

The effects of globalization on application of environmental management system (EMS)

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Aim and methods

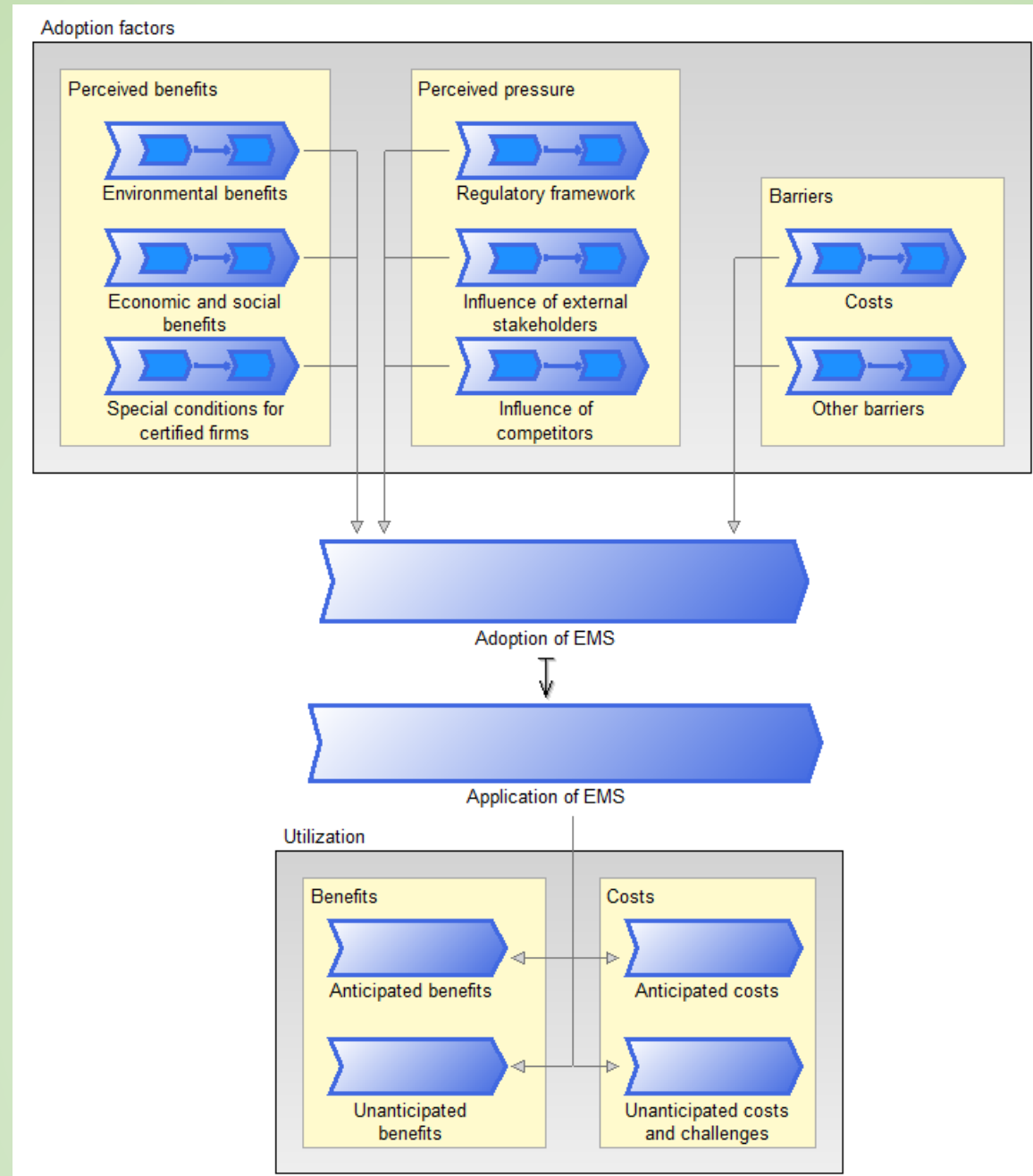
The aim of the article is to formulate conceptual model of globalization effects on the application of EMS and to document these effects on selected company.

1. Development of EMS lifecycle - Data collection for literature review in May and June 2020 in Web of Science. Search phrase “environmental management system” brought 1120 hits. Next phase included search through the abstracts for terms: “Globalization”, “Global”, “International”, and “Adoption”. After removing duplicates, there were 340 articles in the selection. Thorough reading of abstracts revealed 27 articles that dealt with EMS adoption factors, application of EMS and global influence.
2. Case study - example of company from automotive industry. Identified effects of globalization in both phases of life cycle (adoption, application).

EMS lifecycle

Two views on the adoption phase :

- 1) what factors influence the decision-making process and drive companies into the decision (adoption factors),
- 2) what qualities possess companies that decided to adopt EMS (mediating factors).



Perceived benefits

Voluntariness of EMS is expressed by perceived benefits, which stands for positive expectations resulting from application of EMS in particular organization.

Environmental benefits:

- Reduction of air pollution
- Reduction of water pollution
- Reduction in noise, smell, vibration, visual impact
- Reduction in soil contamination
- Reduction in risk of industrial accidents
- Effect on biodiversity
- Reduction of waste generation

Economic and social benefits:

- Energy savings
- Savings in raw material
- Tax reduction
- Savings on insurance
- Increase in turnover
- Green corporate image
- Alignment of other company's QMS

Special conditions for certified firms:

- Permit renewal by self-certification
- Expansion of environmental permit duration
- Reduction of technical reports
- Reduction of inspection frequency
- Advantages in public tenders

Perceived pressure

The process of EMS implementation does not have to be completely voluntary. Company decisions are often influenced by pressure from regulatory framework, and influence of its stakeholders and competitors.

Regulatory framework:

- National law and standards
- International law and standards

Influence of stakeholders:

- Public authorities
- Industrial associations
- Environmental activists
- Banks and other institutions
- Customers
- Parent company
- Suppliers
- Shareholders

Influence of competitors:

- Green strategy of current competitors
- Planned expansion into new market segment with new competitors

Costs and other barriers

Costs are only one side of the coin. More complex problems represent other barriers, especially those rooted in people's thinking. If people perceive the whole process of implementation and application of EMS as too complex and demanding. In this case, benefits are weak factors that can not drive the implementation itself. If there is no perceived pressure, companies mostly resist the implementation of EMS.

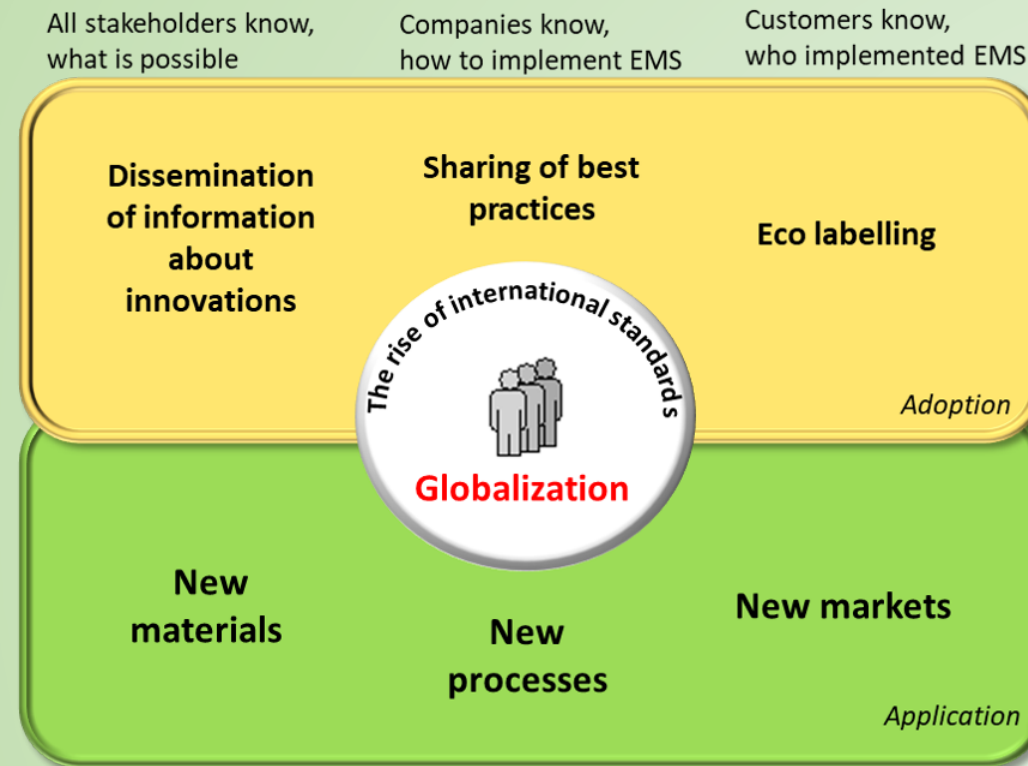
Costs for:

- Obtaining the registration
- Maintaining the registration
- Consultancies
- Staff training
- Updating production processes

Other barriers:

- Lack of awareness about EMS
- Resistance of management to change
- Lack of staff motivation
- Lack of staff time
- Lack of skilled staff
- Insufficient information about customers' green demand
- Lack of technologies and materials
- Demandingness of EMS implementation
- Demandingness of internal environmental audit
- Increasing complexity of corporate procedures

Model of globalization effects on EMS application



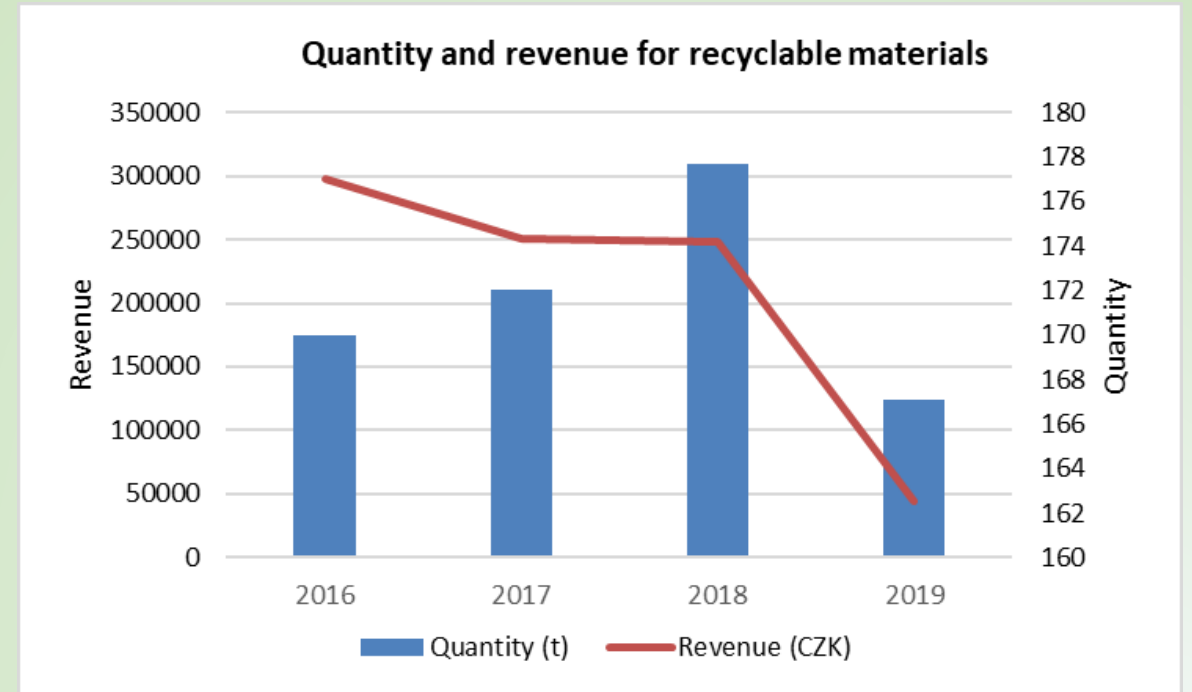
Case study

- company is involved in automotive industry and based in the Czech Republic
- it is part of international automotive company, functioning as a division of business unit
- certification for EMS ISO 14001 in 1999
- foreign ownership was identified as an important determinant of EMS adoption
- perceived benefits - knowledge sharing and benchmarking
- perceived pressure - high customer demands
- costs and barriers - high costs of the implementation, adaptation to EU law

Case study - problem definition

Although the drop in quantity is preferable, there is also noticeable dramatic drop in revenue for waste between 2018 and 2019.

The reason is falling purchase price for recyclable materials, moreover for some type it is necessary to pay for their liquidation.



Case study - globalization benefit

The unexpected benefit of globalization was finding a German company that can purchase plastic recyclates as a by-product of production.

Two dimensions benefit:

- economic benefit - higher prices for plastic waste,
- environmental benefit - reduction of the total waste produced by an average of 140 t/year.

This will enable the company to achieve its corporate goals.

Conclusion

- This case study confirmed the role of globalization in both phases of the life cycle. In the adoption phase, it was the influence of foreign ownership. In the application phase, it was finding an international customer that opened a new view and opportunities into recyclates waste management.