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BUSINESS PROCESS MANAGEMENT

Application of Kaizen in Different Countries

*Comparing kaizen application in Asia (Japan), Europe
and America*

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Introduction

Most people connect the lean methods like kaizen to the Japanese manufacturing after World War II (Womack, Jones, & Roos, 1990). Yet even Taiichi Ohno, one of the people responsible for implementing the lean methods in Toyota, attributed his methods to Henry Ford's knowledge (Levinson, 2002). Yet, by the late 1940s the Ford company has all but abandoned his teachings and had to relearn them a couple of decades later (Levinson, 2002). Why had these ideas taken hold in Japan, while they originally died out in America? What are the differences in the implementation and the culture and thinking, that show themselves through the implementation of the lean methods like kaizen.

In this following paper, I am going to present a review of the different case studies of the implementation of the kaizen. Through perusing the differences and similarity of the cases based on the cultural background, I will point out the differences and possible explanation for them. All the way, I am going to be aware, that some previous studies show, that the organizational differences have a larger effect than the cultural ones (Magnier-Watanabe, 2011).

1 Theoretical Concepts

Kaizen is a life philosophy and it means gradual and continuous improvement (Karkoszka & Honorowicz, 2009). All parts of our life: working, social, family and personal should be constantly improved (Saleem, Khan, Hameed, & Abbas, 2012). In organizational contexts the kaizen means bottom-up systemic incremental improvement where every employee is involved (Saleem et al., 2012; Emiliani, 2005).

Kaizen is not considered the same as innovation. It is a different way of introducing change. Some authors, like Wittenberg (1994) even call it an antithesis of innovation because of its gradual process. Also, unlike the classical western improvement strategies, it takes advantage of human factor and standardisation to a greater extent (Karkoszka & Honorowicz, 2009). The difference between innovation and kaizen also nicely explains the difference between how differently West and Japan understand change (Khan et al., 2011).

The main goal of Japanese managers is first to maintain, and then improve the standards (Khan et al., 2011). Because of this goal and Japanese mentality, a different leadership methods are used in Japan than in the West. In Japan the first goal of kaizen is to help employees increase their problem solving abilities. Only the second goal is to improve the processes. The worker has to plan, do and control their actions. The role of the managers is simply to increase worker's productivity by motivating them (Gopalakrishnan, 2006). In fact, in Japan it is a corporate responsibility to teach employees good manners (Aoki, 2008).

It is this mentality that makes something kaizen. Kato and Smalley (2010) even said: "There is no "one way" to do kaizen in terms of steps, analysis methods or timing".

2 Methodology

I have used two steps in my research. First, through reading about implementation of kaizen in different organizations. I was trying to find some fundamental differences. In the second step, I was trying to prove these differences by using the additional case studies.

I have used a convenience sample of case studies. When I came across of case study in the first phase of my research, then I automatically included it, but if I came across it in the second part of my research, then I only included it, if it had some information about the differences found in the first part.

There are two specifics in the case studies. The first is the companies that I used for Japanese environment. The second one is the company Ford from US.

Let me first touch on the Japanese companies. Most companies in Japan are trying to implement kaizen by coping the Toyota. Because of that Toyota can, in a lot of cases, be used as a stand in for all Japanese companies (Aoki, 2008). I did triangulate this by using a Brunet and New (2003) study, which compared the kaizen implementation in Nippon Steel Cooperation with 11 other Japanese companies. In the differences In what I was studying, there were no difference between Toyota and Nippon Steel Cooperation, neither were they mentioned as differences compared to 11 other companies.

Ford company is another unique example. When we are talking about the philosophy of kaizen being implemented in the organization, it was not the Japanese organization that did it first, but Ford. The Japanese had openly accredited their kaizen ideas to Ford's writing (Levinson, 2002). But unlike Japanese companies, which made the kaizen a successful story, Ford was unable to sustain the kaizen culture inside the company. The 2 reasons that Levinson (2002) cites are the complacency in the company after the success of model T and that this culture depended on one man, Henry Ford, and when he was gone, so was this culture.

In the following section I am going to discuss the differences in process implementation of kaizen and philosophical implementation of kaizen. I will use case studies as data points to show the different tendencies in three continents: Asia (where I mostly analysed Japan), Europe and America. I will follow up with how this difference also manifest in different usage of kaizen.

3 Differences in Kaizen Implementation

3.1 Process vs. Philosophy

There is a noticeable difference in the process vs. philosophy part of the kaizen implementation. Kaizen process implementation means that the kaizen ins implemented as a series of steps and analysis. On the other hand, kaizen philosophy implementation means, that there is a higher emphasis given to the need for continuing improvement and the mentality needed to do this.

Kaufman Consulting Group is a typical example of the former group. Lareau (2003) put a lot of emphasis on the regular meetings and the structure of the meetings. It also details the different levels of groups, how they should be structured and how to lead them. Deviating from this structure is highly discouraged.

Toyota is a good example of the later one. Kato and Smalley (2010) even mentioned that there is 'no "one way" to do kaizen in terms of steps, analysis methods or timing'. They do give suggestions for the different methods that could be used, but they have put even more time to explaining the kaizen mentality.

Both Toyota (Womack et al., 1990; Kato & Smalley, 2010) and Nippon Steel Cooperation (Brunet & New, 2003) use the philosophy of kaizen as the basis and not the specific techniques. Brunet and New (2003) had also not found this as a differences, when comparing Nippon Steel Cooperation with 11 other companies using kaizen in Japan. Kato and Smalley (2010) had written, that the methods of kaizen in Toyota are dependent on the situation. There is no one solution fits all kaizen tool.

In Europe, the situation is mostly reversed. Most companies from the cases use kaizen process as the foundation. The companies span from Niko d.d., a manufacturing company in Slovenia (Čufar, 2010), to 4 different municipality public organizations in Spain (Manuel F Suárez-Barraza & Lingham, 2008; Barraza, Smith, & Dahlgaard-Park, 2009). The only possible exception was the General Motors company in Poland (Karkoszka & Honorowicz, 2009), but even then, it was not specifically said, but implied. It could be that I have not understood the situation correctly because of the lack of information.

The situation in America is similar to the one in Europe. There are two cases with the sufficient information to determent this: a cancer treatment centre and a business school offering EMP masters programs (Emiliani, 2005; Graban & Swartz, 2013). Both of them had used process as their foundation, but it was much more prominent in the school case, than in the case of a hospital.

The big exception, because of the reasons connected with the history of kaizen, was Ford (Levinson, 2002). There I noted that they used the philosophy of kaizen, even if they did not use this word for it.

The difference between kaizen philosophy and process of kaizen lead to a different implementation of kaizen in different countries. In the following section, I am going to be showing the differences in time, scope, participation and who is thought kaizen in a company.

3.2 Continuous Kaizen vs. Kaizen Blitz

There are mostly two ways that companies implement kaizen: they either start using some sort of continuous system or they implement kaizen blitz events. Some companies mix the two processes. The difference is that continuous system becomes a part of a company and it is constantly executed. The kaizen blitz event, even if they become a regular occurrence, do not become the part of a everyday life of a worker, but something that puts them away from their work.

There had been some discussions in differences between kaizen, kaizen blitz and kaikaku. Kaizen refers to small improvements that happen on an everyday basis. Kaizen blitz refers to 2-7 day event with the goal of improving the process. Kaikaku refers to the bigger change. Some authors like Liker (2013) seems to think that all of these refer to kaizen. The main argument is that in Toyota, all changes from the smallest one to the invention of Prius would be called kaizen. There are authors that do not agree with this notion. Their main argument is that kaizen blitz and similar events actually harm the continuous improvement that is the main attribute of kaizen. That is why a different word should be used (Brunet & New, 2003).

In this research, I used cases where they called their process of improvement kaizen. The only exception is Ford, as word was not yet used in the western world at the time, but the Levinson (2002) did use it do describe it in his book.

All companies in my sample (Womack et al., 1990; Kato & Smalley, 2010; Brunet & New, 2003) had no mention of kaizen blitz and had quite a lot of emphasis, that kaizen is a continuous method. Kato and Smalley (2010) even mentioned, that what is now considered a kaizen blitz is not a normal state of affair in Toyota.

In Europe, most companies use the kaizen blitz method of kaizen, but there are examples, where they use the either mixed or even continuous method of kaizen.

Organizations using blitz methods include 2 organizations from the public sector, one from Basque, Spain (Barraza et al., 2009), and the other from Netherlands (Teeuwen, 2010) and 1 organization from private sector: Paddy Hopkirk Limited (Wittenberg, 1994).

Organization using one of the continuous variants of kaizen also include both public and private companies: General Motors company in Poland (Karkoszka & Honorowicz, 2009) is an example of a private organization and one of the Municipal Town Council in Spain (Manuel F Suárez-Barraza & Lingham, 2008) is an example of public organization.

Organization using mixed strategies in my sample were two city council in Spain, one in Barcelona (Barraza et al., 2009) and one in Madrid (Barraza et al., 2009). Both of them started with the blitz method, but then they started to change it into a more continuous variety.

In America, compared to Europe, there were some less completely blitz implementations, and more mixed ones. One possible reason for this would be, that my sample was biased. The one one could be, that it might be a natural progression. In America, there were more cases of already working kaizen, than the ones implementing for the first time. Maybe the continuous component is a natural progression from the purely blitz kaizen.

Companies using blitz methods included business school from USA (Emiliani, 2005), school project at meat manufacturing in USA (Allen, Wachter, Blum, & Gilchrist, 2009) and GKN Driveline operations in Brasil (Pampanelli, Found, & Bernardez, 2011). Companies using the continuous way were Avera McKennan Hospital and University Health Centre in USA (Grabban & Swartz, 2013) and again Ford (Levinson, 2002). The mixed one included hospital from USA like Cancer Treatment Centres of America (Grabban & Swartz, 2013), Children's Medical Centre Dallas (Grabban & Swartz, 2013) Virginia Mason hospital (Grabban & Swartz, 2013), ThedaCare (Grabban & Swartz, 2013) and a Chocolate factory from Mexico (Mi Dahlgaard-Park, Suárez-Barraza, Ramis-Pujol, & Estrada-Robles, 2012).

3.3 Section Improvements vs. Overall Improvements

Some companies use the kaizen process on just a specific section of a company, like only manufacturing, only human resources or only administration. Some go even further, using kaizen methodology on just specific subprocess. The other use kaizen through the whole company and nothing is exempt from continuous improvement.

In Asia, all companies in the sample: Toyota (Kato & Smalley, 2010), Nippon Steel Corporation and others (Brunet & New, 2003) use the overall company strategy.

Things are completely reversed in Europe and America. In both cases, only one company use the overall kaizen strategy: General Motors plant in Poland (Karkoszka & Honorowicz, 2009) is an European example and Ford (Levinson, 2002) as American example.

In Europe, the examples of kaizen implementation on just specific process or subprocess include public companies like municipality social service in Netherlands (Teeuwen, 2010), and 2 municipality councils in Spain (Manuel F Suárez-Barraza & Lingham, 2008; Barraza et al., 2009). The private organizations are 2 manufacturer: Paddy Hopkirk Limited (Wittenberg, 1994) and Niko d.d. (Čufar, 2010).

In America the examples span business school in USA (Emiliani, 2005), meat manufacturing in USA (Allen et al., 2009), chocolate manufacturing in Mexico (Mi Dahlgaard-Park et al., 2012),

hospitals in USA like Virginia Mason (Graban & Swartz, 2013), Children's Medical Centre Dallas (Graban & Swartz, 2013), GKN Driveline operations from Brazil (Pampanelli et al., 2011) and 60-120 Mexican Public Service Organisations (Manuel F. Suárez-Barraza & Ramis-Pujol, 2010).

3.4 Group Kaizen vs. Everyone's Kaizen

In earlier examples of kaizen like Ford and Toyota, everybody was included in the kaizen process. The companies expected all the workers to try and find a better way to do things. But somewhere along the way, there came forth a way of doing kaizen, where only some people were involved.

One reason for this could be the difference in leadership. For example, in Japan, the leadership hinges on consensus (Broadbent, 1994). I will discuss it in the later part of a paper. But in the Europe and America this type of leadership is quite rare.

Another reason could be found in Japanese transplants in China. Aoki (2008) researched the kaizen in a different Japanese companies in China and found out about a couple of organizational underpinning that has inhibit kaizen, especially when tried in a overall, everybody participating level. One of them was when there is a lot of difference, in this case salary, between management and workers. This difference is quite smaller in Japan, than it is, for example, America (Gavett, 2014).

In Japan, every company in my sample, from Toyota (Womack et al., 1990; Kato & Smalley, 2010), Canon (Khan et al., 2011), Nippon Steel Cooperation and others (Brunet & New, 2003) used a style that included everybody in the kaizen process. But the difference was show already, when comparing with China. There the results were mixed, in some cases everybody was involved and in some cases only the management (Aoki, 2008).

In Europe the results were mixed in the most general sense. There were 3 companies that used the kaizen where everybody was involved equally, 3 were mixed, where everybody were involved in some part of the kaizen process, but not the rest, and 3 had only some employees involved in the kaizen process.

The 3 organizations that involved everybody in kaizen were General Motors plant in Poland (Karkoszka & Honorowicz, 2009), city council in Barcelona (Barraza et al., 2009) and Niko d.d. manufacturing in Slovenia (Čufar, 2010). Organizations where only some employees were involved in the kaizen process were Paddy Hopkirk Limited (Wittenberg, 1994) City Social service in Netherlands (Teeuwen, 2010) and City Council in Madrid (Barraza et al., 2009). The organizations with mixed kaizen process were budgeting for the Lichtenberg Berlin District (Teeuwen, 2010), where everybody was involved in suggestions and accepting decision, but paring down the

suggestions had limited participation, Municipal Town Council in Spain (Manuel F Suárez-Barraza & Lingham, 2008), where everybody could give suggestions, but only some could implement it, and Basque City Council in Spain (Barraza et al., 2009), which had mostly limited participation, but there were parts where everybody could participate.

The situation in America is leaning more toward the everybody can participate way of kaizen, but is still have quite a lot of examples, where this is not achieved. Organizations that involved all of their employees in the whole process of kaizen were manufacturers in USA like Ford (Levinson, 2002) and New United Motor Manufacturing (Magnier-Watanabe, 2011) and hospitals in USA like IU Health Goshen Hospital (Grabán & Swartz, 2013) and Baptist Health Care (Grabán & Swartz, 2013), ThedaCare (Grabán & Swartz, 2013), Avera McKennan Hospital and University Health Centre (Grabán & Swartz, 2013). Organizations where only some employees are included in the kaizen process include business school in USA (Emiliani, 2005), meat manufacturing in USA (Allen et al., 2009), chocolate manufacturing in Mexico (Mi Dahlgaard-Park et al., 2012) and GKN Driveline operations in Brasil (Pampanelli et al., 2011). Organizations with mixed kaizen were Children's Medical Centre Dallas in USA (Grabán & Swartz, 2013), Virginia Mason Medical Centre in USA (Grabán & Swartz, 2013) and 0-120 Mexican public service organisations (Manuel F. Suárez-Barraza & Ramis-Pujol, 2010).

3.5 Kaizen Education

I also expected to see the big difference in how many people are educated about the kaizen in an organization. The number of cases with this information was lower, but it does show an interesting trend. Most companies, that had this information included educate every worker in the kaizen way or methodology.

In Japan, all companies from Toyota (Womack et al., 1990; Kato & Smalley, 2010) to Nippon Steel Corporation (Brunet & New, 2003) show that all employees are educated in the kaizen way.

So do both of the companies in Europe. Both General Motors in Poland (Karkoszka & Honorowicz, 2009) and Niko d.d. in Slovenia (Čufar, 2010) had educated every employee on the kaizen.

In America the situation is a little different. New United Motor Manufacturing from US (Magnier-Watanabe, 2011) is educating every employee about the kaizen. But the business school in USA (Emiliani, 2005) and meat manufacturing company in the USA (Allen et al., 2009) did not. The later could be explained with the unique situation of the kaizen project. It was a student project in a company which was used for a company to test kaizen and for students to learn. At that point they did not yet know if the kaizen is going to be successful for them, so they most likely did not yet want to invest in the employee education.

3.6 Summary

Table 1: Summary of Differences in Kaizen Application

	Japan	Europe	America
Process vs. Philosophy	Philosophy	Process	Process
Continuous vs. Blitz	Continuous	Blitz	Mixed
Section vs. Overall	Overall	Section	Section
Group vs. Everyone	Everyone	Mixed	Mixed
Education	Everyone	Everyone	Only some

Source: Me

There are differences in how the application of kaizen in different countries. The original vision, that the Ford had started, had found its stronghold in the Japanese culture. They treat kaizen as part of their life philosophy and it is shown by using the terminology in their everyday life. That is why the kaizen is used by every member in the company all the time, and on every process. Everybody is also educated about the positive sites of kaizen.

The Europe and America, with their different culture, had then copied different tools and methods from the Japanese. But without the overarching philosophy, the application is quite different. They used these techniques to improve some of their processes, when they needed improving. Usually the management starts it. But after a while, some organizations show, that they are moving in the more Japanese way of treating kaizen. But it will still take a lot of time.

4 Possible Explanations

4.1 Conflict Resolution

There are a couple of cultural explanations for these differences. The first of them is how the conflict resolution is approached in America and in Japan.

Womack et al. (1990) had noticed, that when working in teams, the Japanese teams tend to become smaller over time, while the American teams become bigger over time. One explanation that he gave is, that the American's shy away from the conflict, so towards the end they have to bring additional people in to resolve all unsolved questions. The Japanese do the reverse, they resolve each question from the start, and as more and more decisions are accepted, less and less people need to be still present in the team (Womack et al., 1990).

There is also a different way of making decisions in Japan. In Japan, when people make a decision, everybody involved with decision analyse it to the smallest detail and then they make a decision

based on consensus. If the decision is wrong, that just means that they did not analyse it enough (Broadbent, 1994).

This could be in part explained by the independent and interdependent constructs of self. Cultures with independent construct of self, like USA and Western Europe see themselves as away from society. They value individualism and they get their meaning in life from their own well-being. On the other side, cultures with interdependent construct of self, like Japan, see themselves as part of the culture. They value their place in society, their roles and duties and get meaning in life from acceptance (Heine & Lehman, 1995).

But interdependent cultures have a much better refined concept of others. They are less likely to stereotype and in case of a threat they are much less likely to protect their identity through biases (Heine & Lehman, 1995). This physiological differences and the decision making described above lead to a lot easier problem solving with Japanese than with Western people.

4.2 Management Styles

In the upper parts, I have already discussed some of the concepts. They were that the goal of the management is to keep and improve standards, consensus decision making and how it is a corporate responsibility to instill good manners. In this part I am going to be expanding this with a different concepts.

One is how the control is made in the Japanese culture. In Western world it is usually authority that steps in in case of a disruptive action on the part of individual. In Japan, it is not authority but peers on the same level that do it (Hofstede, 1993). It helps that Japan is a interdependent culture (Heine & Lehman, 1995).

The following story from the Hofstede (1993) describes it quite well. In kindergarten there is a boy, that is constantly causing troubles. When a girl tries to alarm the teacher, she gets a response to deal with it herself.

There is also a difference in prototypical versions of a leader in different cultures. When comparing the Eastern and Western, the trait determent was prototypical in every Western country sampled, while the trait intelligent was prototypical in every Eastern country samples (Gerstner & Day, 1994). Japanese traits were quite different from the overall traits. The Japanese valued in order: responsibility, education, trustworthiness, intelligence and discipline. When comparing all countries, the most valued traits in leaders were: determination, goal-orientation, intelligence, responsibility, and decisiveness (Gerstner & Day, 1994).

These results correspond to the study mentioned above (Hofstede, 1993), which studies the differences in leadership styles in different countries.

Conclusion

The results of my study indicate that there are differences in the kaizen implementation in the Japan and in the Western countries. The difference start on the most fundamental level, as Japanese implement kaizen philosophy, while the Western organizations mostly implement kaizen methodology and tools.

This difference leads to different expressions of kaizen that shows itself in different ways. In Japan, it is a standard for kaizen to be a process that is present everyday, which involves the whole organization and where everybody participate. This is also imbedded in the Japanese culture, when the notion of constant improvement is a way of life. Japanese consider that life as "battle for constant improvement" that you only escape in death (Levinson, 2002). One good way of showing this is their education. For them, the expert is a person that understands that he or she does not know everything (Levinson, 2002). And acquisition of knowledge is a life long process (Gapp, Fisher, & Kobayashi, 2008).

Europe and America are still lagging in this regard. They are both getting a lot of improvement from adopting specific tools of kaizen, like S5, reporting, kaizen blitz and others. But they are still far away from adopting the kaizen philosophy as a whole.

In most cases it seems that America might be closer to that ideal than Europe. One of the possible explanation could be that they also have some cultural underpinning that somehow helps them with this. After all, the concept was first consistently applied and documented at Ford, which is an American company. The other explanation is, that the Americans had simply started to adopt the kaizen sooner and are further away in their path to the kaizen philosophy. Third explanation could be, that my sample has bias in it.

I have then also explained some cultural differences connected to the managerial part to try and explain the differences in kaizen implementation, like type of management and conflict resolution.

There are differences, that I have not included, like linguistic (Chen, 2012), psychological differences in reaction of fear and their neurological differences (Maurer, 2014), their education system and many others. It could be that some of these concepts would lead to a better explanation of the differences.

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