

## ENVIRONMENTAL NON-GOVERNMENTAL CERTIFICATION: ADOPTION, COMPLIANCE OF VOLUNTARY STANDARDS AND THEIR EFFECTS FOR THE ENTERPRISES

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**Summary.** *Many voluntary environmental standards together with certification schemes were created in the last decades. The phenomenon is that majority of them are non-governmental standards. It means it was created by non-governmental organizations or the private sector – suppliers, manufacturers, traders, or their associations – independently from the governments. This paper presents the results of an empirical research which sought to answer the questions: what makes the enterprises to adopt and certify against non-governmental environmental standards, to comply with their rules and what effects do they have for the enterprises?*

*A quantitative research method was employed to answer the main research question. Empirical data was collected by the survey which was conducted during July and September 2012. Respondents (N=90) were enterprises which are certified against one of the three private environmental standards: for the forestry and logging, fishing and aquaculture, and production of textiles standards. All of them being transnational, non-governmental, very popular globally, and operating in the similar manner allows making more generalized conclusions. Additionally, they are most popular private standards for the production certification in Lithuania.*

*The research revealed that majority of the enterprises adopted these standards quite recently and this means that it is a new trend in Lithuania. However, the majority of them adopted the standards due to the external forces only – always being the clients. The effects of the standards are measured by comparing the adoption factors (expectations) and the satisfaction after the adoption. Although the main adoption factor was the demand from the clients (it means the enterprises expected to satisfy the client demand), after the certification procedure the enterprises were most satisfied with the fact that they gained access to certified markets or didn't lose their current market share.*

**Keywords:** *environmental certification, standards, environmental governance, governance mechanisms.*

### INTRODUCTION

Many voluntary environmental instruments (VEIs) have been created in the last decades. One type of the VEIs employed by the public and the private sectors is voluntary environmental

standards together with the certification schemes.

The phenomenon of an enormous and rapid development of different certification schemes, especially created by

the private sector itself<sup>8</sup>, has emerged in the last decade. According to the biggest database more than 400 voluntary environmental standards have been created for the different industry sectors. (Ecolabelindex, 2012) Some of the schemes have been created transnationally and their standards encompass global principles and criteria which later supposed to be adopted nationally. It means that non-official environmental rules are implemented voluntarily and widely in geographical terms. An open question remains how the global principles of voluntary environmental standards are implemented nationally? Why and how do local enterprises accept those rules? What is the impact of the standards on their performance?

Therefore, the focus of the research presented in this paper is the adoption, compliance and the effects of the voluntary environmental standards. The aim of the research is to improve the understanding of the adoption and compliance determinants as well as the effects that the standards have.

To meet the research aim, the main research questions are to be answered: what makes the enterprises to adopt and certify against non-governmental environmental standards, to comply with their rules and what effects do they have for the enterprises?

Environmental governance researchers focusing their research on the

actors beyond the state, often analyse environmental certification as an example of private voluntary actions within the environmental governance. Scholars have carried out the research studies to explain how these environmental non-governmental certification schemes emerge and what their main drivers are. (See for instance, Bartley 2003; Bartley 2007a and 2007b) There are also studies implemented to evaluate their implications and overall impact on the regulatory arrangements. (See for instance, Auld et al. 2008) However, there are considerably little studies on the adoption and use of such schemes at the country level. The novelty of this research is the idea to analyse how environmental non-governmental certification schemes work at the company level and what are their direct effects rather than how they were created or how they function.

A questionnaire was constructed to explore the adoption and compliance determinants of the different environmental standards. The data retrieved by this instrument helps to understand and to picture the general situation of the use of different voluntary environmental standards in one country. Three environmental non-governmental certification schemes for the forestry, fishery and textile industries were chosen for the analysis. All of them being transnational, non-governmental, very popular globally, and having the similar functioning allows making more generalized conclusions.

The next chapter presents what is an environmental non-governmental certification in this paper and how it operates. The subsequent chapter presents the research and discusses the results. The chapter is divided into three subchapters

<sup>8</sup> According to the global survey made by the World Resources Institute, only 8 proc. of the organizations that develop ecolabelling schemes were government run. (World Resources Institute (2010) *Global ecolabel monitor 2010. Towards transparency*. Big Room Inc., World Resources Institute)

to make it easier to follow. The last chapter presents the conclusions.

## **ENVIRONMENTAL NON-GOVERNMENTAL CERTIFICATION**

Environmental certification is a process when the enterprise adopts a standard – agreed rules that makes an economic activity more sustainable – and their compliance is verified (audited) by the third party. After the auditing the enterprise and founding no non-compliances with the requirements the third party issues a certification. Certificate confirms the enterprise's compliance with the standard. Finally, the label on the products is a confirmation sign of the producers' sustainable practices.

Literature-based views on environmental certification vary greatly. Different authors emphasize different aspects of it. Concerning the adoption factors there were quite many studies that analyse the diffusion of certification and its driving forces. Morris and Dunne (2004) give an empirical study on the environmental certification and its impact on the furniture and timber products value chain in South Africa. When analysing the driving forces that push the certification within the South African companies they found it is mostly the requirement from the big foreign retailers. Companies also expected that in this way the big foreign retailers will increase their business and so the demand for the supply will increase as well. There were only minority of the companies that certified due to the environmental concerns and the wish to be publicly recognised for the awareness (Morris and Dunne, 2004, p. 257-258). Similar results are presented in the other

studies. Carlsen and Hansen (2012) present similar results found in Ghana. Also Goyert et. al. (2010) or Perez-Ramirez et. al. (2012) found similar adoption (or uptake) factors of environmental standards when they analysed the certification for fishing and aquaculture.

Comprehensive and interesting literature review on the effects of certification is given by Overdevest and Rickenbach (2006). Here they argue that that certification can operate as one (or more) of the three governance mechanisms defined by previous research and theory. These mechanisms are: a market-based mechanism that provides market advantage; as a learning mechanism that transfer knowledge; and as a signalling mechanism that helps to inform about the firm's practice. The idea to use the three types of mechanisms is used in this paper as well.

## **RESEARCH RESULTS**

Three transnational environmental non-governmental certification schemes for the forestry and logging, fishing and aquaculture, and production of textiles were chosen for the analysis. All of them being transnational, non-governmental, very popular globally, and operating in the similar manner allows making more generalized conclusions. Additionally, they are most popular private standards for the production certification in Lithuania.

As was mentioned in the text before, the research instrument was created for the quantitative analysis of the selected certified companies. There are 161 enterprise certified against the selected standards in Lithuania. The multi-wave e-mail survey of the certified companies

was conducted during July and September 2012 (N = 161). Respondents from all the certified companies were asked to fill the questionnaire which allows to rate how important the given elements were, for instance, in their decision to become certified. Possible answers ranged

from 'extremely important' to 'not at all important' by a series of 5-point Likert scale. More than a half of certificate holders responded to the survey (n = 90) for a response rate of 56 % and confidence interval 6,92. (See Table 1)

**Table 1.** Number of the respondents of the survey

Certification type	Number and type of the certified enterprises in Lithuania	Number / percentage of respondents from certified enterprises
FSC CoC	121 Forestry and logging enterprises	69 / 60 %
MSC CoC	10 Fishing and aquaculture enterprises	6 / 60 %
Oeko-Tex 100	30 Manufacturers of textiles	15 / 50 %
<b>Total</b>	<b>161</b>	<b>90 / 56 %</b>

The survey collected 63 variables from each respondent, including information about the certificate holder, standard adoption motives, compliance facilitation, as well as effects for the enterprise.

### Profile of the respondents

There were 90 enterprises that responded to the survey. More than 74 % of the certified companies are small or medium-sized enterprises.<sup>9</sup> This can be simply explained that there are fewer large enterprises in Lithuania so they cannot be the main respondents. The least number of respondents are microenterprises. We might think that it is too expensive for these companies to get certified as the price is identified as one of the main

problems as we will see later. Majority of the companies (82,2 %) that are certified are manufacturers. Others are resellers or service providers.

67 % of all the enterprises work longer than 10 years. The least number of certified companies are enterprises in their first 5 years. Again, we can assume that the younger companies see the certification as a too expensive tool for them. However, the certification could be used as an advantage in the fierce competition of the young companies trying to get their market share.

Over 70 % of the companies are certified no longer than 5 years, which means that they are newly certified companies. (MSC and FSC standard valid for 5 years, Oeko-Tex – for 3 years). This indicates that an environmental certification is still very new in Lithuania.

Nearly 40 % of the enterprises export more than 75 % of their certified production. Interesting to note, more than 30 % of the companies export only up to 25 % of their certified production. It means

<sup>9</sup> Sizes of the enterprises are identified according to the Commission recommendation of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises (2003/361/EC) <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:124:0036:0041:EN:PDF>

that the companies either export a small part of their production or nearly everything. This shows that the companies use certification for very different reasons and geographies (for the local or the international markets).

More than 70 % of the companies said they have never used any other environmental certification type before. Adoption of the FSC, MSC or Oeko-Tex standard was their very first certification. This contrasts with the Western authors which disclosed that this type of certification often is used by the pioneers only. It means by those who are environmentally aware and use some other environmental instruments already. (Prakash and Potoski, 2012) In this case the certification is used by the “laggards”. Interesting is the fact that privately created rules are followed by those who have never took care about their environmental performance before. This can be indicated as a positive effect of the privately created environmental standards.

### Adoption and compliance factors

As was identified in the chapter before, the certification has three different mechanisms. Each of these mechanisms performs different functions. In the survey different elements (statements) mean different function. The first mechanism consists of 3 items: (1) New marketing opportunities or a threat to lose market share, (2) Responding to increased client demand and (3) Earning price premiums or improve company performance in other way. These items were interpreted to represent the expectation that certification would give some market advantages. This mechanism tentatively was

labelled as „*a market-based*“ mechanism which provides only marketing opportunities for the users of the standard.

The second mechanism has two items: (1) Wish to contribute to the conservation of natural resources (meeting ecological standards), (2) Providing help in meeting regulatory requirements. These two items largely mean that certification will operate as a way to transfer knowledge about the better environmental performance at the company level. So this mechanism is labelled as „*a learning mechanism*“ which help to get knowledge for the companies to change their practices into more sustainable or contribute to environment protection.

The last mechanism consist of two items: (1) Wish to improve the company's image by signalling the new practices, (2) Gain recognition of management practices by using the eco-label (in Lithuanian or foreign markets). These two items was interpreted to represent the expectation that certification would signal about the company's internal practices to the external public. Hence, the mechanism corresponding with these items is labelled as „*a signalling mechanism*“.

The majority of the enterprises adopted environmental standards due to the external drivers only. The external coercive drivers, always being business partners (customers), encouraged Lithuanian enterprises to adopt the standards. When evaluating the list of the factors that made the enterprises to adopt the standard, the highest value was given to the following element: „*Responding to business partners, client demand*“ (Mean=4,52) (to remind you, the evaluation scale is from 1 to 5). The second greatest value was given to the expecta-

tion „Gain access to certified markets“ (Mean=4,08). It means that the majority of the enterprises expected certification to work as the market-based mechanism which would help to meet the market needs or would provide other market advantages (access to certified markets, etc.). It is not surprising that the statements reflecting the certification (two of them just cited above) as a market-based mechanism has got the highest average value (Mean=3,92). It means that certificate holders expected the certification to bring some market advantages.

The statements reflecting mechanism labelled as a signalling mechanism has got the second highest average value (Mean=3,79): “With to improve company’s image” and “A possibility to use the logo (in Lithuanian market or abroad)”.

The least average value was given to the statements reflecting a learning mechanism (Mean=3,37): “Wish to contribute to the conservation of natural resources”, “An assumption that the compliance with the standard may help in meeting regulatory requirements”.

Since we know what drives the enterprises to adopt voluntary environmental standards, we can look at the factors that help them to comply with the rules. There were no statistically significant differences between the compliance factors that were listed in the survey. However, the majority of the enterprises said “There is an appointed person who ensures the compliance with the standard’s rules.” (Mean=4,17) It means the responsibility rests with one person only. Interestingly, the second greatest value was given to the following factor: “Because the standard is non-governmental and voluntary, the compliance is only the matter of honour”

(Mean=3,99). It is interesting when taking into account how much effort and resources are spent on control mechanisms (audits) from both sides: organizations have to create effective control mechanisms, and enterprises have to pay for these audits.

Although a wish to contribute to the conservation of natural resources was not the main driver for the companies to adopt the standard, “Knowing that compliance with the rules contributes to the solution of the environmental problems” collect the third greatest value (Mean=3,64).

The factors such as control mechanism (audits) and a threat to lose the standard as well as the consultations before the adoption of the standard got the least value (less than 3,50). It means that the main compliance factors are not external, created by the standard organizations, but more internal emerging from the inside of the companies. Maybe it can be explained by the regulatory system and compliance culture in a country<sup>10</sup> when the enterprises assume that the compliance with the rules rests in their hand only and there are no consequences they might face if non-complying.

The effects of the certification at the company level: expectations and satisfactions

The effects of the standards adopted by the enterprises were intended to measure by comparing the adoption factors

<sup>10</sup> Apparently many companies in Lithuanian are tax evaders: the share of the shadow economy expected to remain record high in 2011, accounting for 29 per cent of GDP and 45 per cent of businesses were at least in part involved in illicit activity in 2011 (Lithuanian Free Market Institute, 2011)

(expectations) and the satisfaction after the adoption of the standards and certification.

Although the main adoption factor was the demand from clients (it means the enterprises expected to satisfy client demand), it turned out that after the certification procedure majority of the enterprises were most satisfied with the fact that they gained access to certified markets or didn't lose their current market share (Mean=3,89). It means that while the satisfaction was higher with the factor other than the main adoption factor, both the primary expectation and the satisfaction factors were related to the market benefits. It means that certification functions best as the market-based mechanism.

However, the second element which gained the highest evaluation was "*Improved image by signalling the new practices*" (Mean=3,76). This element represents signalling mechanism. And the third element was an assumption that "*Now the enterprise contributes to the conservation of natural resources*" (Mean=3,46). This element represents learning mechanism.

To compare the evaluation of the three mechanisms the average values were deduced from the elements representing each mechanism. (See Picture 1)

Statistically the elements representing the market-based mechanism collected the highest evaluation (Mean=3,92) as adoption factors. However, after the certification procedure and some experience with the standard respondents evaluated

these elements the worst (Mean=3,27). It is the highest difference (decrease is 0,65) of the evaluation before the adoption of the standard and after. It means that enterprises expected the certification to work as a market-based instrument; however, after some experience they were disappointed. The meaning is statistically significant as the  $p\text{-value}=0,000$ .

Interesting to notice, that answering the question "What factors would motivate other companies to become certified" the absolute majority of the respondents indicated again that only the benefits provided by the certification as a market-based mechanism would encouraged other companies to become certified (access to certified markets, increased client demand, earn price premiums, etc.).

The second highest evaluation before the adoption of the standard was given to the elements representing the signalling mechanism (Mean=3,76) and this mechanism gained the greatest value sometime after (Mean=3,53). Although the given value decreased least (0,23), the satisfaction was still lower than the expectations. Again, the meaning is statistically significant as the  $p\text{-value}=0,009$ .

The least value before adopting the standard was given to the elements representing the certification as the learning mechanism (Mean=3,37). After the certification this mechanism gained the middle value (Mean=3,53) and the decrease was 0,4. The meaning is statistically significant as the  $p\text{-value}=0,000$ .

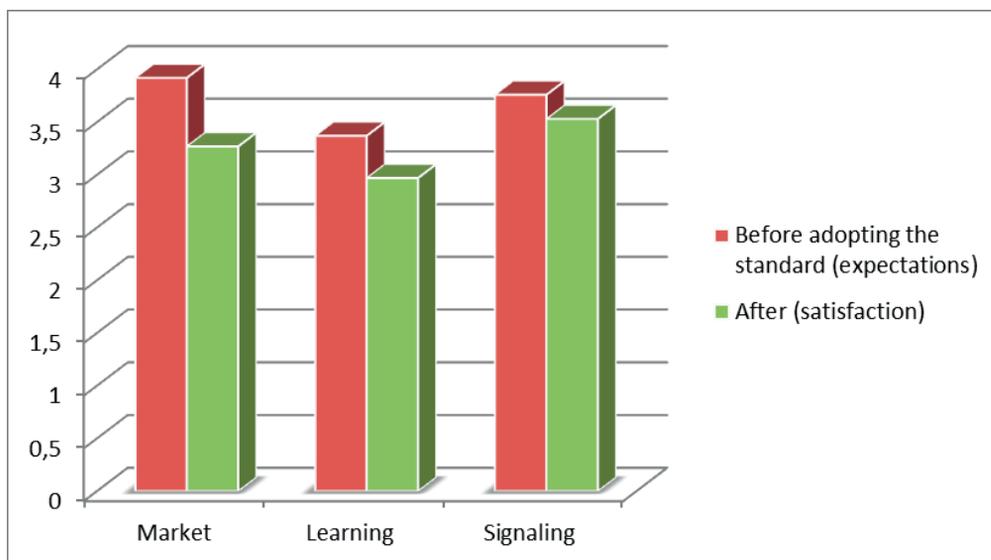


Fig. 1. The effects of the different mechanisms of the certification: expectations and satisfactions

## CONCLUSIONS

- Over 70 % of the companies are certified no longer than 5 years, which means that they are newly certified companies. This indicates that an environmental certification is still very new in Lithuania.
- Certification can operate as one (or more) of the three governance mechanisms: as a market-based mechanism that provides market advantage; as a learning mechanism that transfer knowledge; and as a signaling mechanism that helps to inform others about the firm's practice.
- The majority of the enterprises expected certification to work as the market-based mechanism which would help to meet the market needs or would provide other market advantages (client demand, access to certified markets, etc.).
- The least what enterprises expected is to learn something new from the certification process and use of the standard – the least average value was given to the statements reflecting a learning mechanism.
- There were no statistically significant differences between the compliance factors that were listed in the survey. However, the majority of the enterprises indicated that the responsibility rest with one appointed person in the enterprise.
- Although the main adoption factor was the demand from the, it turned out that after the certification majority of the enterprises were most satisfied with the fact that they gained access to certified markets and didn't lose their current market share.
- While the satisfaction (after certification) was higher with the factor other than the main adoption factor,

both the primary expectation and the satisfaction factors were related to the market benefits. It means that certification functions best as the market-based mechanism. This can be confirmed statistically as all the elements together representing the market-based mechanism in the questionnaire collected the highest evaluation.

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## NEVYRIAUSYBINIS APLINKOSAUGINIS SERTIFIKAVIMAS: SAVANORIŠKŲ STANDARTŲ DIEGIMAS ĮMONĖSE, JŲ LAIKYMASIS IR POVEIKIS

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### Santrauka

Didelis skaičius savanoriškų aplinkosaugos standartų buvo suskurti paskutiniiais dešimtmečiais. Tai standartai, padedantys gaminti prekes arba teikti paslaugas aplinkai palankesniu būdu, palyginus su kitais tos pačios rūšies produktais arba paslaugomis. Šių standartų fenomenas yra tai, jog dauguma jų yra sukurta nevyriausybinių organizaci-

*jų. Vadinas, šie standartai buvo sukurti nevyriausybinių organizacijų arba privataus sektoriaus – tiekėjų, gamintojų, prekybininkų ar jų asociacijų – nepriklausomai nuo vyriausybinių institucijų. Šis straipsnis pristato empirinio tyrimo rezultatus, kuris siekė atsakyti į kelis klausimus: kodėl įmonės įsidedgia šiuos nevyriausybinis standartus ir pagal juos sertifikuoja savo veiklą, kas padeda įmonėms laikytis standarto nustatytų taisyklių ir koks jų poveikis?*

*Tam, kad atsakyti į iškeltus klausimus, buvo pasirinktas kiekybinis tyrimo metodas. Empiriniai duomenys surinkti anketiniu būdu 2012 m. liepos-rugsėjo mėn. Respondentai (N=90) buvo įmonės, kurios turi įsidedgę minėto tipo standartus savo veikloje: miškininkystei ir medžio apdirbimui, žuvininkystei ir žuvies perdirbimui, tekstilės gamybai. Pasirinkti standartai yra nevyriausybini, tarptautiniai, populiarūs visame pasaulyje ir veikiantys pagal panašius principus, kas leidžia daryti generalizuotas išvadas apie juos visus. Beto, šie nevyriausybini standartai yra vieni populiariausių Lietuvoje iš visų tarptautinių nevyriausybinių standartų.*

*Tyrimas atskleidė, jog dauguma įmonių įsidedgę standartus visai neseniai ir tai rodo, jog tokio pobūdžio sertifikavimas yra pakankamai naujas Lietuvoje. Kaip bebūtų, didžioji dauguma įmonių standartus diegėsi tik dėl išorinių priežasčių – klientų ar užsakovų poreikio (o ne, tarkim, dėl įmonės vidinės politikos).*

*Standartų poveikis įmonių veiklai buvo matuojamas, lyginant standarto diegimosi priežastis (lūkesčiai) ir standarto padarytą pokytį įmonei po įsidedgimo (pasitenkinimas). Nors pagrindinis standarto įsidedgimo faktorius buvo klientų poreikis (vadinasi, įmonės tikėjosi patenkinti klientų poreikį), po sertifikavimo ir darbo pagal standartą įmonės labiausiai džiaugėsi galimybe patekti į sertifikuotą rinką arba neprarasti esamos rinkos dalies.*

**Reikšminiai žodžiai:** aplinkosauginis sertifikavimas, standartai, aplinkosa valdymas, valdymo mechanizmai.

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