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## **The influence of managers on the introduction of innovations in logistics in Poland**

### **Wpływ menedżerów na wprowadzanie innowacji w logistyce w Polsce**

**Abstract.** The innovativeness of logistics companies depends on the quality of management staff. Logistics is an area where innovation largely determines the competitiveness of the company and its position on the market. Managers can have a strong influence on the level of innovation, but the way they interact can vary. The paper presents the results of the study of 200 managers working in small and medium-sized enterprises from the Podlaskie Voivodeship responsible for logistics activities and their subordinates. The aim of the research was to assess the impact of SME sector managers working in the area of logistics on the innovation of the enterprise in the context of management style and their relations with subordinates. The research shows that managers characterized by a democratic style of management and having better relationships with subordinates have a greater impact on innovation in the area of logistics. Sharing your own knowledge with subordinates is the most frequently indicated method of influencing the company's innovativeness by managers.

**Key words:** logistics, innovations, manager, management style, relations with subordinates

**Synopsis.** Innowacyjność przedsiębiorstw logistycznych zależy od jakości kadry kierowniczej. Logistyka jest tym obszarem, w którym innowacyjność decyduje w dużej mierze o konkurencyjności przedsiębiorstwa i jego pozycji na rynku. Kierownicy mogą mieć silny wpływ na poziom innowacyjności, jednak sposób oddziaływania może być różny. W pracy przedstawiono wyniki badań 200 kierowników pracujących w małych i średnich przedsiębiorstwach z województwa podlaskiego odpowiadających za działania logistyczne oraz ich podwładnych. Celem badań była ocena wpływu kierowników sektora MSP pracujących w obszarze logistyki na innowacyjność przedsiębiorstwa w kontekście stylu kierowania i ich relacji z podwładnymi. Badania wskazują, że kierownicy charakteryzujący się demokratycznym stylem kierowania oraz mający lepsze relacje z podwładnymi mają większy wpływ na innowacyjność w obszarze logistyki. Dzielenie się własną wiedzą z podwładnymi jest najczęściej wskazywanym sposobem wpływania przez kierowników na innowacyjność przedsiębiorstwa.

**Słowa kluczowe:** logistyka, innowacje, menadżer, styl kierowania, relacje z podwładnymi

## Introduction

The modern economy is characterised by high competitiveness, which forces enterprises to constantly search for sources of competitive advantage. One of the ways to build this advantage is the continuous implementation of innovations in the area of company logistics. Innovation is considered to be a very important area of the company's operation and a source of competitive advantage and economic growth [Damanpour and Schneider 2006, p. 216].

The expectation that sustainable development will attract the attention of managers in the logistics industry, supported by the pressure of various stakeholders, including consumers, investors and decision makers, has made it a subject of great interest for organisations in recent years, especially in the transport industry [Rossi et al. 2013, p. 2] especially in the field of the fleet, concerning fuel-consuming vehicles and the use of alternative fuels [Marchet et al. 2014, p. 794].

The need to integrate logistics with the process of sustainable development was demonstrated in their research by Zailani, Amran and Jumadi [2011, p. 112], indicating that the aim of this is to reduce the environmental impact through more energy-saving technologies and changes in processes implemented in companies. Such an approach, therefore, requires innovation in logistics processes.

Innovations have a positive impact on sustainable development in the supply chain, and they can significantly affect the company's results due to their positive impact on the market share and reputation, which may translate into increased income [Björklund and Forslund 2018, p. 2].

The introduction of innovativeness faces external and internal barriers. Barriers to innovation include:

- financial restrictions (lack of external financing),
- radicality and controversy of innovation,
- the impact of external stakeholders who are key actors,
- barriers along the innovation value-added chain, such as an insufficient technical support from suppliers, limited supply, competitive pressure and the lack of customers,
- barriers at the organisational and structural level – lack of compliance of innovation goals with the organisation's strategy,
- failure of the organisation to learn, including organisational culture and inappropriate training in the organisation,
- skills barriers hindering innovation (lack of qualified personnel),
- lack of information about technology,
- lack of information on markets,
- lack of innovative partners (difficulty in finding partners for cooperation in the field of innovation) [Abdullah et al. 2015, pp. 686–687].

Innovation in logistics does not only benefit logistics practitioners, but it also has impacted marketing, sales, finance practitioners and even end consumers. Containerisation, cross-docking, EDI, RFID and temperature control technologies are some examples of logistics innovations that have influenced the way companies do business. Many logistics innovations are not visible to the wider business community as they manifest themselves in process changes that allow for more visible improvements in other areas. The improved temperature integrity during the transportation of products is one of the exam-

ples. It is not easily visible to outsiders and it improves the quality of fruit and vegetables in the grocery store, which is quickly noticed by consumers. A better understanding of such innovations and their impact can help companies to establish processes to generate further logistics innovations [Grawe 2009, p. 374].

The paper presents the results of the study of 200 managers working in small and medium-sized enterprises from the Podlaskie Voivodeship responsible for logistics activities and their subordinates. The aim of the research was to assess the impact of SME sector managers working in the area of logistics on the innovation of the enterprise in the context of management style and their relations with subordinates.

## **Theoretical background**

Innovation and creativity in the workplace are becoming more and more important determinants of organisational performance, success and long-term survival. Using the ideas and suggestions of employees allows you to increase your competitive advantage. However, creativity and innovation are complex, multi-level and emerging phenomena that go beyond time and require skilful leadership. Only this approach allows maximizing the benefits of new and improved ways of working [Anderson et al. 2014, p. 1299].

Managers are often expected to be the source of innovation in a company. The wide range of their duties and their functions and roles may limit their activity in this respect. They can focus more on assessing the innovations proposed by colleagues and subordinates.

Managers are often promoted to management positions for their success in generating ideas and innovations. However, their role as managers in creating ideas is diminished due to the fact that they often spend a lot of time evaluating other ideas rather than generating their own. While performing their basic functions, they are cut off from the creative process, despite the fact that the generation and evaluation of ideas are closely related [Berg 2016, p. 436].

The role of managers should be to support and encourage employees to undertake creative activities, generate useful ideas, which are of key importance for the survival and effectiveness of the organisation. Managers and team leaders can play an important role in facilitating individual and team creativity. By adopting a dual focus on transformational behaviours, they can meet a dual challenge that requires them not only to develop creative team members, but also to foster joint idea generation. To increase individual creativity, team leaders can undertake individual-oriented activities such as expressing high expectations, intellectually demanding, and offering cognitive and socio-emotional support. At the team level, it is helpful to involve team leaders in team-level behaviours such as articulating vision and facilitating acceptance of team goals. They also suggest that promoting individual members to generate creative ideas can be beneficial as it provides opportunities for skills development through various mechanisms such as training programs, conference attendance and mentoring. At the level of the TSL team, it can be complemented by a clear focus on knowledge sharing, especially since knowledge sharing directly supported the team's creativity, as well as individual creativity when the development of individual skills was lower. As knowledge sharing can have a double favourable effect, it is worth considering rewarding knowledge sharing in the team [Dong et al. 2016].

Sharing knowledge plays a key role in effective knowledge management. Employee knowledge-sharing behaviours are associated with a wide range of job-related positive outcomes, such as individual results, team creativity and innovation, and financial performance of the organisation [Arain et al. 2018, p. 7]

A manager can also be effective in influencing the team's learning to build and create innovation routine, as this combination of Transactional and Transformational Leadership at the same time provides the team with a clear direction and supports team members in sharing and co-creating their ideas [Koeslag-Kreunen et al. 2016, p. 501].

In a leadership theory, a constructive dialogue is the realisation of adaptive space. The dialogue, in which people speak freely and listen in depth, can be a driving force behind organisational changes and a continuous innovation [Bäcklander 2018, p. 55].

In today's competitive global economy, a company's success in supply chains is attributed to effective knowledge management or knowledge sharing between partners. There is a significant positive link between knowledge sharing, the ability to collaborate on innovation and the company's ability to innovate. Moreover, sharing knowledge between companies increases the company's ability to continue to innovate in the long run [Butt and Ahmad 2019, p. 1]

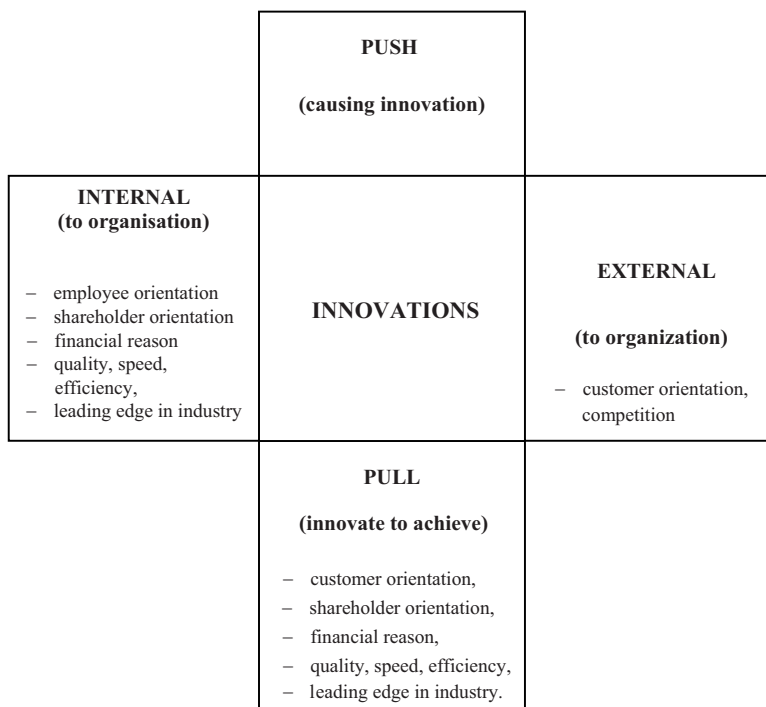


Figure 1. Drivers of innovation grouped into push, pull, internal and external factors

Rysunek 1. Czynniki napędzające innowacje pogrupowane w czynniki popychania, ciągnięcia, czynniki wewnętrzne i zewnętrzne

Source: [Soosay and Hyland 2004].

Social networks can be a source of innovation, but their role is ambiguous. Strong ties can have a positive effect on innovation in some phases of creating innovation, but in the others they can affect them negatively. However, an important factor may be trust, which facilitates cooperation and knowledge transfer [Perry-Smith and Mannucci 2015 pp. 36–37].

Soosay and Hyland [2004, p. 49] identified in their research the factors that drive innovation in companies. They classified them into four groups of factors (Figure 1):

- PUSH (causing innovation),
- PULL (innovate to achieve),
- INTERNAL (to organization),
- EXTERNAL (to organization).

Research by Cui et al. [2012] found that customer requirements, environmental factors, increased efficiency and effectiveness, provision of a broader service portfolio and diversification are the key drivers for third-party logistics companies to innovate in China.

The research by Seo et al. [2014] confirmed that companies in the supply chain compete with each other, using innovative technologies such as Internet procurement and integrated communication systems to create knowledge and networking based on multiple collaborations. Without collaboration or strategic partnerships in implementing integrated systems, joint planning and forecasting, and information sharing, innovation is no longer a driver of better performance. Therefore, the right degree of integration and collaboration is the main catalyst for better performance in the context of knowledge management of the supply chain; information management; technology adaptation and management skills; and the ability to manage cooperation.

## **Purpose and methodology of research**

The study involved 200 managers working in small and medium-sized enterprises from the Podlaskie Voivodeship responsible for logistics activities. The respondents for the study were selected using the purposive sampling method. The following selection criteria were used:

- in case of managers, work in a managerial position in an enterprise of the SME sector in the Voivodeship Podlasie,
- in case of subordinates, work as a direct subordinate of the manager participating in the study,
- work in a logistics company or in a logistics unit.

The characteristics of managers include gender, age, education, and the number of years of work in a managerial position (Table 1). The 200 employees of direct subordinates of the surveyed managers (the manager and one of his subordinates) also participated in the study. The aim of the research was to assess the impact of SME sector managers working in the area of logistics on the innovativeness of the enterprise in the context of management style and their relations with subordinates. The research was carried out in the period of February to September 2019. The research used a questionnaire, delivered to respondents via email.

The following research hypotheses were formulated:

- H1: Managers characterised by a democratic management style, according to their subordinates, have a greater impact on the company's innovation in the area of logistics;
- H2: Managers who maintain good relations with subordinates, in their opinion, have a greater impact on the company's innovation in the area of logistics.

Table 1. Characteristics of managers participating in the study

Tabela 1. Charakterystyka kierowników biorących udział w badaniu

Factor	Number	[%]
Sex		
female	50	25.0
male	150	75.0
Age		
below 30 years	30	15.0
between 30 to 40 years	40	20.0
between 40 to 50 years	100	50.0
above 50 years	30	15.0
Education		
higher	160	80.0
secondary	40	20.0
Number of years of work in a managerial position		
below 5 years	45	22.5
between 5 to 10 years	74	37.0
between 10 to 15 years	44	22.0
above 15 years	37	18.5

Source: own research.

The scope of the research included the identification of the management style with the use of the self-assessment test of the management style on the NL and NZ management grid in accordance with the procedure presented by Tokarski [1997, pp. 217–223] and the examination of the supervisor-subordinate relationship. A questionnaire was used to assess the relationship between managers and subordinates and the impact of managers on innovation in which the questions referred to the subjective assessment of relations by subordinates and the assessment of the supervisor's impact on the innovation of the company in the area of logistics by the subordinate.

## Research results

The 50% of the managers participating in the research are characterised by a democratic style of management (Figure 2). A small percentage of the surveyed managers (5%) is characterised by an autocratic management style. On the other hand, laissez-faire style is represented by 22% of the respondents, and the integrated style is represented by 23% of the respondents.

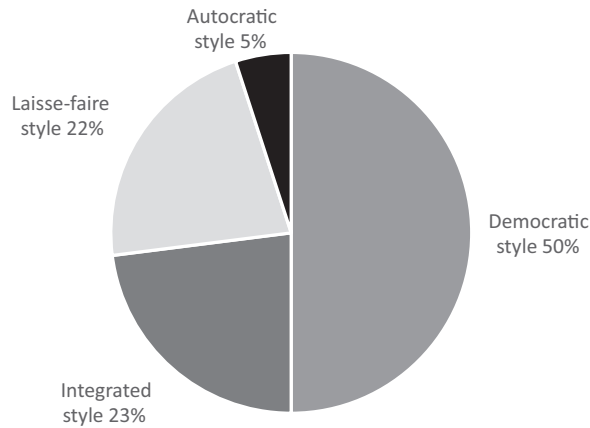


Figure 2. Management styles of surveyed managers [%] N = 200  
Rysunek 2. Style kierowania badanych kierowników [%] N = 200  
Source: own research.

In the opinion of the subordinates, the assessment of the relationship of the subordinate-superior indicates a positive reception by the respondents (Figure 3). As many as 84% of respondents assess their relationships with managers as average and above. The relationship was assessed by 22% of respondents as very good, and only 5% as very bad. A large proportion of democrats were identified among the managers. At the same time, the assessment of the quality of relationships is high, which may indicate that the management style influences their assessment by subordinates.

The surveyed employees believe that their superiors have a high impact on the innovativeness of the companies they work for. As many as 85% of the surveyed subordinates

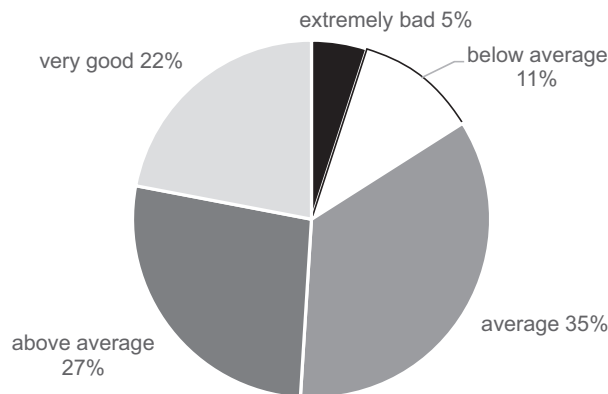


Figure 3. Opinions of subordinates on the quality of their relations with managers [%] N = 200  
Rysunek3. Opinie podwładnych na temat jakości ich relacji z kierownikami [%] N = 200  
Source: own research.

assess this impact at 3 or more on a 5-point scale (Figure 4). The average rating was 3.55. Only 1% of the respondents assessed the influence of their supervisor on the innovativeness of the enterprise as very low, and 12% as low.

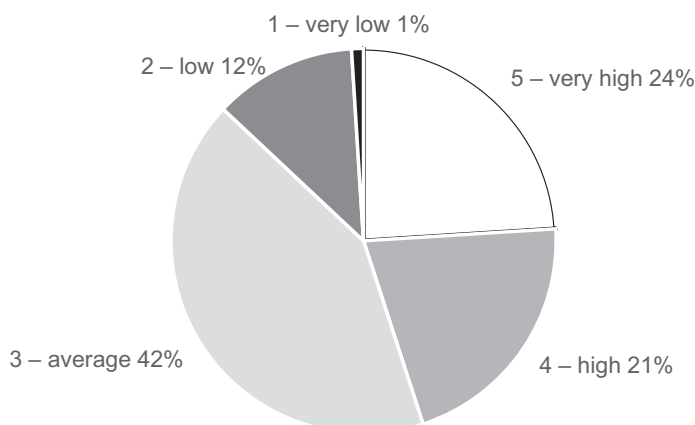


Figure 4. The assessment of the influence of managers on the company's innovation on the scale 1-5  
Rysunek 4. Ocena wpływu kierowników na innowacyjność przedsiębiorstwa w skali 1-5

Source: own research.

The research also allowed to identify ways of influencing managers on the innovativeness of enterprises noticed by their subordinates (Figure 5). The most frequently mentioned method of the influence of managers on the innovativeness of enterprises in the area of logistics is sharing their knowledge (78% of respondents). A large percentage (67%) of the respondents indicated that their manager motivates them to share knowledge among their colleagues. For 62% of the respondents, the action carried out by managers that influences the innovativeness of the company is to ensure the possibility of a dialogue between subordinates and with subordinates and thus building an atmosphere of trust (62% of responses). According to the respondents, a large percentage of managers (59%) spend time assessing their subordinates' ideas for innovation. According to the respondents, 45% of managers are independently involved in generating ideas for innovation. The research has shown that subordinates notice a number of activities undertaken by managers aimed at increasing the innovativeness of enterprises.

The identified management styles were compared with the assessment of managers' impact on the innovativeness of enterprises (Table 2). The analysis shows that a high rating of the level of managers' impact on innovation is more often associated with a democratic style of management. Hypothesis 1 was verified positively. On the other hand, managers representing an autocratic management style received only low and very low ratings for the impact on innovation.

The comparison of the assessment of the relationship between managers and subordinates with the assessment of their impact on the innovation of the company indicates that



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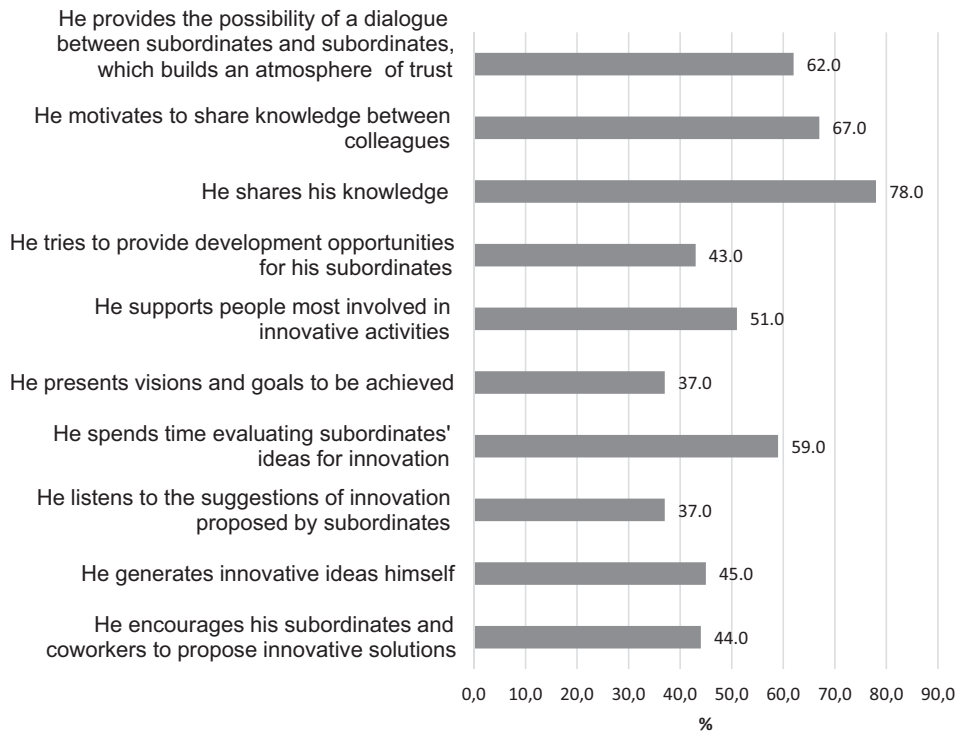


Figure 5. Ways of influencing managers on the innovativeness of enterprises in the area of logistics in the opinion of subordinates

Rysunek 5. Sposoby wpływania kierowników na innowacyjność przedsiębiorstw w obszarze logistyki w opinii podwładnych

Source: own research.

Table 2. Management style and the influence of managers on the company's innovation [%]

Tabela 2. Styl kierowania a wpływ kierowników na innowacyjność przedsiębiorstwa [%]

Identified management style	The influence of managers on the company's innovation [%]				
	very high	high	average	low	very low
Democratic	20	17	11	2	0
Integrated	3	2	15	3	0
Laissez-faire	1	2	16	3	0
Autocratic	0	0	0	4	1

Source: own research.

managers who have good relations with subordinates are more often assessed by them as those who have a high impact on the innovation of the company in the area of logistics (Table 3). Hypothesis 2 was verified positively.

Table 3. Management style and the influence of managers on the company's innovation [%]  
 Tabela 3. Styl kierowania a wpływ kierowników na innowacyjność przedsiębiorstwa [%]

The influence of managers on the company's innovation [%]	Assessment of relations with subordinates				
	extremely bad	below average	average	above average	exceptionally good
Very high	0	0	6	6	12
High	0	2	2	11	6
Average	2	2	24	10	4
Low	2	7	3	0	0
Very low	1	0	0	0	0

Source: own research.

## Summary and conclusion

The success of an enterprise, its ability to effectively respond to phenomena occurring in a competitive environment, depends primarily on the quality of the manager's work [Kaczmarek, 2013, p. 175]. The management style, the manager's relationship with subordinates and the pursuit of innovation are important elements of the evaluation of their work by means of which its quality can be measured. Managers may, with their attitude, strive to increase innovation in every area of the company's operation, including logistics activities.

The results of the presented research indicate a link between the management style and the manager's level of influence on innovation in logistics noticed by subordinates. At the same time, it can be noticed that good relations between a manager and subordinates influence the level of assessment of their impact on innovation in the area of logistics.

The presented research results, due to the area of research and the size of the research sample, do not allow the results to be generalized to the entire population. These studies, on the other hand, can be an inspiration for further research to assess the impact of the management style, the level of relations between managers and subordinates, on the impact of managers on the level of companies in the area of logistics. These studies should also be extended to assess the impact of the above dependencies on the efficiency of enterprises and logistics departments, or the level of competitiveness, which was not possible at this stage due to limitations. In future studies, statistical analysis of the data should be performed to allow generalization of the study results.

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