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# LEADERS DEVELOPMENT IN COMPANIES APPLYING LEAN MANAGEMENT

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**Purpose:** The purpose of the article is to identify and evaluate the activities undertaken in the surveyed companies in the area of leadership development to support the concept of lean management.
**Design/methodology/approach**: The article presents the results of qualitative research in the form of a case study using the interview technique. The research was conducted in two manufacturing companies applying concept of lean management. The scope of the research covered activities undertaken in the companies in the area of leadership development.
**Findings:** The research results show that, in the surveyed companies, activities undertaken in the area of leadership development are implemented both within the structural solutions (e.g. Leadership Academy), training (formal and informal), as well as within the cooperation and exchange of experiences between employees. Support and example from superiors are also crucial. The research results also indicate the need for greater cooperation between various entities in the area of leadership development for the lean management concept.
**Research limitations/implications**: The research conducted is a pilot study. Limiting the research to two case studies results in limitations in the scope of generalizability of conclusions. There is a need to conduct further research in this area on a larger group of companies, taking into account the type of activity and industry.
**Practical implications:** Companies following the lean concept need to develop leaders at all levels of management. This requires the introduction of systemic solutions and embedding in the organizational culture. In addition to structural solutions in the scope of training activities, the inclusion of various entities and their cooperation for the development of lean leadership is important.
**Originality/value:** The research conducted presents a view of the issue under study from the perspective of the various actors involved in leadership development.
**Keywords:** lean management, lean leadership, leaders development.
**Category of the paper:** Research paper.

## 1. Introduction

The concept of lean management (LM), initiated in Toyota in the Toyota Production System (TPS) formula, has become a significant source of creating competitive advantage and improving performance through higher quality offerings (Agyabeng-Mensah et al., 2020). LM is one of the key approaches adopted by several leading companies in the world to create and maintain their competitive position (Losonci, Demeter, 2013). Lean practices have a significant and positive relationship with organizational performance, including operational, financial, market and environmental performance (Antony et al., 2021). The companies' approach to LM has evolved from focusing primarily on "lean" production (to reduce waste, improve operational efficiency and product quality) to embracing lean thinking throughout the organization and creating elaborate management systems based on continuous improvement (CI) (Japanese: kaizen). The concept of lean is a philosophy that enables the creation of a culture focused on continuous improvement, leadership and learning allowing the expansion of its ideas throughout the organization (Santos et al., 2024). It takes a long way to achieve the benefits of the lean philosophy, and there are many critical factors for the success of a lean implementation, one of them is leadership, which plays an essential role in in the transition from the previous state to the culture of lean (van Beers et al., 2022).

In addition to being a key implementation factor, lean leadership also plays a key role in maintaining the lean philosophy (Alnadi, McLaughlin, 2021). Lean leadership is a social process, carried out by leaders with personal attributes aligned with lean principles in order to sustain continuous improvement. These leaders should be supported by a lean management system compatible with the internal and external context of the firm (Seidel et al., 2019). There are five main tasks of a lean leader (Seidel et al., 2017): regular communication, structured problem-solving, process confirmation, continuous improvement and employee development. Ensuring leadership in an organization requires taking appropriate development actions and educating people to act as lean leaders. Therefore, the development of leaders and leadership for the effective implementation of lean management assumptions and principles is necessary.

Theoretical and empirical research focuses more on the principles of effective implementation of lean leadership, the role of leadership, or the abilities and competencies required of leaders responsible for implementing and executing lean (e.g. Dombrowski, Mielke, 2013; Holmemo et al., 2023; Seidel et al., 2017; Simões et al., 2024; Toledo et al., 2019) than on the way of leaders development itself. Holmemo et al. (2023) suggest that organizations should build a continuous development capability within their structures, where leadership development is approached holistically, both building personal and interpersonal skills, as well as improving management structures and practices to align with lean thinking. As Moldoveanu and Narayandas (2019) point out, the need for leadership development has never been more

urgent. Companies are realizing that to survive in today's business environment, they need leadership skills and organizational abilities that are different from those that have helped them succeed in the past. There is also a growing awareness that leadership development should not be limited to senior management. This allows to identify a research gap relating to the practices undertaken by companies in the development of lean leaders.

The purpose of the article is to identify and evaluate the activities undertaken in the surveyed companies in the area of leadership development to support the concept of lean management. In order to achieve the adopted purpose, the following research questions were posed: What actions do the surveyed entities take to develop leaders? How do they assess the effectiveness of their actions in the area of leadership development and what problems do they see related to this? What do they expect from organizations to be able to better support leaders in their development?

To obtain answers to the research questions formulated in this way, qualitative research was conducted (based on a case study) using the interview technique. Interviews were conducted with production directors, HR managers and kaizen managers from two manufacturing companies selected for the study. This research should be seen as a pilot study.

The article consists of the following parts: introduction, theoretical background, research methodology and characteristics of the surveyed enterprises, presentation of research results and conclusions.

## 2. Theoretical background

As mentioned in the introduction, lean leadership is recognised as one of the key success factors when adopting and applying lean management (e.g., Arnaiz et al., 2022; Dombrowski, Mielke, 2013; Holmemo et al., 2023; Oon et al., 2021; Tortorella et al., 2021; Walentynowicz, 2013). The introduction and practice of the lean concept, apart from having typical leadership competencies, also requires competencies that take into account the lean context.

Lean leadership consists of a set of competencies, practices and associated leadership behaviours that enable the implementation and execution of lean concepts (Liker, Convis, 2012). The implementation of lean management changes roles for leaders. The focus in managerial tasks changed from managing processes to managing people. The managers focuses on empowering employees to take control of their work process and involve them in improvement activities. The means and methods to achieve higher employee empowerment, two-way communication flow, and building a system of continuous improvement (Poksinska et al., 2013). Lean leadership is important at all levels of organizational management, but the actions taken should be adapted to the specifics of hierarchical levels (Connor, Cormican, 2021). Netland et al. (2020) emphasize that the roles and responsibilities of lean

managers vary depending on the hierarchical level, and that many difficulties in implementing lean arise when organizations apply the same leadership practices at different levels of the hierarchy.

There is a growing interest in the literature (e.g. Dombrowski, Mielke, 2013; Liker, Convis, 2012; Seidel et al., 2017) regarding determining which leadership behaviors are more in line with the concept of lean. Lists of desired lean leadership competencies and practices are created (e.g. Dombrowski, Mielke, 2013; Seidel et al., 2017; Simões et al., 2024). For example, Seidel et al. (2017) developed a list of sixteen lean leadership competences on the basis of their literature research, which included, among others, the following competences: identify what adds value to internal and external clients, identify and solve problems with their teams using the PDCA principle (coaching), use continuously lean practices and principles, manage with emphasis on value flow rather than on isolated operations, see the problems with your own eyes (based on data and facts), lead through example, stabilize processes, practice self-development as well as professional and personal continuous evolution, develop actions based on long-term views, develop innovative and challenging actions. Simões et al. (2024), on the other hand, presented a list of eighteen essential lean leadership competencies grouped into the following areas: cognitive skills, social capacities, motivational orientation, expertise, knowledge.

Despite the fact that leadership is consistently recognised as an important success factor for the implementation and execution of lean, knowledge on how to develop the necessary leadership competencies at the individual level as well as at the organizational level remains limited (Holmemo et al., 2023). In accordance with the principle of continuous improvement, the competencies of lean leaders should be constantly improved, therefore, it is required to undertake development activities in this area. Two terms are used in the literature: leaders development and leadership development. Leadership development is related to human capital, while leadership development refers to the social capital of the organization (Day et al., 2021). Leaders development refers to the development of individual knowledge, skills, abilities related to the leadership role, which represents an investment in the human capital of the organization. Leadership development, on the other hand, refers to an organization's social resources, which are rooted in work relationships, taking the form of social capital. Holmemo et al. (2023) emphasize in their study that the development of lean leadership in an organization requires actions in these two dimensions. First, in the individual dimension related to competencies, leaders should learn both lean principles and general leadership competencies. Second, in the organizational dimension, individual development should be complemented by planes of collective alignment and actions aimed at eliminating structural and cultural barriers to lean. Holmemo et al. (2023) suggest that lean leadership development should integrate knowledge and practices from human resource management for individual development and knowledge from change management for organizational development.

One of the basic models of lean leadership development is the Toyota model (Liker, Convis, 2012). This model includes the following four practices: (1) commit to self-development, (2) coach and develop others, (3) support daily kaizen, (4) create vision and align goals. The model is based on four values: challenge, kaizen mind, go and see, teamwork, respect for humanity. The literature on the subject also includes more detailed models regarding how lean leadership activities should be implemented at different levels of the hierarchy (Netland et al., 2020) or at different stages of the company's transformation process in the spirit of lean (Holmemo et al., 2018).

Lacerenza et al. (2017) indicate that in practice, organizations seem to rely on conventional leadership development, which, despite its usefulness, may not be sufficiently adapted to the needs of lean. Organizations use various development methods in their leaders development activities (e.g. Allen, Hartman, 2008; Ardichvili et al., 2016; Lacerenza et al., 2017), which have both advantages and disadvantages depending on the context of their application, and each of these methods has its place and time in the overall leadership development process. Campbell et al. (2003) divided the methods used in leadership development activities into three groups: support (providing motivation and belief in the possibility of development), challenge (providing new experiences, skills), assessment (providing information about strengths, weaknesses, and development needs).

## 3. Research methodology and characteristics of the surveyed enterprises

In order to achieve the aim of the article, own research was conducted using the structured interview technique. Production directors, kaizen managers, HR managers or HR Business Partners (HRBP) and shift managers were selected for the interviews. Such a selection of respondents was to allow for getting to know the perspective of various entities, which is related to the fact that, in accordance with the lean concept, the development of leaders should be implemented at all levels and areas of the company's operations.

Two manufacturing companies with a long history of employing lean management were selected for the study. The respondents requested anonymity, so for the purposes of the study, they were named Company A and Company B:

- Company A is a company with foreign capital operating in the automotive industry, established in the 1950s. It employs about 1500 people and has been implementing Lean Management for over 20 years.
- Company B is a company with foreign capital operating in the food industry, it currently employs about 400 people. Its first production plant was established in the 1940s. It has been implementing Lean Management for 13 years.

Limiting the research to two case studies resulted in limitations in the possibility of generalizing conclusions. At the same time, during the interviews, it was not possible to conduct interviews with all entities selected for the study. In company B, no interview was conducted with the HR manager, because the HR department focuses on the implementation of "hard" HR and does not support the implementation of lean activities. In company A, no interview was conducted with the shift manager due to lack of time related to the implementation of a large contract. The research was a pilot and was conducted in June and July 2024.

## 4. Research Results

### 4.1. Company A

*4.1.1. Actions taken in the area of leaders development*

For the production director, one of the ways to identify potential leaders is through kaizen workshops. Employees who demonstrate activity during these workshops and show potential for development take on the role of team leaders and later advance to managerial positions. Their development path begins at kaizen workshops, which are somewhat like a "breeding ground for leadership talents." The workshop format allows for direct interaction between participants, making it relatively easy to identify potential leaders, and participants can demonstrate their leadership skills. Another possibility are audits conducted in production areas, which aim not only at ongoing improvement and raising employee awareness of the need for continuous improvement but also at identifying leaders through observation and direct interactions with the evaluated employees. The respondent added that he also tries to set an example of how to be a lean leader.

The kaizen manager also stated that he identifies candidates for leaders during the kaizen workshops he organizes and leads. Another opportunity to identify potential leaders is through meetings and conversations with employees on the production lines. The respondent also conducts informal leadership training for managers based on the processes they participate in. During such training, he explains how they can influence their employees "to motivate them to continuous improvement".

The HRBP replied that currently, the company is starting leadership training organized by the HR department and overseen by him in the newly established Leadership Attitudes Academy. Dedicated trainers in the Academy conduct the program of four lean leadership principles in the form of workshops, namely: "inspiring change, leading by example, reinforcing responsibility, mutual trust". Applying these principles by leaders is intended to support the organization in operating in line with the "lean spirit". The HRBP participates in each of these workshops. Participation in the Academy ends with a meeting led by the HRBP,

where participants share examples and experiences from the workshops. Formal oversight of this program will soon be entrusted to the respondent. The respondent explained that the "Leadership Attitudes Development Program" consists of three parts dedicated to different management levels. The most intensive program, intended for the highest management level and lasting a full year, is combined with one-on-one coaching. It is assumed that "leadership is built from the top and then cascades down to lower levels". The second and third levels of training, prepared respectively for middle and lower management levels, are shorter, with the cycle of meetings completed within a month. The aim of the Academy is to teach managers at all management levels the four leadership principles adopted in the company and to show how to implement them in practice to support the lean approach.

*4.1.2. Evaluation of actions taken by the examined entities*

The respondents evaluated the effectiveness of their actions on a scale of 1-5, where 1 indicated low effectiveness and 5 high effectiveness. The production director rated the effectiveness of his actions at 4, justifying this rating by the fact that the identified leaders conduct independent kaizen or problem-solving workshops, during which their leadership skills and competencies are utilized and further developed. In his opinion, the main problem, given the strong hierarchical culture in the examined company, is the limited "freedom of movement" and decision-making at lower management levels. High variability of conditions (both external and internal) causes frequent changes in priorities, resulting in high variability of decisions. "This undermines the authority of manager-leaders and their credibility in implementing continuous improvement".

The kaizen manager rated his actions at 3. This rating is due to the fact that the respondent also has other tasks to perform and cannot engage in leadership development as much as he would like. The biggest problem he reported is insufficient cooperation, and often lack thereof, with managers of other departments regarding joint agreements on leadership development for the implementation of lean. This is mostly due to a lack of time, "as there are other tasks with higher priority".

The HRBP rated the effectiveness of his actions at 4. According to the respondent, managers have a strong desire to develop in the area of lean leadership. What hinders this is "the overload of duties and current matters, and the fact that the hierarchy in the examined company is very developed". According to the respondent, it is evident that leadership training significantly influences the attitudes and behaviors of managers at various levels, including the company director, who also receives training in this area. However, the respondent expressed concern that "current matters, the overload of external stimuli, and the need to meet all the goals imposed by the corporation and the internal ones may cause the new leadership principles, which are supposed to support the implementation of LM, to become less important in daily life".

*4.1.3. Expectations for obtaining support in the development of leaders*

The production director highlighted the need for the following actions: delegation of authority, decentralization, and increased autonomy – such actions should influence the development of leadership skills at lower management levels. The idea is for new, "young" leaders to feel that "they have their matters in their own hands". The interviewee also stated that greater autonomy and the ability to make fact-based decisions would help managers be perceived as effective leaders.

The kaizen manager expects greater involvement from managers of various departments in leadership development. According to the respondent, they need to understand the importance of leadership for the effective implementation of LM and shape this leadership in their own teams. The interviewee stated that "the kaizen department alone cannot do everything and pull everyone along"; "I also have limited time".

The HRBP expects top-level managers to "support the building of a lean leadership culture, promote a leadership culture among their teams, and not oppose it". In most cases, according to the respondent, this is unfortunately not the case. The respondent believes that it is important to "inspire employees to act for LM by the example set by their supervisor". However, it happens that despite knowing the lean leadership principles in the company, some managers do not follow them - "they declare cooperation, but in practice it is not visible".

## 4.2. Company B

*4.2.1. Actions taken in the area of leaders development*

The first action mentioned by the production director was leading by example as a lean leader. The respondent strives to be present on the production floor daily, talking with employees and supporting them in implementing lean principles. The director often asks employees questions like: "What could you improve, how can it be improved, how do you see the development of your team?" The respondent believes that "employees need to know that leaders are with them, supporting them, so the principle that the example comes from the top should be applied". Additionally, the company is supporting the development of managers at various levels by providing them with training in both "hard" and "soft" HR activities. Another tool supported by the director is providing mentoring for individuals with leadership potential. For example, a foreman becomes a deputy plant manager, but often not of their own plant but another – "The idea is for the employee to show their capabilities and to see how another leader manages, to learn a different management perspective". The respondent also uses internal and external benchmarking, during which good leadership practices are shared.

The kaizen manager listed the following actions: daily presence on the production floor, communication with leaders, and supporting them in organizing and implementing teamwork. Sometimes a leader in a certain area performs better than others; in such cases, the CI manager organizes benchmarking meetings where "leaders learn from each other how to be effective

leaders". The respondent noted: "When shift managers feel they have support, they can later mobilize their people for continuous improvement". According to the respondent: "It cascades, meaning the example comes from the top, and the strength from the bottom". The respondent believes that "the most important thing is the sense of being a team and that we work together for a common success". Currently, the kaizen manager, together with the production director and the HR manager, is co-creating an internal Leader Academy. Since the HR department has not previously supported the implementation of LM and is only now getting involved, the main burden of creating the Leader Academy falls on the kaizen manager. The Leader Academy is expected to be a "breeding ground for leaders".

The shift manager stated that candidates for lean leaders are "picked up" by him during internal recruitment, usually when someone leaves or changes position. "You see such people, e.g., operators with the necessary predispositions and experience, and they are captured. We don't want to lose those people; we want to retain them with the possibility of promotion and development. We offer them support in the new position". The selected person undergoes internal training in areas such as reporting and using IT solutions, conducted by the shift manager. The candidate is then directed to the Leader Academy to develop their leadership competencies for lean implementation.

*4.2.2. Evaluation of actions taken by the examined entities*

The production director rated the effectiveness of his actions at 4. He believes that his leadership style is close to the Japanese style. "If you set a good example, lower-level managers learn this leadership from the top". The respondent criticizes himself for rarely giving feedback to his employees in the form of praise or constructive criticism and equally rarely receiving feedback from them. He believes that these skills need to be further developed in everyone. "Everyone should exchange information, both positive and negative, because it is the basis of continuous improvement".

The kaizen manager rated the effectiveness of his actions at 3. He believes that "things have been good for some time, but there is still much to be done in the area of lean leadership development". The biggest problem, according to the respondent, is "the lack of cooperation between different entities, the lack of decisive support from the HR department, and the still weak systemic approach to leadership development for the needs of Lean Management".

The shift manager rated the effectiveness of his actions at 3. He explained that this rating is not due to his reluctance to support leaders but to the substantial number of various duties and tasks he has. "Initially, there is more support and involvement in leadership development, but later it often starts to wane because there are various current matters to attend to, and time is usually scarce". "There is also a lack of greater support from the HR department, e.g., in organizing training for new leaders". "As a result, these young leaders are often thrown into the deep water and sometimes left to fend for themselves". "Now that the Leader Academy has been established, the situation should improve".

*4.2.3. Expectations for obtaining support in the development of leaders*

The production director hopes for greater support from the HR department in the form of, for example, training for leaders in "soft" skills. He expects the kaizen manager to develop the Leader Academy. He also hopes for "greater emphasis on the lean approach in daily activities and more frequent organization of leadership development training".

The kaizen manager has high hopes for the newly launched Leader Academy. He also expects support from direct supervisors in the development of leaders in their teams. According to the respondent, direct supervisors should act as mentors, be an authority for employees, and a model of how to be a lean leader.

The shift manager hopes for support from his direct supervisor. "Giving a sense of support, talking, asking how things are going? It gives him strength and motivation to continue working, which is very important in continuous improvement". He also hopes for leadership training organized by the HR department. According to the respondent, comprehensive support for new, "young" leaders working in the lean area is important.

## 5. Conclusions and discussion

The results of the conducted research allowed for the formulation of the following conclusions regarding the development of lean leaders in the surveyed enterprises:

- All the examined entities are involved in leaders development, which is reflected in the lean principles related to the need for the involvement of all managers and employees in the continuous development and improvement of both the organization and employee competencies.
- Each of the examined enterprises has a Leader Academy, supplemented by additional leaders development opportunities, such as organizing leadership training, providing growth opportunities for employees to test themselves in leadership roles (e.g., in kaizen or problem-solving workshops), teaching leadership in action, organizing mentoring, and sharing best practices.
- Supervisors play a vital role in shaping leadership attitudes and developing leaders; they should set an example of how to be a good leader. Such actions are declared by the examined production directors.
- Production directors generally express satisfaction with the actions they have taken, while also recognizing problems in leaders development, such as poorly developed autonomy and lack of decision-making freedom, weak feedback, and little support from the HR department. In Trenkner (2016) study similar group of respondents pointed out limited budget and the lack of time for both coaching and training as main obstacles for developing leaders in their organizations.

- On the other hand, greater dissatisfaction is shown by the other surveyed respondents, with reported problems including lack of time for leadership development and lack of cooperation in leaders development between entities.
- Individual entities expect support in leaders development from other participants in the organization, such as the HR department, direct supervisors of employees, and top-level managers in building a lean leadership culture and greater autonomy at various management levels.

It should be noted that the results presented pertain solely to the examined production enterprises. The study's limitation to two case studies restricts the generalizability of the conclusions. Consequently, this research should be regarded as pilot studies.

Obtained research results indicate a need for consistency and collaboration among various entities in developing lean leaders. Holmemo et al. (2023) emphasize that organizations should go beyond merely sending individual managers to external courses (e.g., 'black belt' certification) for lean transformation training. Instead, they should focus on building comprehensive internal competences development programs based on lean practices and learning by doing approach. The focus on active learning and knowledge sharing methods corresponds with Saabye (2023) case study results describing an approach to develop leaders as lean learning facilitators to cope with the increasing velocity of changes within the organization.

Setting an example by the supervisor (especially from higher management levels) on how to be a good lean leader, and teaching leadership through the master-apprentice relationship (mentoring, coaching) are conducive to the development of leaders at lower levels in the context of lean implementation. This is also supported by the results of other studies. Study by Zanchi et al. (2021) showed that mentoring actions of the sensei (master, teacher) increase leadership abilities of people, stimulating them to teach others only when they are promoted with the top management sponsorship and endorsement. Research by Trenkner (2016) showed that "there is a sensei in each (of then studied) company that provides lean leaders with coaching during the implementation and the maintenance of lean". Reke et al. (2020) explore the workings of sensei and the role they play in developing lean leaders, who themselves lead the organization's lean transformation, by interviewing executives who worked with sensei rather than following classic consultancy-led best practice implementation.

As research results show, there is a need for a systematic approach to the development of lean leadership in enterprises. The competency development at the individual level should be complemented by an organizational dimension embedded in the company culture. This requires a systemic approach to leadership development, which means defining the individual elements of this system and the connections between them. The fundamental elements of such a systemic approach should include principles and tools for leaders development, shaping cooperation between entities involved in this area, organizational culture, and structural solutions supporting the development of lean leaders and lean leadership in the organization.

In the future it would be reasonable to extend study to a larger group of production enterprises. It would also be cognitively interesting to conduct research in a group of service or commercial enterprises for comparative analysis. Another interesting research direction would be to determine the competency profile of a lean leader, taking into account, for example, the specifics of production, commercial, and service enterprises.

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