Unions and the Lean concept

By Monica Rolfsen and Jonas Ingvaldsen, NTNU, Norway

Introduction

The interest in Lean has reached new heights in Norway. Networks of companies, consultants and academics have been established, such as the Norwegian Lean Forum, established in 2009, with an ambition to “develop the Norwegian model of lean”. Also on company level in various sectors, the interest in Lean is strong. Multinational consultancy companies have had several big contracts implementing Lean on a broad basis.

In various reports and research articles worldwide, however, Lean has been accused for being a strategy of work intensification and tightened managerial control (Graham, 1995; Lewchuk & Robertson, 1997; Parker & Slaughter, 1988; Sewell & Wilkinson, 1992). But the trade unions in Norway are mainly supportive, and the national trade union is actually one of the initiators of the Lean Forum. Also on company level, the large picture is that unions support implementation of Lean.

In this article, we will discuss why trade unions in Norway are mainly supportive to lean, which is surprising given the negative reputation from a blue collar, union perspective in the international literature. This attitude in Norway is contrary to other findings in the literature on the connection between lean and trade unions. In a recent research project, the focus is to develop a Norwegian Lean model. By using empirical data from leading companies within manufacturing, process industry and service, we will give possible explanations to why the trade unions’ attitude differs from other. Possible explanations can be the content in Lean, the implementation strategy, or the participative tradition on the national level.

The Norwegian model

What is often referred to as the “Norwegian model” has historical roots back to 1935, when a historical compromise was established with the National Main Agreement between the social partners. The agreement set boundaries for strikes, national standards on wages, working conditions and working hours. The agreement can be seen as a class compromise, where the
employers’ freedom to manage was accepted by the trade union, and a higher level of participation for workers was accepted by employers.

The Industrial Democracy Program during the 1960s (Emery & Thorsrud, 1976) further strengthened worker participation. This program was a joint commitment between the Norwegian Confederation of Trade Unions (LO) and the Confederation of Norwegian Business and Industry (NHO) to initiate experiments of participatory work, consisting of field experiments (Gustavsen, 1992) inspired by socio-technical principles (Emery & Thorsrud, 1976; Thorsrud & Emery, 1964, 1970; Trist, 1981). The program achieved several results: In 1973 the government passed an act on employee representation on the company board. The Employment Protection Act in 1977 imposed better work environment in factories and increased intrinsic motivational factors. The most remarkable instrument, however, is the Basic Agreement, where the purpose is to increase added value through broad worker participation in companies. Also in Sweden, the trade union movement has a long tradition of involvement in technical and organizational development. Industrial democracy was put on the agenda in a trade union conference in 1971, inspired by the Norwegian experiments (Johansson & Abrahamsson, 2009).

The relation between unions and employers is highly regulated both on national as well as on local level, and partnership is a part of the social partners’ agreement system. Union membership is individual, but usually more than 80 percent of the blue collar work force in manufacturing companies is unionized. This involves being a member of the local union at the company and also being a part of a national union. The local union has an office within the company, and the shop steward elected by the members is paid by the company to serve as a union representative usually about 50 per cent of his time depending on the size of the company. The industrial democracy program started in the 1960s and consisted of field experiments with autonomous work groups (Gustavsen, 1992). Several results were achieved. In 1973 the government passed an act on employee representation on the board of directors. The Employment Protection Act in 1977 imposed better work environment in factories and increased intrinsic motivational factors. The most remarkable instrument, however, is the Basic Agreement (BA), also called “The Constitution of Norwegian Working Life,” negotiated between the LO and the NHO in 1982. The purpose is to increase added value through broad participation. The Agreement states that the social partners will commit themselves to focus on enterprise development through joint labour-management partnership.
This is how the national trade union conceptualizes the Norwegian model on company level:

![The Norwegian cooperation model](image)

Figure 1: The Norwegian cooperation model

**Trade unions and lean**

The term *lean production* was coined by the International Motor Vehicle Program, studying the competitive situation in automotive sector worldwide (Krafcik, 1988; Womack, Jones, & Roos, 1990). They concluded that the global competitive advantage of Japanese car manufacturers was due to their superior way of organizing production. Lean production is described as a synthesis of standardized mass production and flexible craft production, in which the benefits of the two are combined (Womack, et al., 1990). Lean can be understood as a set of related principles mutually reinforcing and producing system wide effects (Karlsson & Åhlström, 1996; Macduffie, 1995; Womack & Jones, 1996), and characterized by just-in-time logistics, short cycle times, standardized work, systematically job rotation, continuous improvement activities and team organization.

Womack et al. (1990) stated that "lean production will supplant both mass production and the remaining outposts of craft production in all areas of industrial endavour to become the
standard production system of the twenty-first century” (p. 285). Their argument is that lean production, as a social technology (see Adler and Borys, 1996), will prevail because it is a more rational way of organizing high volume production independent of context. The failure of Volvo’s “human centered design” (Sandberg, 1995), has also been taken as evidence that there are no real alternatives to lean production. There has been a discussion on the implications of lean for working conditions. Researchers from the trade union movement have been highly critical, for example Parker and Slaughter who rename the concept to “mean production”, focusing on reduced cycle time, stress and work related injuries (Parker & Slaughter, 1988). The conclusions was followed up, comparing lean organization with the autonomous teams at Volvo during the 1980ies (Berggren, 1992). Also Laurie Graham concluded that lean reduced the quality of work life for employees in a Japanese plant in the US (Graham, 1995). The plant was not unionized, and the overall impression she reports is that lean leads to increased stress, strain injuries and accidents. A recent literature (Brännmark & Häkansson, 2012) review shows that there is a negative, although mixed connection between lean and work-related musculoskeletal disorders, one of the main findings also in the earlier studies referred above.

Research on unions and Canadian auto industry reports negative response to lean from the union and workers’ point of view. Although workers were initially positive and hopeful that lean would provide a more human and democratic work environment, the attitude changed due to negative experience (Rinehart, Huxley, & Robertson, 1997). Also by Swedish researchers, lean production is contrasted as being in opposition to the industrial trade union’s vision of “the good work” (Johansson & Abrahamsson, 2009). In Britain, there are reports on more stress, unsecure jobs and work related suicides connected to the implementation of lean (Stewart et al., 2009).

In sum there have been four main objections to lean from a union perspective in the literature. The first has to do with working conditions, as already mentioned. According to several authors lean will lead to more stress, work-related injuries, and even suicide (Fucini & Fucini, 1990; Graham, 1995; Parker & Slaughter, 1988; Stewart, et al., 2009). The second objection is related to reduced participation, caused by hierarchical level and opportunities for autonomy (Dankbaar, 1997; Moldaschl & Weber, 1998; Nomura & Jürgens, 1995; Vidal, 2007). The third objection is related to union busting strategies, where in some work evidence for a connection between lean and union busting has been launched and analyzed (Babson,
The fourth objection in the literature of crucial importance for unions is that it can lead to reduced manning of staff (Benders & Van Bijsterveld, 2000).

Within our Norwegian empirical reality with strong unions, high union density, and where work conditions, participation and industrial democracy are considered important, one would, given all these objections, expect the union to be in strong opposition to lean. In the next section, we will present our empirical findings.

**Empirical findings**

Lean Forum Norway was established in December 2009 by the Research council, two consultancy firms, two research institutions, Innovation Norway owned by the government, one industry cluster, two of the national Employer associations and the national Trade union association. The aim for the Forum is to contribute to economic growth through innovation and business development and thus strengthen the competitiveness of Norwegian industry and private and public services. The overall goal is to develop the "Norwegian model" further to a clear management model based on lean management, combined with the national tradition of cooperation. The forum will focus on innovation and business development in which economic growth takes place through the use of technology to create value for the customer or user. Through experience and research the forum contribute to further development of the "Norwegian model" and "lean philosophy". A director in the national trade union has a position in the Forum’s board.

Why did LO (the national trade union) participate in the establishment of a forum promoting implementation of lean in Norway, given the union related objections in the literature? The decision was far from conflict free within the union, and there are different opinions within the trade union whether one should contribute or not. One of the directors of LO gave a presentation recently and explained the motivation. One of his main arguments was to refer to the main agreement’s part B, were the trade union is obliged to contribute to value creation for companies, productivity and effectiveness, while on the other hand employers are obliged to involve the trade union in important decisions and work for increased autonomy and work environment. In his presentation, implementation of Lean would be an example of organizational development both aiming for increased productivity and work environment. In his presentation, he defined Lean in the following way:

---

1 The Main Agreement between LO and NHO, §9-1
“LEAN is a type of leadership, about people and a culture. It's about the possibility to learn, understand and develop yourself as a human being, take responsibility, act, and have faith in workers’ abilities to take responsibility, be creative and innovative. It's about creating an organization to take advantage of these capabilities. Create a commitment that gives the individual a better job and development opportunities and strengthens the company's value creation and competitiveness. Lean is about creating a more rational and efficient operation. LEAN is about those creating value, closest to the customers, to make decisions on what to do to get better. Lean is about to apply and further develop the Norwegian model - the interaction between management and union representatives.”

As we can see, he conceptualizes Lean within the context of the Norwegian model where cooperation and mutual respect are important aspects, instead of putting it against each other. Another important point for him was to connect lean to the work environment act from 1977, especially with a paragraph focusing on variation, autonomy, training and responsibility. The work situation for the individual worker has to meet the following demands:

- Opportunities for professional and personal development
- Ability to self-determination, influence and professional responsibility
- The opportunity for variation and to see the connection between individual tasks
- Information and training so that employees are able to perform work when there are changes that affect their work situation.

According to the representative from the national trade union, all these demands can be met through Lean, where training is important, there is a possibility to make decisions, and also improvement activities and delegated responsibility can contribute to the work demands.

We will present data from a newly established research program initiated by the same forum, funded by the government and by six participation companies. Initial investigation on lean work on company level has provided us with some insight on how lean is introduced and understood on company level. We will refer to three of the companies and how the local union understand lean.

The first company produces parts for the global automotive industry. The company was an integrated part of the industrial democracy program during the 1960ies. There are today 500

---

2 Presentation by LO’s representative in Lean Forum Norway, our translation
employees. The company has worked according to the lean principles more or less since the mid 1980ies. All workers are unionized, and the labor union is highly involved through close partnership with the local management. The level of partnership is due to traditions within the industrial area where the company is located, where employees has had representation on the board of directors since the 1950ies, even before it became a part of the legislative system. The local union concluded that lean was necessary in order to remain competitive. The union is strongly involved in all decisions on strategy, economical issues, manning and recruitment. The local union representative explains how lean was introduced from their main customer in the early 1990ies:

“It was based on customer relationships, the customer wanted us to run the same system as them, to increase productivity and get cheaper products. The union was included from the first day, it was entirely based on the intention of the Basic Agreement, with the intention is to achieve productivity through participation. And that was followed down to every detail. Everyone was involved, and we worked with what we called autonomous groups, but the CEO wanted to call it objective-oriented-groups, they were not entirely autonomous, it was supposed to be some leaders there too! It was based on delegation of responsibility, we had seminars and activities, and everyone in the company was involved, operators, managers, technical experts, union representatives, we worked on weekends to create our own production system. All operators were involved; we were divided into groups. My group was supposed to think of all possible ways to reduce the tool change on one of the central processes. At that time it took between 8 and 12 hours to change tools. Our goal was to reduce it to 2 hours and we thought it was totally unrealistic. But when all participated, leaders, workers, all had proposals based on their knowledge, we came up with a plan that reduced the time to less than two hours. It was so fun, I have never felt so well respected and valuable, all were appreciated equally for their particular knowledge. This is why we are still in the market, we have a culture of participating, a spirit of voluntary work.” (Union representative, automotive supplier)

According to the union representative, the union has always supported lean, and even taking a proactive role in developing the concepts further. During the 90ies, the company was influenced by several customers from Germany, Japan, the US and UK. They developed their own production system further, adjusting to the demands from customers, but based on their original model with involvement and teamwork, and the union continued to take an active
part. On one of the production lines, the team members for example made their own plan for total maintenance work, wrote all instructions and made them available for new operators on the line. It was based on lean principles, but adjusted to their own production system and invented and implemented by team members.

Comparing the automotive company to a traditional Japanese version of lean, there are several remarkable differences. The continuous improvement (kaizen) activities are conducted within the ordinary production teams, working systematically in weekly team meetings. The fact that the production team is also the kaizen team differs from a Japanese system, where there usually are different groups working unpaid outside of their ordinary work schedule. A particular important focus area for improvement had been preventive maintenance. Operators had decided the routines for oil shifts, greasing etc. In addition to group based activity, those especially interested in a particular area participated together with technical experts. Another important part of the content of lean is team autonomy. Production goals are decided by costumers, and the planning period is short, with frequent deliveries. The team has no influence on recruitment of new members. The teams cannot decide when to work overtime, but they are consulted in trying to find practical solutions. Due to low buffer levels, scheduling is tight. As one of the workers put it; “when the truck is outside waiting for our bumpers to be produced, there is not much to discuss, just do the job”. Work methods are standardized, but less rigid than in a Japanese setting, while workers were involved in for instance change of dies. Here workers had experimented with different logistical solutions to make the change smooth, and then decided on a detailed standard for how it should be performed. When it come to more regular operations, time and quality standards are prescribed, but the choice of method is usually left to the individual operator. The responsibility for quality control, job rotation and maintenance are left to the team. The routines are to a certain degree standardized, but the team members have a lot to say in organizing the details. As one operator put it; “we have to follow routines, but since we have developed these routines ourselves it does not seem that rigorous”. Before the introduction of lean, support tasks had been conducted by electricians or “greasers”. Now these functions were performed by the teams themselves. With respect to horizontal task integration, autonomy had actually increased after the introduction of lean team organization. There are some obvious limits for autonomy in a lean system, but it is certainly possible to have a higher level of autonomy than in a typical Japanese case.
The second company is an assurance company with 1000 employees, implementing lean five years ago. White board meetings were introduced; internal processes streamlined and the manning reduced with around 200 employees during two years. One of the large global consultancy firms had a contract for 9 months, introducing lean in all departments. Compared to the former example, the insurance company implemented a more “readymade” concept with less involvement from employees. The consultancy firm played an important part, deciding the scope and concept together with top management, and the readymade solution was “rolled out” on a broad basis in the organization. There are a group of six lean navigators; internal consultants, working with continuous improvement activities.

The leader of the union is strongly supportive to lean, but in the beginning there were diverse opinions among members:

“Opinions are very mixed, and different concepts were used, too. Lean is one thing, continuous improvement is something completely different. Also, there are activities having to do with lean, but not called lean. When you talk about lean you can feel some resistance among employees. I think it goes back to 2006, when the consultancy-boys came in white shirts and black suits and wanted to “straighten us up”. It was really provoking. And every solution was readymade and fixed. But now it has become more accessible in terms of that we have made adjustments to fit to our purpose. After all we are not a pure manufacturing company.” (Union representative, assurance company)

After the initial phase with consultants, the overall standard for white boards was adjusted and changed to fit the various departments with different work situations. During the adjustment, employees have been involved, according to the union representative. The reason for the union to be positive to lean from the beginning was because it was never introduced as a way to reduce the number of employees, but instead “to be efficient, doing more with the number of people we have”. The union is involved in discussions on further development of lean. After the initial year with the consultancy firm, the level of involvement seems to have increased.

The third company that we include in this discussion is a corporation of smelting plants operating both in Norway and abroad. Lean was introduced five years ago, because of a new CEO who had used lean successfully in his previous company, and also motivated by a need
to reduce costs. In this industry, a main success factor is to keep the production stable in terms of temperature; with frequent stops and startups the quality is reduced. The main goal has thus been to standardize all aspects of the production process through developing standard operation procedures (SOP) for every operation. Team work has been introduced on all levels, and workers have been involved in developing the standard operations procedures. The company has not used any external consultants in the process, but they have an internal department centrally organized with five lean navigators helping the various plants to develop their lean concept. They do not use the term lean, but rather an internal concept also including human resource management, leadership development and quality.

Lean was introduced as an industrial democracy project, as one of the union representatives put it:

“It was introduced as a revolution; the workers were almost going to take over the plant, broad participation and equal responsibility for everyone on every level. The new CEO and the “Lean boys” came to convince us” (Union representative, smelter)

The introduction has been quite successful both according to stability of the production process and cost savings. Operators have been involved in developing SOPs and also in training of each other and continuous development of the standards. Costs have been reduced due to more stabilized processes.

The union has been cooperative in developing and implementing Lean. The only opposition has been from the foremen’s union, because one of the objectives of team work was to remove the foreman and include these obligations as a part of the teamwork. The blue collars workers have supported the change process. But the union representative finds some of the standardization to go too far; especially the control system, where the workers are supposed to control each other according to whether they follow the standards or not:

“This last control routine is going too far, according to my point of view. It is wise to standardize, but they are overdoing it. These “Lean boys” from the head quarter invent all kinds of ideas”. (Operator, smelter)

Also the operators we talked with had a positive attitude, but also some critical marks. The main reason for supporting lean was to “get rid of the foreman”, gain more responsibility and stop “being a zombie at work”. The meaning of that expression was to be able to take more
responsibility and decision regarding their job. In the beginning there were critical discussions on Lean being just another new concept being introduced, people were fed up of new concepts, but the level of involvement was positive.

In sum, unions in all three companies are mainly positive to lean. Their arguments are that it is necessary and required by customers, and also that in enhances involvement, more decisions delegated to teams and jobs more interesting. However, there are critical remarks regarding readymade solutions, consultants either external or internal and pushing standardization too far. In the following, we will discuss these findings.

**Discussion and conclusion**

The literature review showed that the results of implementing lean are highly contested, but most of the research from a trade union perspective report negative results regarding work conditions and union influence. What is the possible reason for Norwegian trade union to be not just positive, but also proactive, both on national as well as on company level?

One possible reason could be that the union representatives are being manipulated and do not understand the real consequences of lean. They just accept the fancy rhetoric presented by the lean promoters (Womack & Jones, 1996; Womack, et al., 1990) that the lean concept has to do with influence and participation, but without realizing that work conditions are getting worse, people are laid off because of lean, and the work is increasingly characterized by stress. One could argue that union representatives are co-opted by managers by working too close (Rolfsen, 2011), and thus are victims of a sort of ideological control such as earlier research has concluded (Barker, 1999; Casey, 1999) This could be a possible explanation for the insurance company, while the union at the smelting plant and especially at the automotive company has experienced lean during a period of more than 25 years, going through crisis, periods of reduced staff and outsourcing. Still, lean is not considered being the reason for such structural changes, but rather a help to still be competitive. The union representatives from these companies have been through lean courses, cooperation with unions abroad, and have had the opportunity to establish their own perspective, and are not adopting management’s point of view. Also important is that in the automotive supplier industry, unions do not consider alternatives to lean, so the question is more how to influence and participation rather than fighting it.
Another possible explanation can be that the content of lean is different in Norway compared to various other countries. Within the automotive industry, the supplier sector has to adjust to their customers, which makes it likely that certain aspects need to be implemented, while the two other companies to a larger extend can choose what aspects of the they implement. However, even within the automotive supplier, adjusted versions of lean are possible. As we have shown, when comparing the automotive company to a traditional Japanese version of lean, there are several remarkable differences; the teams decide on kaizen activities themselves, routines for preventive maintenance have been developed by the teams, and the level of team autonomy is higher than in the Japanese version. There are some obvious limits for autonomy in a lean system, but it is certainly possible to have a higher level of autonomy than in a typical Japanese case. The most important part is the development of routines and standards, but in the automotive supplier, teams are highly involved in developing these routines.

A third possible explanation has to do with the way lean is implemented, were the union is more involved that what is common internationally. This has to do with the tradition already explained, were union representatives are involved in all kind of developmental activities as a part of the legislative and agreement system. This is also confirmed in other studies (Adler, 1995; Shaiken, Lopez, & Mankita, 1997; Vallas, 2003). According to Brannmark og Håkansson (2012), the connection between lean and work related injuries i more positive in Sweden than in other companies. They explain this phenomenon by the Swedish (and Norwegian) socio-technical context and higher level of employee participation in the companies’ lean implementation process.

Out of the possible explanations, the last two are most important according to our findings and analysis. Through the high level of participation and tradition for involvement, unions are able to adjust the content of lean in a way that fits into their important priorities.
References


