as Africans have a bad image of it. In addition, while discussing with the manufacturing industry in mind, some of the discussion also holds for the service industry and agriculture as well, so using "industrial development" is more advantageous than "industrialization" so as not to exclude the service industry and agriculture.

3. Some experts make fine distinctions about whether the so-called five S's—*seiri* (putting things in order), *seiton* (arranging things neatly), *seisou* (cleaning), *seiketsu* (cleanliness), *shitsuke* (discipline)—constitute *Kaizen* or not, but it is better not to distinguish between them in the context of ODA.
4. It is also worth noting that the Association for Overseas Technical Scholarship (AOTS), now integrated into the current Overseas Human Resources and Industry Development Association (HIDA), has instructed a total of over 360,000 people from 170 countries.
5. McKenzie and Woodruff (2012) commented on the methods and results of these experiments, including those of the author's group, as well as about the experiments' problems and things that could be improved.
6. In addition to this, the author also participated in the evaluation of the full-scale impact of *Kaizen* training carried out by JICA at Ethiopian corporations that lasted longer than one year, although they were not randomized control trials. While the target of the experiments that the author had organized was small-scale enterprises, this training program targeted the country's thirty largest companies.
7. Japan has also enthusiastically worked on training vocational training instructors for developing countries, such as at the Polytechnic University (in Kodaira City in Tokyo).

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