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Sustainable Development Of Tourism – EU Ecolabel Standards Illustrated Using The Example Of Poland

Abstract

Tourism, as one of the biggest and fastest growing industries in the world, has an enormous impact on the achievements of the Europe 2020 growth strategy. The main factor influencing its effectiveness, based on achievement of strategy indicators, is tourist infrastructure, which is understood as hotel and restaurant facilities used by tourists coming to a particular area to meet their needs associated with passive and active tourism. To achieve the highest effectiveness in this regard, the European Union has established the scheme of Ecolabel standards, implemented in individual countries through independent certification, compliance with which means that the strategy's assumptions can be effectively implemented. According to experts, managing a facility in compliance with Ecolabel standards today is an example of innovative hotel management. In addition to the benefits resulting from taking care of the environment, the certification also allows for a reduction of the operating costs of a facility. This paper aims at verifying – through an econometric model – research hypotheses related to the reduction in operating costs of a facility that complies with the certification standards.

Keywords: *tourism, economy, sustainable development*

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1. Introduction

Tourism is one of the biggest and fastest growing industries in the world. In the longer term, the basic development indicators by 2020 describing industries are unchanged and continue to show a steady upward trend (UNWTO *The future of tourism 2020*, 2015). For many countries tourism earnings are the main source of income. A skilfully managed and well-promoted tourism industry offers many jobs and supports and stimulates the local economy. For the industry itself, as well as the region in which tourism develops, it is important that it be managed and developed in accordance with the principles of sustainable development, because like other economic sectors, tourism can also create a lot of problems; namely the loss of cultural heritage, economic dependence, or environmental degradation (UNWTO, *International Tourism…*2015). All activities within the tourism industry – business trips, conferences and recreational travels - should be balanced in the light of today's global challenges. Sustainable tourism is defined as a tourism that respects both the daily life of local people, regional cultural heritage and, above all, takes care of the good of the environment, while ensuring a comfortable rest and interesting recreation for tourists visiting the region (UNESCO, *Sustainable tourism...*, 2015). In the implementation of the principles of sustainable tourism the basic factor affecting the achievement of set objectives, namely accommodation facilities and their impact on the environment, should be considered. The growth of the industry should incorporate innovative solutions relating to tourist facilities, mainly in hotel facilities, which as a result will contribute to increased competitiveness and attractiveness of the region in which the facility operates. In this article the main objective of the study is to verify whether the environmental certification system "Clean Tourism", developed on the basis on Ecolabel standards, along with a reduction in CO_2 emissions also reduces maintenance costs of hotels in particular areas. The main hypothesis of the research is whether possession of the environmental certification system "Clean Tourism" significantly reduces the general operating costs of a hotel, as compared to other facilities without certification. In order to verify the main hypothesis about the effect of holding certificates by hotels, cross-sectional data describing the value of maintenance costs of twelve hotels was collected through surveys and a direct interview. Statistical data for the model (the value of costs) was obtained from a questionnaire and a direct interview in the Lodz region and other regions of Poland.

2. An example of an innovative approach to management under the sustainable development strategy of EU tourism

An example of an innovative approach to management under the sustainable development strategy of EU tourism can be based on the assumptions underlying the management of a certified environmentally-friendly hotel, i.e. one that complies with international Ecolabel standards. A certified environmentally-friendly hotel is a facility that favours the local, regional and/or global ecosystem, while allowing a reduction in its own operating costs. A hotel independently described as environmentally-friendly must have a certificate awarded by an external independent organisation, which makes it possible to reliably confirm that the owners of a facility comply with various kinds of environmentally-friendly standards. More than 50 certificates dedicated to the tourism industry are available across the European Union.[1] However, generally, in every country of the European Union there are designated independent State organisations, which are authorised to award the European Ecolabel. In Poland such an organisation is The Polish Centre for Testing and Certification S.A. (PCBC S.A.), which on behalf of the Government of the Republic of Poland is the only entity authorised to award the Ecolabel (PCBC S.A. *Oznakowanie Ecolabel dla hoteli*, 2015). However, there are independent organisations which, on the basis of the Community Ecolabel standards and their own experience, have developed certificates confirming compliance with similar standards. An example of such an organisation is the "Fundacja Partnerstwo dla Środowiska", which introduced one of Poland's first environmental certification systems dedicated to the tourism industry – "Clean Tourism". It is granted to hotels, hostels, boarding-houses and guest houses which, by implementing cost-effective and environmentally-friendly solutions, wish to reduce operating costs and improve the quality of services offered; which are key factors in raising the permanent ability to compete not only in a regional but also in a global environment (Wysokińska 2011, p. 124).

The certification system "Clean Tourism" was developed on the basis of Ecolabel standards and Norwegian certification experience by an independent non-governmental organisation – Fundacja Partnerstwo dla Środowiska (the Ministry of Sport and Tourism, *Wspólnotowe oznakowanie...,* 2014). The certificate covers issues of major importance for the conducted business activity and of utmost relevance with respect to the impact of a tourist facility on the environment. The criteria aim to set limits on the main environmental impacts during the three phases of the life cycle of a tourist accommodation service (purchasing, provision of the service, and waste). In particular, they aim to limit energy and water

[1] Information obtained during a direct interview with a Representative of the European Commission, W. Andreas Scherlosky Ph.D. 29/10/2013 Warsaw.

consumption, waste production and to favour the local natural economy (European Commission, Decision 2009/578/EC, 2014). Certification of facilities is supervised by the Certificate Chapter consisting, inter alia, of representatives of the Ministry of Environment and the Ministry of Sport and Tourism. Environmental certification involves benefits not only related to managing a facility in accordance with the principles of sustainable development but primarily enabling savings resulting from a reduction in operating costs of the hotel (Dziuba 2013, p. 233).

3. The effectiveness of using environmental solutions based on Ecolabel standards

A reduction in operating costs of hotels as a result of the environmental solutions under Ecolabel certification standards can be achieved through actions in the following three areas:

1. Introduction of environmental building and design solutions, e.g. through insulation of buildings;
2. Installation of eco-friendly equipment in an existing hotel, producing a reduction in CO_2 emissions, e.g. solar panels, water mixers, eco-friendly washing machines, etc.;
3. A change in the organisation of hotel management and a pro-ecological approach to end users/customers, e.g. through environmental training for employees, encouraging customers to segregate waste, etc.

The primary objective of the above actions is to reduce water and energy consumption and carbon dioxide emissions, and thus to reduce operating costs of a building and generate maximum savings. With emphasis being placed on "eco", hotel owners will not only reduce operating costs of buildings but also increase the potential of their own range of services, which can attract new customers, e.g. through lower accommodation fees. Actions relating to the introduction of technological innovations in the field of ecology aimed at obtaining the eco-certificate "Clean Tourism" could successfully become a new example of achieving one of the main objectives of the European Union Policy – Sustainable Development, which would enable better promotion of hotels. After two years of operation in programme of environmental certification "Clean Tourism", the Foundation has audited all 85 certified facilities. The studies conducted showed a monthly reduction in CO_2 emissions by Organisations holding the Certificate "Clean Tourism", on average of 22%. This result consists of a reduction in CO_2 emissions for electricity by 17%, thermal energy by 12%, water consumption by 13% and waste generation by 80%. The biggest reduction in CO_2 emissions was achieved in the field of "electricity". This is associated with the use of energy-efficient equipment and energy-efficient light sources in the entities. These actions allowed a reduction in electricity consumption in all organisations by 178 MWh per month. Annually, it yields more than 2.130 MWh of electricity savings.[2]

Due to investments in equipment reducing water consumption, such as faucet aerators, shower reducers, flow regulators, water saving mixer taps and modern fittings, organisations save about 2.108 m^3 of water a month. Annually, these actions make it possible to save more than 25.300 m^3 of water. These savings affect not only reduced water consumption, but also smaller quantities of discharged waste water and smaller quantities of raw materials needed to heat water, which together translates into reduced operating costs of a hotel facility. Certified facilities also segregate municipal waste. With these actions landfills receive less waste by more than 460 Mg annually, which is provided for reuse or recycling.

4. Results of the analysis based on statistical data

The research background as presented shows the main objective of the study, which is to verify whether the environmental certification system "Clean Tourism" developed on the basis on Ecolabel standards reduces not only CO_2 emissions, but also reduces the maintenance costs of hotels in particular areas. Economic analyses show that the introduction of certification systems, which reduce water and energy consumption costs by about 20% and waste disposal costs by 80%, significantly reduces the general operating costs of a hotel compared to other facilities.

4.1. Statistical data

In order to verify the hypotheses about the effect of holding certificates by hotels, cross-sectional data describing the value of maintenance costs of twelve hotels was collected through surveys and a direct interview. Costs by category and variable, taking into account compliance with certification standards or the lack of them, is shown in Table 1. Statistical data for the model (the value of costs) was obtained from a questionnaire and direct interviews in the Łódź region and other regions of Poland. From among the data collected from the

[2] Information provided by Fundacja "Partnerstwo dla Środowiska" *[the Environmental Partnership Foundation]* obtained in cooperation under the "internship agreement" of the project entitled "Tourism for the region - Integrated Programme of Development for Doctoral Students".

owners of hotels, the data selected for an analysis was that which was the most similar in terms of a category of a facility, accommodation capacity offered, and annual maintenance costs.

Table 1. The values of the variables of maintenance cost models for hotels – data obtained in the period 2011–2012 (PLN)

	Total annual maintenance costs of the hotel	Energy consumption costs	Water consumption costs	Waste disposal costs	Compliance with certification standards
No	**Y**	**Y2**	**Y3**	**Y4**	**X1**
1	133640.0	12780.00	12877.45	1794.59	1
2	118212.5	14712.00	10028.21	1586.47	1
3	150527.5	17076.00	14548.06	4574.16	0
4	152335.0	21240.00	17816.27	5788.33	0
5	146435.0	22584.00	30352.70	3002.15	0
6	146252.5	13608.00	10869.70	3605.90	0
7	143965.0	27552.00	13112.22	3631.20	0
8	166705.0	22560.00	12132.60	3080.63	0
9	132535.0	14088.00	10246.68	1806.82	1
10	128365.0	11136.00	9687.54	1778.00	1
11	125477.5	13296.00	8716.28	1429.50	1
12	109992.5	10759.68	9276.48	1151.26	1

Source: the author's own compilation.

4.2. Analytical form of the model

The relationship between the costs and compliance with certification standards by the hotels under the study is written in the form of four linear models, expressed by the formulas (1-4):

Total cost model:

$$Y_i = \alpha_{10} + \alpha_{11} \cdot X1_i + \zeta_{1i} \tag{1}$$

Energy consumption cost model:

$$Y2_i = \alpha_{20} + \alpha_{21} \cdot X1_i + \zeta_{2i} \tag{2}$$

Water consumption cost model:

$$Y3_i = \alpha_{30} + \alpha_{31} \cdot X1_i + \zeta_{3i} \quad (3)$$

Waste disposal cost model:

$$Y4_i = \alpha_{40} + \alpha_{41} \cdot X1_i + \zeta_{4i} \quad (4)$$

where:

Yi is the value of total annual maintenance costs of the hotel

Y2i is the value of annual energy consumption costs

Y3i is the value of annual water consumption costs

Y4i is the value of annual waste disposal costs

X1i is the zero-one variable, taking a value of 0 for hotels that do not comply with certification standards, a value of 1 for hotels that comply with certification standards. It is assumed that the parameter standing by the explanatory variable will take a minus, and that the negative statistically significant value of the parameter estimation by the variable will inform by how much PLN particular types of costs will be lower for hotels that comply with certification standards compared to hotels that do not comply with the above standards.

4.3. Estimation of models

Estimation was made using the ordinary least squares method. The results of the estimation of models are shown in tables 2–5.

The form of models after estimation:

Total cost model:

$$\hat{Y}_i = 151037 - 26332{,}9 \cdot X1_i \quad (5)$$

Energy consumption cost model:

$$\hat{Y}2_i = 20770 - 7974{,}7 \cdot X1_i \quad (6)$$

Water consumption cost model:

$$\hat{Y}3_i = 16472 - 6333{,}2 \cdot X1_i \quad (7)$$

Waste disposal cost model:

$$\hat{Y}4_i = 3947 - 2355{,}9 \cdot X1_i \quad (8)$$

Table 2. The results of the estimation of the total maintenance cost model for hotels

Model 1: OLS estimation, used observations 1-12

Dependent variable (Y): Y

	Coefficient	Std. error	Student's-t	p-value	
const	151037	3547.91	42.5706	<0.00001	***
X1	-26332.9	5017.5	-5.2482	0.00037	***

Arithm. mean of depend. var.	137870.2	Stand. dev. of depend. var.	16055.38
Residual sum of squares	7.55e+08	Residual standard error	8690.566
Coeff. of determ. R-squared	0.733644	Adjusted R- squared	0.707008
F(1, 10)	27.54375	p-value for F-test	0.000374
Log-likelihood	-124.7733	Akaike information criterion	253.5465
Schwarz criterion	254.5163	Hannan-Quinn information criterion	253.1874

Test for normal distribution of residuals -

Null hypothesis: the random component is normally distributed

Test statistics: Chi-square(2) = 0.844694

with p-value = 0.655507

Breusch-Pagan test for heteroscedasticity -

Null hypothesis: there is no heteroscedasticity of residuals

Test statistics: LM = 0.0548806

with p-value = P(Chi-square(1) > 0.0548806) = 0.814778

Source: the author's own compilation, using GRETL.

Table 3. The results of the estimation of the total energy consumption cost model

Model 2: OLS estimation, used observations 1-12

Dependent variable (Y): Y2

	Coefficient	Std. error	Student's-t	p-value	
const	20770	1472.77	14.1026	<0.00001	***
X1	-7974,72	2082.82	-3.8288	0.00333	***

Arithm. mean of depend. var.	16782.64	Stand. dev. of depend. var.	5401.450
Residual sum of squares	1.30e+08	Residual standard error	3607.544
Coeff. of determ. R-squared	0.594482	Adjusted R- squared	0.553930
F(1, 10)	14.65982	p-value for F-test	0.003325
Log-likelihood	-114.2227	Akaike information criterion	232.4454
Schwarz criterion	233.4153	Hannan-Quinn information criterion	232.0864

Test for normal distribution of residuals -

Null hypothesis: the random component is normally distributed

Test statistics: Chi-square (2) = 5.02484

with p-value = 0.0810717

Breusch-Pagan test for heteroscedasticity -

Null hypothesis: there is no heteroscedasticity of residuals

Test statistics: LM = 3.91734

with p-value = P(Chi-square(1) > 3.91734) = 0.0477905

Source: the author's own compilation, using GRETL.

Table 4. The results of the estimation of the total water consumption cost model

Model 3: OLS estimation, used observations 1-12

Dependent variable (Y): Y3

	Coefficient	Std. error	Student's-t	p-value	
const	16471.9	2122.03	7.7623	0.00002	***
X1	-6333.15	3001.01	-2.1103	0.06101	*

Arithm. mean of depend. var.	13305.35	Stand. dev. of depend. var.	5958.249
Residual sum of squares	2.70e+08	Residual standard error	5197.899
Coeff. of determ. R-squared	0.308128	Adjusted R- squared	0.238941
F(1, 10)	4.453539	p-value for F-test	0.061007
Log-likelihood	-118.6055	Akaike information criterion	241.2109
Schwarz criterion	242.1807	Hannan-Quinn information criterion	240.8518

Test for normal distribution of residuals -

Null hypothesis: the random component is normally distributed

Test statistics: Chi-square (2) = 9.36569

with p-value = 0.00925267

Breusch-Pagan test for heteroscedasticity -

Null hypothesis: there is no heteroscedasticity of residuals

Test statistics: LM = 5.10396

with p-value = P(Chi-square (1) > 5.10396) = 0.0238713

Source: the author's own compilation, using GRETL.

Table 5. The results of the estimation of the total waste disposal cost model

Model 4: OLS estimation, used observations 1-12

Dependent variable (Y): Y4

	Coefficient	Std. error	Student's-t	p-value	
const	3947.06	315.851	12.4966	<0.00001	***
X1	-2355.96	446.681	-5.2744	0.00036	***

Arithm. mean of depend. var.	2769.084	Stand. dev. of depend. var.	1434.550
Residual sum of squares	5985713	Residual standard error	773.6739
Coeff. of determ. R-squared	0.735582	Adjusted R- squared	0.709140
F(1, 10)	27.81886	p-value for F-test	0.000361
Log-likelihood	-95.74714	Akaike information criterion	195.4943
Schwarz criterion	196.4641	Hannan-Quinn information criterion	195.1352

Test for normal distribution of residuals -

Null hypothesis: the random component is normally distributed

Test statistics: Chi-square (2) = 5.32556

with p-value = 0.0697541

White's test for heteroscedasticity of residuals (variability of residual variance) -

Null hypothesis: there is no heteroscedasticity of residuals

Test statistics: LM = 2.78467

with p-value = P(Chi-squared(1) > 2.78467) = 0.0951701

Source: the author's own estimation, using GRETL.

4.4. Analysis of the selected properties of model residuals

Starting with the assessment of the statistical significance of the effect of holding certification by hotels on their maintenance costs, the veracity of the hypotheses about the normal distribution of model residuals should be verified. It should be emphasised that critical values of a Student's-t test are based on the assumption of the normal distribution of residuals. The statistical significance of explanatory variables in the models will be verified on the basis of a Student's-t test.

H0: the residuals of the estimated model have a normal distribution

H1: the residuals of the model do not have a normal distribution

The hypotheses are verified on the basis of the Jarque-Bera test statistics. The critical value for two degrees of freedom at the significance level of 0.05 was read from distribution tables $\chi 2$, which is $\chi 2$ (2, 0.05) = 5.99.

The statistical values of the values of the calculated JB test statistics for the models are:

Y: JB = 0.844694

Y2: JB = 5.02484

Y3: JB = 9.36569

Y4: JB = 5.32556

The hypotheses were verified on the basis of the equation of the calculated statistics value (JB) with the critical value read from tables χ^2 (2, 0.05) = 5.99

• **JB (test value – calculated)** < $\chi^2_{(2,\ 0.05)}$ = 5.99

If the test value does not exceed the critical value read from Chi-square distribution tables, with the assumed significance level of 0.05, it can be concluded that there are no grounds for rejection of the null hypothesis, according to which the estimated model residuals are characterised by a normal distribution

• **JB (test value – calculated) > χ^2 (2, 0.05) = 5.99**

If a JB statistics value is higher than the critical value, the null hypothesis should be rejected in favour of the alternative hypothesis which indicates the lack of a normal distribution of the estimated model residuals.

Except for the model describing water consumption costs (Y3), it should be noted that in the case of other models empirical statistics are lower than the critical value read from Chi-square distribution tables. Therefore, it should be inferred that the residuals of the three models have a normal distribution, which makes it possible to draw conclusions about the significance of the variables of the specified models.

4.5. Verification of the assumption of homoscedasticity of residuals

Homoscedasticity of the model residuals is one of the assumptions relating to the properties of the OLS estimator. This property occurs when disturbance variances are constant. The lack of disturbance constancy is called heteroscedasticity of random disturbance. If the assumption of homoscedasticity of random components is not met, the estimators of structural parameters obtained using the Ordinary Least Squares Method are unbiased, consistent, but not efficient. As a result, this makes a reliable verification of the hypotheses about the values of structural parameters impossible. Verification of the assumption of homoscedasticity of residuals is based on the analysis of the veracity of the hypotheses.

H0: $H_0 : \sigma^2{}_i = \sigma^2 = const$ – the variances of residuals are constant

H1: $H_1 : \sigma^2{}_i \neq \sigma_j{}^2$ – lack of constancy of the variances of residuals

To test the hypotheses the Breusch-Pagan test programmed in the Gretl package was used. The inference was based on a comparison of empirical significance levels of the BP statistics with the assumed significance level of 0.05.

If p-value > 0.05

there are no grounds for rejection of the null hypothesis about homoscedasticity of random disturbances

If p-value < 0.05

the null hypothesis should be rejected in favour of the alternative hypothesis- there is heteroscedasticity of a random component. In order to obtain efficient estimators, the model parameters should be estimated using the generalised least squares method.

The values of empirical significance levels of the BP statistics:

Y: P(Chi-square(1) > 0.0548806) = 0.814778

Y2: P(Chi-square(1) > 3.91734) = 0.0477905

Y3: P(Chi-square(1) > 5.10396) = 0.0238713

Y4 P(Chi-square(1) > 2.78467) = 0.0951701

Both in the case of models describing the evolution of energy consumption costs and waste disposal costs, the model residuals are heteroscedastic. This means in practice that the estimations of the parameters of these models are not the most accurate. There are other methods than OLS (e.g. the weighted least squares method) allowing for more accurate estimates of the parameters of these models.

5. Assessment of the statistical significance of structural parameters

To assess the statistical significance of the parameters of the models that meet the assumption of normal distribution of residuals, the Student's-t test was used to verify the hypotheses:

$H_0 : \hat{\alpha}_i = 0$

the value of the estimated parameter is not significantly different from zero, the explanatory variable at which the parameter stands does not significantly affect the formation of the dependent variable:

$H_1 : \hat{\alpha}_i \neq 0$

the parameter assessment value is significantly different from zero, so the explanatory variable affects the level of the dependent variable.

The test statistics (t-empirical) is expressed by the formula:

$$t_\alpha = \frac{\hat{\alpha}_i}{S_{\hat{\alpha}}} \quad (9)$$

The critical values for the significance level of 0.05 and 10 degrees of freedom were read from Student's-t tables. The significance of the parameters was verified on the basis of the empirical significance level p-value.

If |t-empirical| ≤ t-critical – no grounds for rejection of the null hypothesis are provided.

If |t-empirical| > t-critical – the null hypothesis is rejected and the alternative hypothesis is adopted.

If the p-value is lower than the assumed significance level, the null hypothesis is rejected in favour of the alternative hypothesis.

Assuming the significance level of 0.05, it must be stated (p-value <0.05) that the zero-one variable in the form of compliance with certification standards, except for water consumption costs, significantly affected the evolution of the maintenance costs of hotels.

6. Assessment and economic interpretation of the values of the model parameters estimation

Total cost model :

$$\hat{Y}_i = 151037 - 26332{,}9 \cdot X1_i \tag{10}$$

Energy consumption cost model:

$$\hat{Y}2_i = 20770 - 7974{,}7 \cdot X1_i \tag{11}$$

Water consumption cost model:

$$\hat{Y}3_i = 16472 - 6333{,}2 \cdot X1_i \tag{12}$$

Waste disposal cost model:

$$\hat{Y}4_i = 3947 - 2355{,}9 \cdot X1_i \tag{13}$$

Analysing the values of the parameter estimation, the compliance of parameter symbols with the theoretical assumptions, according to which the introduction of a certificate would lead to a reduction in maintenance costs, should be indicated. In the case of total maintenance costs (Y), the hotels that complied with certification standards incurred lower maintenance costs by PLN –26,332.9 compared to the hotels that did not comply with certification standards. This difference represented 19.09% of the average costs incurred by all hotels. Taking into account energy consumption costs (Y2), in the case of the hotels that complied with certification standards, they were lower by PLN 7,974.7, representing 47.51% of the average energy consumption costs incurred by all hotels. Analysing waste disposal costs (Y4), the hotels that complied with certification standards incurred lower costs by PLN 2,355.96, which represented as much as 85.08% of the average level of such costs borne by all analysed hotel facilities.

7. Assessment of the matching of model estimates to empirical data

To determine the matching of theoretical values to actual values and to compare the models in this regard, the values of the adjusted determination coefficient were used. The model describing waste disposal costs was characterised by the highest level of matching of theoretical values to empirical values. The value of the adjusted determination coefficient was 70.9%. Total maintenance costs of hotels were explained in 70.7%. However, theoretical values corresponded to the empirical values of energy consumption costs at 55%. On the basis of the standard deviation values of the model residuals it should be noted that estimating total maintenance costs of hotels the model erred by +/- PLN 8,690.57. In the case of estimates in the energy consumption cost model, the error value was PLN +/- 3,607.544, while estimating waste disposal costs, the model erred by +/- PLN 773.6739.

8. Conclusions

The econometric model confirms the assumed research hypotheses. It is also a confirmation of the results of other empirical studies. In the case of total maintenance costs, the hotels that complied with certification standards incurred lower maintenance costs by PLN -26,332.9 compared to the hotels that did not comply with the standards. This difference represented 19.09% of the average costs incurred by all hotels. Taking into account energy consumption costs (Y2), in the case of the hotels that complied with the standards, they were lower by PLN 7,974.7, representing 47.51% of the average energy consumption costs incurred by all hotels participating in the research. Analysing waste disposal costs (Y4), the hotels that complied with certification standards incurred lower costs by 2,355.96, which represented as much as 85.08% of the average level of such costs borne by all analysed hotel facilities. Therefore, the econometric model confirms that compliance with certification standards involves benefits resulting not only from taking care of the region’s environment and cultural heritage values and providing comfortable rest for tourists, but also reduces the operating costs of the facility. The consequence of the introduction of the certificate and compliance with Ecolabel standards, in a narrower sense, can be the increased dynamic competitiveness of the facility compared to other hotels in the immediate vicinity; by creating new forms of promotion, increasing price attractiveness of accommodation while increasing the comfort of a stay and, in a broader sense, becoming involved in achieving the objectives of the Europe 2020 strategy, which may positively affect the possibility of raising additional investment funds.

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Streszczenie

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***Słowa kluczowe**: turyzm, ekonomia, zrównoważony rozwój*