

A CONCEPTUAL FRAMEWORK FOR ASSESSING THE TRANSFERABILITY OF THE JAPANESE KAIZEN MANAGEMENT TECHNIQUES TO MANUFACTURING PLANTS IN ETHIOPIA

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ABSTRACT

Based on its competitive success in the 1990s, in its aid package to support growth for those countries late to industrialization, Japan has used its kaizen management system, (a continual process of improvement which is related to quality and productivity) to intensify the capacity development goals of Africa as monitored by the Japan International Cooperation Agency (JITC). Fully convinced that the Japanese kaizen management model would be an effective strategy for latecomers like Ethiopia to industrialization and realizing that the contribution of the manufacturing sector to GDP is only about 5 %, employees of thirty pilot companies from Ethiopia were sent to Japan. Then, the Kaizen Unit was sent to Egypt, Tunisia, and Japan with employees of the pilot companies to have work-site observation and learn from the experience of the Japanese kaizen practitioner. The purpose of this paper is to review the literature and develop a conceptual framework for assessing the transferability of the Japanese “kaizen” management techniques to manufacturing plants in Ethiopia.

Key Words: *kaizen practices, continuous improvement, organizational culture, transferability of techniques to improve quality and productivity*

I. INTRODUCTION

In the 1950s, American industry entered the “Golden Age” of manufacturing. Earlier, during the Post WWII era, a number of American companies realized enormous profits as the world stood in line to buy their products at a premium. At the same time, Japanese goods were generally assigned low market prices in the world market because Japanese products were perceived as being ‘cheap’ and of ‘low quality.’ (See Becker and Snow, 1997, and Ohno, I. Hhno, K. and Uesu, S., October 2009.)

To revitalize its economy and reinvigorate its industrial base in the 1950s and 60s, Japan started framing the basic infrastructure needed to catch-up with the United States in the global market place. Japan then galvanized the strong support of the Union of Japanese Scientists and Engineers (JUSE) and the Japan Productivity Center (JPC). Finally, in conjunction with the Shewhart cycle taught by W. Edwards Deming, and other statistics-based methods taught by Joseph M. Juran, and with Japan’s social values and beliefs, organizational culture and structure, Japan developed a foundation that enabled a Japanese Management System to create a great economic power (Weldemariam, H. 2010, Sharri, Nariai, 2006, Tasie, G. (2009). The original American technique which was adapted and adjusted became a Japanese management system (JMS), better known as *kaizen* (*ky’zen*). According to Imai (1986) *kaizen* is defined as continuous improvement involving employees in all levels of an organization. As operationally defined by Brunet and New (2003, the three characteristics of the *kaizen* system generally require that it be:

1. *Continuous*, a never-ending journey for quality and efficiency;
2. *Usually incremental* in nature, always improving instead of reorganizing or reinstalling;
3. *Participative*, requiring workforce involvement and intelligence.

Unlike Western business concepts, generally epitomized by the terms innovation or drastic change in order to create fast results, the foundation of the Japanese *kaizen* management system was made popular because it was adapted to promote a continual process of improvement (Becker and Snow, 1997). More specifically, in business *kaizen* includes quality control, automation, workers' suggestion systems, just-in-time delivery systems and the 5S process (*i.e.*, *seiri* (sorting); *seiton* (setting straight); *seiso* (cleanliness); *seiketsu* (standardization in the workplace); and *shitsuke* (sustaining self-discipline and promoting a sense of pride in workers in their work and being owners of their responsibility (See Genobz , July 15, 2010).

Based on the assumption that the most important asset a company has is its work force, with the importance of the individual worker being the key asset, the *kaizen* philosophy is committed to better quality and improved productivity. Based on workers self-criticism and adherence to the constructive critique of the process, *kaizen* involves bottom-up decision-making, and practices an employee-driven management style that heavily emphasizes teamwork. As narrated by Hhno, Hhno, and Uesu, teams are not only formed across various disciplines, but the teams are given training in the dynamics of teamwork. After 'team training' is completed, the team groups are given a problem to investigate and asked to submit recommendations for improvement. A unique aspect of this recommendation process is that the team is empowered by upper management to make sure that action is taken on these recommendations and see them through to completion (2009). In addition, the Japanese management systems work as a unit because:

All the characteristics work effectively on the condition of lifetime employment. The seniority system is based on the assumption that employees' abilities will increase along with the length of service and experience. In-house education also depends on lifelong employment because the company gains the benefit of education only when employees work for a long time. (Enterprises union) is necessary when people work for only one company. One-time recruitment is the other side of lifetime employment. The importance of an employee welfare program is obvious if the employee works within a company for a long time. The other characteristics such as the bottom-up decision making system and family-oriented management are the results of lifetime employment (Ihara, 2004).

In the 1970s, as the *kaizen* Japanese management system revealed a potential for never-ending efforts for improvement in production values, it diffused its new management system throughout Japanese companies. With the globalization of Japanese businesses in the 1980s, *kaizen* became a global activity. *Kaizen* "...was originally developed in Toyota and spread among other Japanese manufacturers as they gained fame in the international market for higher quality products (Imai, 1986)." That is, as Japanese multinational manufacturing companies expanded abroad they tried to duplicate the quality or their management methods within their new factories. When Japanese firms endeavored to increase local procurement of intermediate inputs, local suppliers were requested to conform to Japan's quality standards. Thus, Japanese companies often assisted their local partners in learning the *kaizen* philosophy and practices. Similarly, the Japan International Cooperation Agency (JICA) began actively to use the *kaizen* management style to transform the industrial activities of a number of developing countries.

Based on its competitive success in the 1990s, in its aid package to support growth for those countries coming late to industrialization, Japan included *kaizen* as an additional means for enhancing their human potential and industrial enterprise capability. Before the proliferation of *kaizen*, Japan made sure that the following four vital prerequisites were met by each company. As outlined by Hhno, Hhno, and Uesu, (2009), some of the conditions that Japan wants to see in Africa include:

- 1) the prospective firm is medium to large scale and must be licensed by a private,

- international *kaizen* consulting group (for example, the licensing consulting groups in Africa are now located in Mauritius);
- 2) the plans for each *kaizen* project are customized according to the needs and conditions of the recipient, assisted by JICA;
 - 3) the main purpose of the Japan International Cooperation Agency (JICA) is to assist with organizational capacity building in various productivity improvement centers; and
 - 4) the sustaining of competitive and responsible enterprise programs already in operation.

To justify Japanese commitments and to intensify Japan's endeavors to boost Africa's economic growth, in May 2008, at the Fourth Tokyo International Conference for African Development (TICAD IV) in its Yokohama Action Plan, the Japanese Government outlined the following specific plans:

- 1) to expand JITA training programs in Africa to improve productivity in promising industries;
- 2) to facilitate trade investment by transferring Japanese manufacturing and marketing skills of the Association for Overseas Technical Scholarship (AOTS);
- 3) to establish mechanisms for Official Development Assistance (ODA) that will complement private sector activities that contribute to African development;
- 4) to set up the Japan Bank for International Cooperation (JIBC) Facility for African Investment by offering equity investment, guarantees, and local currency financing;
- 5) to provide to private Japanese companies from the Japan External Trade Organization, JETRO, on a regular basis, information about the African business climate (Hhno, Hhno, and Uesu, 2009).

The Japanese management system as practiced in a number of countries has been seen positively by many managers and practitioners because the system has helped a number of enterprises to become productive and competitive, with greatly increased customer satisfaction. In fact, Yokosuka, K., et. al., (2010) argue that "...two national characteristics are critical for successful *kaizen* transfer. One is the disciplined people who follow what they are asked to do i.e., keeping the deadline, quality control, and following standard operating procedure. The other is a hungry mentality, eager to do work which is above and beyond their responsibility."

Although debatable, many Japanese management systems are not easily adopted by an overseas counterpart due to environmental factors such as differences in national culture and work ethics, it is also worth mentioning at this juncture that in recent years, Japan's competitive condition does not seem to be worth imitating because Japan's position in the *World Competitiveness Yearbook* has dropped from 3rd position in 1993 to 27th in 2010 (*IMD, World Competitiveness Year book, 2011*). Actually, due to its recent poor economic performance, a number of Japanese business managers have questioned pursuing the *kaizen* management approach in their business practices and some have started designing post-*kaizen* strategies that may prove viable for the 21st century.

Despite the above mentioned challenges with *kaizen* management systems and the substantial economic slowdown that Japan is manifesting today, policy makers in a number of developing countries seem to view the *kaizen* system in a positive way because of its earlier success in Japanese firms. Fully convinced that the Japanese *kaizen* management model could be used as an effective strategy for latecomers like Ethiopia to industrialization, they seem to view the Japanese management system as an exemplary method for achieving growth and transformation. As succinctly argued by Gebrehiwot (2010), for the past six years, Ethiopia has recorded high economic growth mainly because of public investment in infrastructure, education, and health care. Traded goods have shown insignificant growth. Given that Ethiopia's industrial sector lacks economic dynamism due to a weak private sector and that the country's exports are highly concentrated in a narrow range of commodities, Ethiopia's sustained growth hinges on

training and equipping Ethiopian industrial workers with the necessary business skills so that they can escape the low-quality trap and produce marketable and internationally competitive products using a productive workforce. Gebrehiwot argues that the quickest way to create vibrant private business enterprises in Ethiopia is to borrow modern management techniques such as *kaizen* from Japan (2010). Also, Assefa (April, 2011) argues that *kaizen* could be the main solution to emancipate Ethiopian business firms from the trap of their low-competitiveness, provided that “before embarking on full-scale dissemination, experimentation on a number of pilot business firms is advisable; and then, expansion needs to take place after measuring the gains arrived at pilot firms.”

Faced with challenges of globalization, a number of Ethiopian firms have been instructed by Ethiopia’s Ministry of Industry to launch a pilot project using the *kaizen* management system in order to internationalize, and accomplish the following three objectives: “first, to formulate a national plan to enhance both quality and productivity in the industrial sector; second, to produce a manual for explaining and guiding these activities; third, to transfer relevant skills and techniques to the staff members of the Ethiopia’s *kaizen* Unit” (Weldemariam 2010). Stated in simple terms, it became imperative for Ethiopian policy makers to endorse the institution of *kaizen* in Ethiopia’s public and private enterprises in order to overcome the abysmal industrial situation. For late starters like Ethiopia, the Japanese tools of hands-on technical cooperation were expected to improve organizational capacity, empower and continuously improve the quality of workers, and add value to their products so that they would become productive and produce internationally competitive products that could meet the needs of a global market. In Ethiopia, *kaizen* guiding principles include:

- 1) a totally integrated company approach with genuine participation of top management, middle management and front-line employees in a collaborative working system throughout company organizations;
- 2) proactive and spontaneous participation of employees in front-line workplaces with their own initiatives;
- 3) focus on the workplace that encourages improvements of efficiency in existing resources by allowing low cost improvements to accumulate for significant contribution to the company’s goals;
- 4) continuous activities in revolving cycles of PDCA (i.e., Plan-Do-Check-Act, or Shewhart cycles, or the Deming circle) resulting in significant improvements;
- 5) endogenous undertaking conducive to change in organizational culture, practicing *kaizen* in itself leading to a corporate culture of a continually self-innovative organization and self-motivated workforce (Ethiopian Ministry of Industry, March, 10, 2011).

Given the credence that the Japanese *kaizen* management system has evoked, in July 2008, Ethiopia’s Prime Minister Meles Zenawi “...requested two-part cooperation from Japan, 1) *kaizen* (factory improvement) by the Japanese International Cooperation Agency (JICA); and 2) policy dialogue with the National Graduate Institute for Policy Studies (GRIPS). The two components were implemented by JICA and GRIPS. (Ohno, 2010). On November 4, 2009, a seminar was given by the Ethiopian Ministry of Trade and the Ambassador of Japan to Ethiopia for about 300 attendees in Addis Ababa. As narrated by Weldemariam ((2010), the *kaizen* project in Ethiopia had three phases: the first phase which started in August, 2009, was involved in reviewing the quality and productivity of 63 companies. After preliminary diagnosis of these factories, 30 companies were selected based the following criteria: 1) proximity to Addis Ababa, within 100km distance, 2) contributions to exports and /or imports, 3) scale of capital, and 4) number of employees. These included 10 from Metal, 6 from Agro processing, 6 from Chemicals, 4 from Leather, and 4 from Textiles.

Based on Sonobe’s (2009) suggestion that for *kaizen* to work well for workers, they needed to have good skills and basic experiential training, from January 12 to January 15, 2010, four *kaizen* Unit members and JICA staff were sent to visit Egyptian *kaizen* centers and three *kaizen* Units were sent to Tunisia to have practical training and learn from the

experience of the Egyptian and Tunisian *kaizen* workers. Finally, from May 8-23, 2010, the Ethiopian *kaizen* Unit members and participants from the 30 pilot companies were divided into two groups and were sent to *kaizen* training centers in Osaka and Nagoya, Japan, to acquire first hand experience and learn more about work place management, teamwork, and other *kaizen* management techniques (for details see, Weldemariam, 2010 and Hhno, Hhno, and Uesu,, 2009).

Finally, based on the assessment and monitoring results (i.e., Plant Assessment Radar Chart, KAIZEN Guidance Qualitative Performance Monitoring Report, KAIZEN Guidance participant Questionnaire, Early wins Report, and KAIZEN Guidance Company Assessment Report) completed by Ethiopia's *kaizen* unit, 18 of the 30 pilot companies were selected during the first phase of the *kaizen* project. That is, 6, 4, and 8 companies were selected October 2009-2010 for their potential to have a high possibility, good possibility, or some possibility to become *kaizen* model companies by the end of the first phase of the *kaizen* project (Ethiopian Ministry of Trade, 2011).

Given that *kaizen* pilot programs have already been launched in Ethiopia, the cardinal question which this study attempts to address is: Do the Ethiopian industries possess a work culture that is conducive to the application of the Japanese *kaizen* management system so that they are able to produce competitive products internationally? Specifically, this study attempts to addresses the following questions:

- 1) Is the level of the implementation of *kaizen* practices compatible with Ethiopia's culture?
- 2) Are Japan's *kaizen* system of lean production and total quality management compatible and transferable to suit Ethiopia's manufacturing plants?
- 3) Were the Ethiopian employees given orientation about the *kaizen* work philosophy?
- 4) Are the *kaizen*-trained factory workers in Ethiopia disciplined and motivated enough to share the underlying *kaizen* philosophy and go beyond formal job requirements to effectively participate in process improvement, that is to: a) identify opportunities, b) make improvements by engaging in quality improvement during working hours, c) challenge the status quo, and d) create favorable conditions to become self-starting and proactive?
- 5) Are the *kaizen*-trained Ethiopians committed to the company's long-term viability?
- 6) How are the *kaizen*-trained workers in Ethiopia compensated and are they allowed to have co-operative unions?
- 7) Are the *kaizen*-trained workers in Ethiopian enterprises prepared to improve continuously their products and services to meet customers' demands?
- 8) Are Ethiopian employees ready to utilize the *kaizen* process tools and methods to make the problems of their firms visible, and then use formal root analysis to identify and correct problems at the source?
- 9) Do the enterprises that employ the *kaizen*-trained Ethiopian workers give a verbal or written contract of a non-lay-off policy (lifetime employment) to their workers?

To understand the transferability of the *kaizen* strategies to Ethiopia, the second section summarizes studies related to the transferability of *kaizen* to overseas. The third section develops the conceptual framework needed to study the *kaizen* institutes in Ethiopia. Finally section four presents the conclusion of the study.

I. LITERATURE REVIEW

"Training will neither make a fish fly nor a bird swim; but training will certainly help a fish to swim faster and a bird fly higher" (Yong, AKB, 1996.)

As mentioned above, Japan being the flagship of economic growth has been offering assistance through private channels such as intra-company technology transfer and

support for local suppliers, and through public channels such as official development assistance (ODA) to public organizations in the form of the *kaizen* business strategy to a number of countries of East Asia, South Asia, Latin America, Eastern Europe, and more recently to Africa. (See for example, Ohno et al., 1997). Since the Japanese *kaizen* calls for continuous improvement that involves everyone in the organization from top management to the workers on the shop floor, its operating system allows employee participation and the delegation of responsibility. As described by Ohno, et al (1997), “*Kaizen* focuses on the way people approach work. It shows how management and workers can change their mindset together to improve their productivity.” (See also, Imai, 1986). In addition, Lee et al (1987) argue that the Japanese management system is based on a philosophy and organizational culture that stresses: hard work for common goals; consultative decision-making; a two-way communication system; long-term planning; sharing of overall objectives of the organization by the employees at all levels; establishing harmony and loyalty; and showing a high degree of concern for people and their values. (See also, Tasie, G. 2009). Given these characteristics, the question that needs to be addressed is: Is the *kaizen* organizational structure that is embedded in the Japanese culture transferrable to other nations with different organizational structures; i.e., can it produce in the host country’s manufacturing plants quality products that can compete in the global market?

Based on Recht’s (1998) theoretical contributions and experience, he has come to the conclusion that “*kaizen*-oriented suggestion systems are transferable to non-Japanese cultural environments.” But he asserts that to increase the chances of a successful transfer, six organization-culture conditions are necessary: a) a clear employee orientation, supported by a (contractually or verbally assured) non-lay-off policy; b) employees committed to the company’s long-term viability; c) a free flow of information, both along the vertical axis and between units of the same hierarchical level; d) empowered employees, i.e., employees that have the information and skills needed to make decisions on a wide range of issues concerning their own working environment; e) a so-called ‘pragmatic’ orientation; and finally f) employees who are both process- and results-oriented (Recht, 1998).

The first JICA project was extended to Singapore, from 1983 to 1990, for productivity management and it was very successful. Building on the success of this cooperative effort, the Singapore Productivity and Standard Board has subsequently grown to become a major organization with external training programs in other countries and regions, including the Southern African Development Community (SADC) under partnership arrangements with JICA (Hhno, Hhno, and Uesu, 2009, p.7).

Similarly, when we look at *kaizen* companies operating in transitional countries such as those in Eastern Europe, the *kaizen* organizational structure seems to be easily transferable because the employees of these organizations have a ‘hungry mentality’ at work and “...are eager to learn advanced technologies and management systems imported from abroad in order to survive in the international competition. At the individual level, due to the lower standards of living, people are striving to earn better lives. Thus, people are motivated to work following the rules and standard operating procedures and also they tend to go above and beyond their job responsibility” (Yokozawa, Steenhuis and Bruijin, 2010). Also, it is persuasively argued by Yokozawa, Steenhuis and Bruijin that “...openness, creativeness, and the challenging mentality can positively influence the transfer of *kaizen* because people can easily accept the foreign idea and suggest for improvement using their creativity and challenging mentality” (2010). As a result, the *kaizen* mode of production has improved company productivity through “...Quality Improvement, Cost Reduction, shortened delivery, reduced lead time, inventory control improvement, safety improvement” (Dobi, 2006).

After studying Japanese management techniques and their transferability in India, Brazil, the Dominican Republic, Mexico and Zimbabwe, Kaplinsky and Posthuma (1988) argue that Japanese management techniques were adopted in these countries because of the fact that they are late starters and were seeking to be innovative. Hosono also endorses the view that *kaizen* as well as Japanese types of Total Quality Circles (TQC) and Total Quality

Management (TQM) can be introduced to countries where the culture is very different from that of Japan. To illustrate his argument he gives three Japan International Cooperation Agency (JICA) projects, one in Brazil and two in Central America, where *kaizen* were introduced. "In the first case, JICA's Brazilian counterpart established its own concept of quality and productivity, adjusted to promote a new movement for productivity improvement in Brazil and meet the current requirements of the country" (October 2009). Though the management system in Central America is different from that of Japan, *kaizen* had various positive impacts on productivity because it brought about: 1) positive changes in attitude among workers; 2) introduced 5S and participation of management and not just workers; 3) simplification and standardization of the production processes; 4) improvements in team work; and 5) better awareness of international competition (Hosono, October 2009).

For example, a case study of Honda's Siel India affirms that the advantages of adapting the Japanese management system in India included: 1) the Japanese management system techniques are not capital intensive and therefore their implementation was not difficult; 2) Japanese management techniques are to a large extent based upon training and not formal education; and 3) the Japanese management system is being recommended for high quality and high productivity that could be easily transferred to benefit India by making its products competitive within domestic and international markets (Choudhury, November 2005).

After a through analysis of the compatibility of the Japanese management system in Nigeria, Ghana, Zimbabwe, and Kenya, Tasie (2009) comes to the conclusion that "If African countries are to improve their management styles efficiently and effectively, they must apply, but with caution, the Japanese styles of management." Otherwise, Tasie warns that "... these tools in the absence of the requisite group cohesion, organizational loyalty and flexibility in attitude, may at best serve only a window dressing purpose." (2009). In addition, Anh et al (2011), illustrates that *kaizen* practices can be transferable to non-Japanese cultural environments such as South Korea, Italy, United States, Austria, Germany, Finland, and Sweden. However, he warns his readers that the performance of *kaizen* implementation is contextually dependent.

On the other hand some scholars still assert that *kaizen* practices are embedded in the Japanese culture and are difficult to transfer abroad. Actually, they argue that *kaizen* has been dysfunctional in a number of foreign companies because it is insensitive to domestic cultures, urges foreign-owned companies to emulate the Japanese way of management, and is based on the assumption that what works in Japan has to be uniformly implemented in other countries (Shaari, 2010). Drawing on insights from the cybernetics of Beer (1966), it is possible to argue that *kaizen* categorizes the management of complexity in the management of target-oriented operations.

Many Japanese management systems are not easily adopted by an overseas counterpart due to environmental factors such as differences in national culture and work ethics. Transferred management systems are more likely to be hybridized with locally practiced systems (Yokozama, K. 2010). To use Lillrank's (1995) conclusion, the direct transfers of Japanese management practices often fail not because of geographical distance but rather due to the mental distance, i.e., culture, history, and strategic paradigms. Moreover, Hayashi (1994) argues that a *kaizen* management system works effectively in Japan because the Japanese organizations tend to have organic structures with decentralized decision-making, a low degree of specialization and formalization, and above all the culture of horizontal communication. Lincoln and McBride argue that the Japanese management system which is based on teamwork, participatory decision-making and quality circles is a result of the collective culture that views self-development to be occurring through harmony and reciprocity in interpersonal relations. Thus, Japanese companies by and large use consensus decision-making with everyone in the company being consulted on each decision (cited by Chow, C. et al., 1991).

More specifically, the transfer of *kaizen* to other countries does not appear to be successful because of a lack of synergy between the requirements of *kaizen* and the work ethics of

local industrial workers. Out of respect, or fear, local workers may not feel comfortable making suggestions to their managers (See for example, Fukuda, 1988). For instance, Yokozawa, Steenhuis and Bruijin succulently argue that though Japanese companies are attempting to transfer *kaizen*, they are finding it difficult to create a pleasant and reassuring organizational climate because they fail to pay enough attention to the host country's national culture (2010). A case in point, Yokozawa, Steenhuis and Bruijin (2010) established that the *kaizen* management system in Indonesia has not been operating as expected because the Indonesian workers feel that they are less responsible for their jobs. In a similar vein, some Japanese companies have found it very difficult to transfer *kaizen* to Germany because German enterprises have rigid job descriptions and the bureaucratic organizational structure of their firms prevents workers from sharing responsibility, having open communication, or developing teamwork, aspects that are paramount to fulfilling the functions of *kaizen* (Yokozawa, Steenhuis and Bruijin, 2010). Along with a nation's cultural characteristics, Recht, R and Wilderom, C (1998) and Anh et al (2011) assert that the adoption of *kaizen* is to a large extent dependent on some specific organizational features such as centralization of authority and cooperation that cuts across functional lines.

Furthermore, Ishiwata, A. (2009) argues that implementation of *kaizen* in Africa and in particular in Ethiopia may be facing challenges because in African countries with a "socialistic nature like Ethiopia, power is mainly concentrated in the hands of a top manager, whereas the basic concepts of *kaizen* are to empower the workers." Because the *kaizen* method focuses on visualization of production and quality performance, workers without sufficient educational backgrounds may not be able to understand the tables and figures. Thus, separate, in-depth training for workers needs to be provided in order for them to develop a full understanding of the tools used in the *kaizen* work environment. Furthermore, Ishiwata argues that the sources of the loss in productivity in Africa are mainly found outside the company. There are delays in the delivery of materials and sudden interruptions of orders from retailers and traders. Given this, Ishiwata suggests that there needs to be improvement in business networking, both backward and forward, if business productivity is to improve for most African manufacturers.

II. CONCEPTUAL FRAMEWORK

From the foregoing discussion, the conceptual framework that could be developed to study the success of *kaizen* overseas transferability and implementation of the *kaizen* practices in Ethiopia depend on the degree of compatibility between the Japanese company's *kaizen* culture and the host country's national culture. As articulated by Anh, et al., (2011) though not a universal model for successful *kaizen* transferability to other countries, *Kaizen* practices should be adapted to the local culture in order to have the highest probability of success. Given that *kaizen* is a vital approach to problem solving, its application requires restructuring the organizational culture and then use formal root cause analysis to identify and correct the problem at the source. Thus, *kaizen* practices could be implemented by the manufacturing companies of host countries provided that the host companies have a low level of centralization of authority, and practice cross-functional team cooperation of eight to 12 people with a skilled facilitator to identify, measure, and correct the problem associated with the process (See for example, Anh, et al, 2011). In short, manufacturing companies in the *kaizen* host countries may be in a position to generate significant value-added products that could effectively compete in the global market provided there is a synergy between the work ethics of the Japanese *kaizen* system and a host company's organizational culture. In addition, the *kaizen* host companies need to be fully committed to boosting the morale of their workers to develop members' capabilities, to achieve self-actualization, and to work cooperatively. These commitments are vital to the process for improving the quality of the company's output. As discussed by Zimmerman (1991) and Imai (1997), as a process *kaizen* utilizes various tools and methods to make the problem visible, and uses formal root tool cause analysis and other means to identify and correct the problem.

Given this conceptual framework, the introduction of *kaizen* as a management tool and success in the transfer of technology to improve and enhance productivity and managerial

capability in Ethiopia needs to be seen in the establishment of several building blocks in addition to conceptual issues related to:

- 1) the fit between *kaizen* culture and the organizational culture of Ethiopia's manufacturing practices;
- 2) changes in the mindset of Ethiopian manufacturing workers so they will adhere to the *kaizen* work ethics;
- 3) workers' training and discipline so that workers follow standard operating procedures;
- 4) the existence of a hungry mentality so Ethiopian factory workers will do work which is above and beyond their responsibility; and
- 5) the empowerment and involvement of workers in decision-making to cooperatively identify problems, generate solutions, implement them and then follow up to evaluate quality and productivity.

III. CONCLUSION

On May 2008, at the Fourth Tokyo International Conference for African Development (TICAD IV) also known as the Yokohama Action Plan, Japan promised to cooperate in the reinvigoration of Africa's economic growth. Given that Ethiopia's manufacturing sector was only about 5% of the country's GDP, it showed no hesitation and jumped to take advantage of the Japanese offer help Ethiopia across its industries. Japan's offer proposed techniques that could accelerate and improve the quality and productivity of Ethiopia's manufacturing enterprises. After Japan showed its willingness to help with Ethiopia's industrial development, it gave a seminar in collaboration with the Ethiopian Ministry of Trade for about 300 attendees in Addis Ababa on November 4, 2009. As a result, the Governments of Ethiopia and Japan agreed to conduct a Development Study on quality and productivity improvement (KAIZEN) in Ethiopia. Accordingly, the Japan International Cooperation Agency (JICA) and Ministry of Trade and Industry (MoTI) in Ethiopia were made responsible for setting up KAIZEN Institute in Ethiopia, the implementation of *Kaizen* pilot Project, and then the selection and training of pilot project companies.

The *Kaizen* project in Ethiopia consisted of three phases. The first phase which started in August, 2009, reviewed the quality and productivity of 63 companies. After preliminary diagnosis of these factories, 30 companies were selected based the following criteria: 1) proximity to Addis Ababa, within 100km distance, 2) contributions to exports and /or imports, 3) scale of capital, and 4) number of employees. Then, the employees of the pilot companies were sent to Japan to undertake work-site observation and learn from the experience of the Japanese *kaizen* practitioner. In October 2009-2010, by the end of the first phase of the project, from the thirty pilot companies, only 6, 4, and 8 companies were finally chosen by Ethiopia's *Kaizen* Institute for having high possibility, good possibility, and some possibility respectively to become *kaizen* model companies (Ethiopian Ministry of Trade, 2011). Therefore, in order to understand the mechanisms needed for the transference of the Japanese *kaizen* management system from Japan to Ethiopia, it is worthwhile to review the literature and identify the important variable needed for the transferability of the Japanese *kaizen* management techniques to other countries.

Over the years *kaizen* has become a global activity. Japan, either through its multinational enterprises or through the support of the Japanese International Cooperation agency (JICA), has attempted to transfer its factory-level model for improving quality and productivity, known as *kaizen*, to a number of countries. Particularly, since *kaizen* can realize productivity improvement with little additional investment, it has been adopted by a number of developing countries with different cultures and business environments. Over the years, *kaizen* becomes internalized and institutionalized in some host countries because it is generally regarded as a philosophy of life. For example, *kaizen* has been adopted by highly disciplined workers and by workers with an unwavering hungry mentality conducive to innovation that makes them eager to learn advanced technologies and management systems in order to survive in international competition.

In some countries, however, the implementation of *kaizen* has been challenging because of a lack of synergy between the requirements of *kaizen* and the work ethics of local industrial workers. *Kaizen* practices are embedded in the Japanese culture and are very difficult to transfer abroad. The dysfunction of the *kaizen* management techniques occurs when Japan is insensitive to domestic cultures of foreign manufacturing companies. Japan has assumed that what works in Japan has to be uniformly implemented in other countries, and Japan insists that foreign-owned companies must emulate its management system (Shaari, 2010).

Given that *kaizen* is a vital approach to problem solving, the transferability and practical implementation by foreign companies involves bottom-up decision-making and an employee-driven management style that adheres to cross-cultural cooperation. In short, manufacturing companies in the host countries could generate value-added products and effectively compete at the global market provided they maintain their synergy with the work ethics of *kaizen*. Their organizational cultures must be fully committed to boosting the morale of their workers and developing their ability to achieve self-actualization. As a result of such coordinated efforts by all employees, they will all be rewarded by the improvement of the quality of their products.

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