

SUSTAINABLE MARKETING IN HIGHER EDUCATION

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SUMMARY

Purpose

Sustainable marketing, which emerged as the third development phase of green marketing, evolved from the economics of sustainable development. It is defined as a simultaneous balanced approach that incorporates and integrates economic, environmental and social goals, while meeting the needs of all stakeholders and respecting the needs of future generations. Such an approach is considered an obligation, rather than an option, and it represents the focus of this doctoral dissertation.

In our post-industrial society, highly-educated human resources and knowledge are the most valuable resources and the key prerequisites for the economic development, prosperity and well-being of each individual and of the society as a whole. Therefore, the traditional role of higher education and its institutions has become more important, and this in turn determines great challenges as these institutions are considered the essence of intellectual, cultural, social and technological development of the community (Meštrović, 2017), the fundamental lever and *spitirus movens* for sustainable development of the society as a whole.

Existing research in the field of sustainable marketing is predominantly focused on for-profit sector, while a further extensive and comprehensive literature review identified the lack of research addressing sustainable marketing in the context of public sector, including the higher education sector and public higher education institutions. In order to address the identified research gap and follow the relevant research recommendations, the basic objectives of this dissertation were defined as follows: (1) to investigate and design a systematic and comprehensive critical account of the existing theoretical knowledge in the field of sustainable marketing, (2) to develop and test a conceptual model aimed at measuring the impact of sustainable marketing in higher education, defined by three dimensions: promotion and education for sustainable development, sustainable

marketing activities and implementation benefits, on higher education performance, assessed by service quality and success in achieving the multiple objectives of higher education institution, and (3) to test the proposed hypotheses.

Methodology

To achieve the empirical objectives of the study, a two-stage approach was adopted. The comprehensive literature review was followed by exploratory primary research suitable to explore the attitudes and perceptions of key stakeholders on sustainable marketing and its application in higher education institutions, using a developed measurement instrument to capture attitudes and perceptions toward manifest forms of sustainable marketing in higher education. The research was conducted using a pre-tested online questionnaire on a purposive sample of experts, where 104 valid and complete responses from selected stakeholders related to higher education were received. Qualitative analysis was conducted using the Hotjar online numerical coding and content analysis application (Hotjar Ltd., 2014-2019) to gain insight into higher education stakeholders' perceptions and understanding of the concept and the importance of sustainable marketing. Quantitative analysis of the collected data was then conducted using the Statistical Package for Social Sciences (SPSS 23.0) programme to determine the dimensionality, validity and reliability of the measurement instrument. Subsequently, the Exploratory Factor Analysis (EFA) using Principal Components Analysis (PCA) with Varimax rotation was applied to determine the manifest variables of the construct (Mejovšek, 2013), with the aim of distinguishing its fundamental factors, since the factor structure was not already known from previous studies. The multidimensional structure of the proposed measurement instrument of sustainable marketing in higher education (Meštrović et al., 2021) and the unidimensional structure of the developed measurement instrument for the multiple objectives of higher education institutions were determined, to be used in the main study.

Following pilot testing, the primary quantitative empirical main study was conducted as in the previous exploratory study, using an anonymous Google Forms online questionnaire between May 10 and May 30, 2019. Using a convenience sample in addition to a snowball sampling to reach a wider range and larger number of higher education stakeholders, a total number of 12.317 respondents approached the questionnaire. Since all survey questions were mandatory, the number of completed questionnaires without missing values reached 2.189, and after the data cleaning, 146 questionnaires were excluded due to the inconsistencies in responses, illogical responses and responses with often extreme or same answers through a series of posed questions. Finally, the total number of 2.043 respondents, consisting of 1.663 (81,40 %) students and 380 (18,60 %) other higher education stakeholders as per the screening question, resulted in a response rate of 16,59 %, which was found to be adequate as similar studies have yielded an average response rate of 15 % (Malhotra & Birks, 2000; Ivy, 2008). The sample was described using descriptive statistical analysis, which was also used to evaluate the constructs' items' mean scores and coefficients of kurtosis and skewness.

To explore the research question if there are differences in mean scores between the two observed samples, the Mann-Whitney U-test for independent samples was used

to determine the presence of statistically significant differences in the mean scores of the variables of the sustainable marketing in higher education construct. Finally, two structural models were developed for both observed samples. Partial least squares structural equation modelling (PLS-SEM) was used to evaluate both structural models and to test the proposed relationships between their constructs.

Findings

The results of the descriptive statistical analysis demonstrate that respondents in both samples (i.e. students and other stakeholders) rated all dimensions of sustainable marketing in higher education institution (i.e. promotion and education for sustainable development, sustainable marketing activities and implementation benefits) with relatively high average scores. Students evaluated the performance of higher education institution's by evaluating the perceived service quality ($\bar{x} = 4,43$) and other higher education stakeholders by rating the perceived success in achieving the multiple objectives of higher education institution ($\bar{x} = 4,86$).

The Mann-Whitney U-test for independent samples demonstrates that only 17,65 % or 6 out of the total 34 variables of sustainable marketing in higher education construct are not statistically and significantly different in the mean scores between students and other higher education stakeholders, thus confirming the hypothesis H2 There are statistically significant differences in the mean scores of the sustainable marketing in higher education measurement construct's items between students and other higher education stakeholders.

The Confirmative Factor Analysis (CFA) was conducted as recommended by Hair et al. (2010) to confirm the factor structures of the underlying latent variables proposed by EFA. The three-dimensional structure of the Sustainable Marketing in Higher Education construct was confirmed and yielded satisfactory results ($\chi^2 = 23286,275$, $df = 1048,000$, $p = 0,000$, $CFI = 0,902$, $NFI = 0,801$, $TLI = 0,830$, $SRMR = 0,079$). The CFA results of the adapted Service Quality instrument did not show a satisfactory fit as a multidimensional construct developed in previous research (Štimac & Leko Šimić, 2012; Barilović et al., 2013; Leko Šimić & Štimac, 2013), but yielded acceptable measures as the unidimensional construct ($\chi^2 = 5869,980$, $df = 90,000$, $p = 0,000$, $CFI = 0,917$, $NFI = 0,916$, $TLI = 0,862$, $SRMR = 0,039$), as well as the unidimensional construct Achievement of Multiple Objectives of Higher Education Institution ($\chi^2 = 1068,611$, $df = 89,000$, $p = 0,000$, $CFI = 0,907$, $NFI = 0,804$, $TLI = 0,813$, $SRMR = 0,061$). The obtained CFA results defined the framework for model development.

Accordingly, two structural models were developed for both observed samples. The reliability and validity of both models were confirmed, as was hypothesis H1, which states that Sustainable Marketing in Higher Education is the multidimensional higher-order construct. Finally, the research findings confirmed the statistically significant positive impact of sustainable marketing in higher education on the performance of the higher education institution as assessed by service quality and success in achieving the multiple objectives of the higher education institution, thus confirming the hypotheses

H3 There is statistically significant direct positive impact of sustainable marketing on higher education institution's performance, perceived as service quality ($\beta = 0,406$, $t\text{-value} = 22,335$, $p = 0,000$), and H4 There is statistically significant direct positive impact of sustainable marketing on higher education institution's performance, perceived as success in achieving the multiple objectives of the higher education institution ($\beta = 0,141$, $t\text{-value} = 6,412$, $p = 0,000$).

Originality of the research

The originality of this dissertation, which combines two research areas (i.e. higher education and sustainable marketing) that are insufficiently linked and represented in previous research, is reflected in the approach that achieved conceptual, methodological and empirical contribution.

Despite the fact that the proposed measurement model emerged from an extensive literature review, any limitations related to the nature of quantitative research, data collection method, measurement instrument design and the respondents' sample should be considered and taken into account in order to draw the appropriate conclusions. It should be noted that the scope and the data quality of the exploratory research aimed to develop measurement instruments are solely determined by the perceptions of experts and leaders of institutions and business entities. Therefore, any future research would benefit from a qualitative approach aimed at obtaining a broader range of data and capturing the aspects, components, and factors of sustainable marketing that were not considered in this research. Since the possibility of respondent bias could be eliminated by both a research involving a wider range of higher education stakeholders and the use of relevant objective higher education performance indicators, this consideration should be taken into account in further research, as well as the possibility that the problem could be addressed in a different context, namely through a longitudinal research.

Despite the aforementioned limitations, the findings of this research expand the knowledge base and provide a conceptual, empirical and applied contribution to the field of sustainable marketing in the context of the higher education non-profit sector.

Keywords sustainable marketing, higher education, public higher education institutions, performance, service quality, PLS-SEM

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