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**THE “3WIN” RELATION SYSTEM OF ECO-LABELING**

**THE ECONOMIC ANALYSIS OF THE SYSTEM IN HUNGARY**

**DOCTORAL DISSERTATION – THESIS BOOKLET**

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## **INTRODUCTION OF THE TOPIC**

Eco-labelling (ISO I type environmental labelling) is a voluntary environmental policy and management tool that provides reliable information on the environmental ramifications of a product (throughout its life cycle) and its (increased) eco-friendliness. Reliability and information on life cycle is provided by the system of eco-labelling. The former is guaranteed by independent certification, the latter stems from the obligation to comply with the criteria system based on a life cycle perspective.

Eco-labelling is an important environmental policy tool. Increasing its efficiency and its widespread use appear as parts of international and domestic environmental regulations and appears in base documents as a tool that is able to support other environmental policy goals as well. Implementation occurs on the micro level, as part of corporate operation (environmental management, eco-marketing), although its background provided by operating the system at the macro level.

Furthermore, eco-labelling is a tool that is able to establish a “3win” (win-win-win) relation system between the three dimensions of sustainability, providing benefits for the economy (organisations allowed to use eco-labels), society (buyers, consumers), and the environment. The realisation of these theoretical benefits in practice is tied to requirements that need to be met simultaneously to achieve efficient system operation.

## **RESEARCH TOPIC, GOALS, METHODOLOGY**

The topic of my dissertation is eco-labelling. My aim is comprehensive research into the theory and practice of eco-labelling and determining success factors as well as their requirements in order to publish new scientific results that can serve as a basis for making the system in Hungary more efficient and effective.

To this end, I have analysed the role of eco-labelling based on available literature in environmental economics (environmental policy) and environmental management to prove that eco-labelling is an important environmental communication tool capable of contributing to the objectives of micro-level corporate environment and marketing as well as macro-level environmental policy.

I have developed a comprehensive model, the “3win” relation system of eco-labelling which serves as the core of my dissertation analysing the practical implementation of theoretical economic advantages at the heart of the “3win” system.

The “3win” model systematises the theoretical advantage and relation system of eco-labelling according to the dimensions of sustainability. It includes not only the advantages, but also the preconditions of implementation.

I have analysed the implementation of the economic advantages presented in the model in the Hungarian system through the use of primary (my interview-based research among domestic companies authorised to use eco-labels) and secondary data, assessing the role of product groups, businesses allowed to use eco-labels and costs as well as the practical realisation of direct and indirect economic advantages.

The results of these analyses serve to prove my hypotheses postulated at the beginning of my research and constitute my theses and new scientific results.

#### **NEW SCIENTIFIC RESULTS – THESES**

My research and results are new in the sense that although there is abundant literature on eco-labelling and its role, there is no work that is accessible (published) and is similar to my research. My new scientific results are the models developed:

- Model of the relation system between Integrated Product Policy, Eco-labelling and Life Cycle Assessment – new in the sense that it summarises the relation system of the three topics (only briefly mentioned in literature),
- Model of the eco-labelling process that shows a schematic overview of the eco-labelling process, showing the main stakeholders and the relation between the stakeholders. The model uses a new logic approach to examine the entire relation system that is absent from literature in such a comprehensive way, only appearing separately,
- Comprehensive model, the “3win” relation system of eco-labelling which systematises the theoretical advantage and relation system of eco-labelling according to the dimensions of sustainability. It includes not only the advantages, but also the preconditions of implementation.

My research on the system in Hungary is entirely new. Although data is readily available and public, statistical comparative analyses on operation in practice assessing the Hungarian system from a new viewpoint have not been created. This is also reported by eco-labelling stakeholders (organisations issuing and corporations using eco-labels) in Hungary – they are not aware of any interview-based research on the Hungarian system that also analyses the

experiences of organisations using eco-labels (in other words, these organisations did not have the opportunity to share their experiences as part of a scientific study). Thus not only the research was original, but all the results as well, only the most important of which have been summarised as theses.

The chapters of my dissertation contain research results in detail. The theses resulting from proving the hypotheses established in the beginning of my research can be summarised as follows.

#### **THESIS 1:**

ECO-LABELLING IS A TOOL OF ENVIRONMENTAL COMMUNICATION, WHICH CREATES AN OPPORTUNITY TO ASSIST THE MICRO-LEVEL EXECUTION OF MACRO-LEVEL ENVIRONMENTAL POLICY GOALS. **SUB-THESIS 1.1.**

ECO-LABELLING FULFILS AN IMPORTANT ROLE IN DOMESTIC AND INTERNATIONAL ENVIRONMENTAL POLICY AS A TOOL FOR ACHIEVING THE GOALS OF THE POLICY **SUB-THESIS 1.2.**

ECO-LABELLING IS AN IMPORTANT TOOL OF CORPORATE MANAGEMENT, WHICH FULFILS A SPECIAL ROLE IN CORPORATE ENVIRONMENTAL MANAGEMENT AND ECO-MARKETING.

#### **SUB-THESIS 1.3.**

ECO-LABELLING IS A TOOL OF THE EXECUTION OF AN INTEGRATED PRODUCT POLICY.

In Chapter 2 of my dissertation, I examined the role eco-labelling played in environmental policy and environmental management by analysing literature and environmental legislation.

From the analysis of environmental policy documents I have found that most of them talk directly about eco-labelling as a tool for achieving policy goals. The key connecting area is the advancement of sustainable consumption and production (by informing customers, use of the life-cycle approach, support of environmentally-friendly products), and stimulation of green procurements.

By analysing and evaluating the connections between eco-labelling and environmental management I have proved that eco-labelling constitutes an important part of environmental communications. These can be integrated well into eco-marketing activity, considering that eco-labelling can be used as a tool for realising eco-marketing strategies, indicating a close relationship with its key steps.

Product eco-labelling is backed up by the ISO 14000 family of standards (Type I ISO environmental labelling – ISO Standard No. 14024), which supports the implementation of

corporate environmental management. The scientific background of eco-labelling is derived from life-cycle analysis, another essential environmental management tool.

In order to facilitate a more in-depth analysis, I have devised a model connecting eco-labelling, life-cycle analysis and integrated product policy, which highlights how the two tools of environmental management (eco-labelling and LCA) may serve as a common tool for realising the goals of integrated product policy, a fundamental aim of environmental policy.

*Related publications:*

[BARANYI, R. 2010] *A környezetbarát termék védjegyzés „3win”kapcsolatrendszere, a hazai rendszer gazdasági elemzése mélyinterjúk kutatás alapján*, in: Marketing & Menedzsment, Megjelenés alatt

[BARANYI, R., 2005a] *Beziehungen zwischen Integrierter Produktpolitik (IPP) und Umweltkennzeichnung*. Szeged, 2005. ISBN 963 482 757 8 pp. 503-507.

[BARANYI, R., 2005b] *Öko-címkés! De hogyan? – Az uniós és a hazai öko-címkézõ rendszer összehasonlító elemzése*, Akadémiai Kiadó, Budapest, 2005. ISBN 963 99364630 pp. 86-104.

[BARANYI, R. - HERCZEG, M., 2005]: *Tracing Substances in the Technosphere and Products*, in: Periodica Polytechnica, Series Social and Management Sciences, Vol. 13, No. 2., BME-OMIKK, Budapest, HU ISSN 1416-3837, 151-167.

[BARANYI, R. - KÓSI, K., 2005] *Umweltzeichen auf dem Markt von Produkten und Dienstleistungen - Ähnlichkeiten und Unterschieden. Umweltzeichen bei Produkten und Dienstleistungen*. Balatonfüred, 2005. Wissenschaftliche Mitteilungen der 17. Frühlingsakademie. ISBN 963866973X. pp. 23-26.

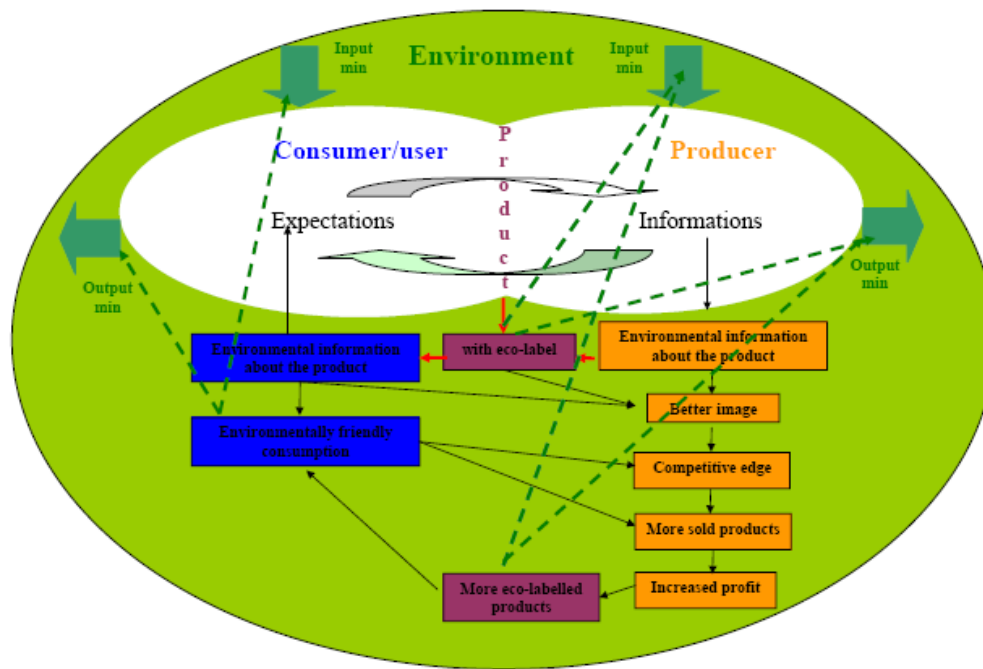
## **THESIS 2:**

ECO-LABELLING CONTRIBUTES TO THE ESTABLISHMENT OF THE “3WIN” RELATIONSHIP BETWEEN THE ECONOMY, SOCIETY AND THE NATURAL ENVIRONMENT.

### **SUB-THESIS**

THE PRACTICAL REALISATION OF THE THEORETICAL BENEFITS OF THE “3WIN” RELATIONSHIP IN ECO-LABELLING IS THE RESULT OF A SIMULTANEOUS OCCURRENCE OF A SYMBIOTIC COOPERATION OF THE STAKEHOLDERS OF THE ECO-LABELLING PROCESS.

In Chapter 3 of my dissertation I have created the central theoretical model of my research (Fig. 1), the “3win” relationship of eco-labelling. I have determined the hypothetical benefits that can be derived from all three dimensions (environmental, social and economic) of sustainability in the framework of this model, thus proving the possibility of the occurrence of a “win-win-win” situation.



**Fig. 1: “3win” relationship of eco-labelling**  
 (source: own edition [BARANYI, 2008])

I also highlighted the necessity of the simultaneous, parallel occurrence of certain conditions, which I have unveiled and introduced in detail.

*Related publications:*

[BARANYI, R. 2010] *A környezetbarát termék védjegyzés „3win”kapcsolatrendszere, a hazai rendszer gazdasági elemzése mélyinterjúk kutatás alapján*, in: Marketing & Menedzsment, Megjelenés alatt

[BARANYI, R., 2008]: *Criteria groups in the eco-labelling process system – comparative analysis focusd on the Hungarian system*, in: Periodica Polytechnika Social and Management Sciences, 16/1 (2008) pp. 45-54.

**THESIS 3:**

BOTH THE RANGE OF PRODUCTS TO WHICH ECO-LABELLING MAY POTENTIALLY APPLY AND THE RANGE OF PRODUCTS AND CORPORATIONS HAVING OBTAINED AN ECO-LABEL IS DIFFERENT TO OTHER ECO-LABELLING REGIMES.

In Chapter 4 of my dissertation I presented the investigation into the domestic practical realisation of the “3win” model based on statistical data from an economic aspect.

As a result of a comparative analysis of the domestic system with other eco-labelling regimes I have proved that the domestic system follows a different path with respect to other systems, implying that the products and corporations which may obtain an eco-label, or which have already obtained an eco-label will differ.

In the course of the research I have discovered a number of distortive factors, which was dominated by the general disinterest of the market, the lack of methodology for particular product groups, and environmental policy insufficiently backing up eco-labelling.

*Related publications:*

[BARANYI, R. 2010] *A környezetbarát termék védjegyzés „3win”kapcsolatrendszere, a hazai rendszer gazdasági elemzése mélyinterjúk kutatás alapján*, in: Marketing & Menedzsment, Megjelenés alatt

[BARANYI, R., 2008]: *Criteria groups in the eco-labelling process system – comparative analysis focusd on the Hungarian system*, in: Periodica Polytechnika Social and Management Sciences, 16/1 (2008) pp. 45-54

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**THESIS 4:**

WHEN CONSIDERING THE MOTIVATING FORCES BEHIND THE THEORETICAL ECONOMIC BENEFITS, IN THE HUNGARIAN PRACTICE, PRODUCT CHARGES FULFIL AN OUTSTANDING ROLE (DIRECT BENEFITS), WHEREAS GREEN PROCUREMENTS (INDIRECT BENEFITS) HAVE A FAR WEAKER MOTIVATING FORCE.

In Chapter 5 of my dissertation, I have conducted an in-depth analysis of the workings of the eco-labelling system in Hungary and the realisation of the benefits of the “3win” model from an economic aspect. The primary research was carried out by conducting interviews with corporations permitted to use eco-labels.

I have investigated the practical realisation of economic benefits by exploiting the features of the methodology from several aspects, and by using control questions. Through primary research I managed to prove that the role played by green procurement and product charging is far more nuanced in domestic practices than the theory would suggest.

Green procurements have a weak motivating force in eco-labelling, considering that the consideration of environmental factors during the evaluation of procurement bids is practically non-existent. This means that a permit to use eco-labels will not provide direct competitive advantages to eco-label users.

The practical role played by product charging is extensive, and it poses a strong motivating force in partaking in the system through a strong market pressure. In the background of the motivating force lies the product charge discount, formerly an exemption, currently a deduction, resulting in a direct financial and economic benefit. The role and motivation of

product charges varies with the constant changing of the relevant legislature, which adversely affects the corporations partaking in eco-labelling.

*Related publications:*

[BARANYI, R. 2010] *A környezetbarát termék védjegyzés „3win”kapcsolatrendszere, a hazai rendszer gazdasági elemzése mélyinterjúk kutatás alapján*, in: Marketing & Menedzsment, Megjelenés alatt

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[BARANYI, R., 2006] *A termékdíjas szabályozás hatása az öko-címkézés gyakorlatára hazánkban*, Tavasz szél 2006 Konferenciakiadvány. ISBN 963 229 773 3. pp. 487-490.

#### **THESIS 5:**

THE HINDERANCE OF ECONOMIC REALISATION OF THE BENEFITS OF ECO-LABELLING IN THE “3WIN” MODEL IS A RESULT OF THE NON-MATERIALISATION OF THE NECESSARY CONDITIONS IN HUNGARY.

In Chapter 5 of my dissertation I have unveiled the extent of the realisation of the presented economic benefits by Hungarian corporations permitted to use eco-labels. The investigation was based on primary research consisting of interviewing Hungarian corporations permitted to use eco-labels.

During this research I examined several questions related to this topic, and through analysis I proved that the reasons for failure can be found in the lack of domestic practical use of the factors of the “3win” model.

Based on these results I furthermore concluded that the factors the participants of the research mentioned as being key to the success of eco-labelling schemes are only present in part in Hungary. Having discovered the reasons for this, I have recommended changes for the development of the eco-labelling scheme.

*Related publications:*

[BARANYI, R. 2010] *A környezetbarát termék védjegyzés „3win”kapcsolatrendszere, a hazai rendszer gazdasági elemzése mélyinterjúk kutatás alapján*, in: Marketing & Menedzsment, Megjelenés alatt

#### **FUTURE RESEARCH GOALS**

I consider my PhD dissertation an important milestone of my professional research, which does not mean the end of this research, but rather, it can serve as a structured basis for my future research. Considering that my dissertation focuses on the set of benefits of the “3win”



model from an economic point of view, my aim is to broaden my research to the environmental and social aspects of benefits arising from eco-labelling.

Besides conducting research in these new domains, as a parallel task, I would like to develop detailed recommendations for the improvement of the Hungarian eco-labelling schemes, (through development of methodology of product group selection, the expansion of the current range of products available for eco-labelling, changing the administrative system supporting eco-labelling, increasing the awareness of eco-labelling schemes,) or perhaps by developing a programme and executing it together with the system operators, as I find it particularly important to take the beneficial factors unveiled in theory and implement them in practice, which could prove to be determinative in the Hungarian practice of this scheme.

#### LIST OF PUBLICATIONS OF THE PHD CANDIDATE

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