Environmental Certification Program ISO 14001: A Study of Membership Motivation and Effectiveness

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Introduction

In 1996, the International Organization of Standardization (ISO) launched the environmental standard known as ISO 14001 to provide a framework for managing ecological impacts. ISO 14001 is presented as a 47-page document that features a series of guidelines which help organizations introduce effective Environmental Management Systems (EMS). These systems allow companies from any size or sector to identify, manage, monitor and control environmental issues in a holistic manner while enhancing environmental performance. An updated version of the standard was released in 2015 so that newer challenges including climate change, water use, and energy consumption could be addressed.

Currently:
- Over 223,000 organizations are certified
- ISO 14001 exists in 159 countries
- 7,725 certifications issued in the United States
- 5,582 certifications in North America
- 16,761 certifications in the United Kingdom
- 120,000 total in Europe

Environmental Benefits
- Meet legal requirements - develop practices that ensure environmental performance satisfies government regulations
- Improve environmental performance - integrate updated technology/ create new procedures which reduce environmental impact
- Leadership commitment - managers address environmental issues
- Employee involvement - workers perceive Environmental Management Systems to be essential
- Stakeholder relations - business partners and investors support companies with green initiatives
- Supplier commitment - suppliers feel compelled to establish environmentally conscious practices

Business Benefits
- Meet stakeholder objectives – enhance confidence in the quality being provided
- Improve company reputation - customers trust establishments willing to mobilize a positive agenda
- Improve efficiency and production – new equipment may result in more effective manufacturing techniques
- Improved financial state - reduced operation costs and increase in business opportunities
- Connections to larger markets - efficient transactions in international markets
- Competitive advantage - customers more likely to support those with extensive credentials

Changes Expected Following Certification:
- Increased recycling
- Reduced paper use
- Reduced raw materials consumption
- Materials sourced from environmentally conscious suppliers
- Decreased energy consumption
- Decreased quantity of waste entering landfills
- Effective management of hazardous waste
- Reduced emission
- Decreased pollutant discharge
- Accurate documentation of environmental data

Factors Influencing Adoption

- Environmental performance
- Environmental management system effectiveness
- Efficiency, production, and financial position
- Environmental issue responsiveness
- Competitive advantage
- Environmental commitment

Motivations

External
- Public image/ reputation
- Social and marketing positions/ relations with foreign consumers
- Stakeholders, customers, competitors, government, suppliers, and society

Internal
- Competitive advantage
- Employee awareness
- Environmental Management System effectiveness

Issues

- Variable outcomes
- Success depends on the severity of a country’s established performance regulations
- Enforcement varies depending on requirement flexibility in each nation

A symbolic adoption:
- Defined as a way to legitimize environmental efforts while failing to institute real commitment
- Stakeholders perceive increased environmental awareness exists following certification
- Adoption by symbolic firms and committed firms may compromise confidence in the standard

Motivation

Firms driven by external motives experienced minimal lasting positive impacts
- High certification costs hinder ISO implementation
- Smaller firms perceive Environmental Management Systems to be difficult and costly to adopt

Data
- Data challenging to analyze / numbers are not standardized
- ISO does not assemble a list of all certified organizations

Environmental impact
- The extent to which ISO 14001 improves environmental outcomes remains contested

Benefits

Environmental improvements
- Risk aversion
- Brand growth

52% Decreasing your competitive edge
60% Improving trust in your business
76% Reducing business risk
53% Compliance to external audits
48% Protecting your business
80% Decreased government red tape
57% Waste/deficit reduction
65% Decreased waste/deficit
30% Decreased waste
23% Decreased waste
45% Compliance to government regulations
38% Decreased government red tape
30% Decreased waste
56% Decreased waste
90% Decreased waste
69% Increased environmental awareness
65% Compliance to external audits
60% Improving trust in your business
57% Waste/deficit reduction
48% Protecting your business
53% Compliance to external audits
42% Compliance to external audits
30% Decreased waste
23% Decreased waste
18% Decreased waste
10% Decreased waste
5% Decreased waste
3% Decreased waste

Number of ISO 14001 Certifications vs. Year

ISO 14001 - World annual growth (in %)

Factors Impacting Success/Case Study

- Ford Motor Company adopted ISO 14001 in 1998
- Became the first automotive corporation to receive ISO 14001 certification at every manufacturing location in 2005
- All 140 plants in 26 countries have adopted the standard
- Ford now has more individual facilities certified under ISO 14001 than any other company

Performance improvements gained after ISO implementation include:
- Increased quantity of disposable packaging
- Reduction in paint solvent usage and volatile organic compound emissions
- Reduced hydrogen sulfide, sodium hydroxide, and chlorine used in wastewater treatment
- Increased electrical output from hydroelectric power plants
- Reduced water consumption

Conclusions

- Data must be standardized to compare environmental performance outcomes in different regions
- The extent to which ISO 14001 helps the environment remains uncertain due to the fact that companies determine their own objectives
- Motivating factors dictate the type of benefits gained from the standard
- Symbolic adoption may cause the level of commitment to environmental preservation seen in certified organizations to be highly variable

ISO in the Future

Scholars have suggested means of improving ISO 14001 in order to make the standard more successful in the future:
1. Tax exemptions, eco-labeling, financial support, and exemptions from frequent inspections for certified corporations
2. Adoption encouraged among small, local, and private organizations
3. Technical financial support, training initiatives, and simplified targets for small and medium sized institutions
4. Increase in government regulation and involvement
5. Encourage primary focus to be on establishing internal motives and enhancing environmental performance

References


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