Identifying Marketing Tools to Promote the Development of the Knowledge Economy: The Case of Lithuania

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Background/Purpose: The research aims to identify marketing tools that promote the development of the knowledge economy and to design a development model grounded in the research findings. This paper analyses the theoretical aspects of non-profit, social, and political marketing, introduces the concept of self-segmentation, and proposes a strategy to transform society's readiness to foster the values of the knowledge economy.

Methods: The research was carried out in two successive stages. The first stage consisted of three separate sub-studies: a case study, quantitative descriptive research, and qualitative exploratory research. The second stage encompassed designing the model based on the findings.

Results: After conducting the case study, secondary impact factors of the tools were identified, influencing the choice of tools or the formation of their set. Following the study of the survey results, groups of high-priority marketing tools were distinguished. Based on the results of the expert evaluation, a set of the most commonly proposed marketing tools was compiled. As a result of the conducted research, a coherent five-stage model for promoting the development of the knowledge economy was created.

Conclusion: The model reflects key ideas: the choice of marketing tools is determined by the readiness and openness of the society to accept ideas; the success of dissemination is determined by inter-institutional cooperation; effective dissemination requires identification of the target consumer audience; and a set of marketing tools is designed on the basis of the results of continuous data analysis.

Keywords: Knowledge economy, Marketing tools, Development model, Societal readiness, Lithuania

1 Introduction

The opportunities for the development of the knowledge economy are relevant to almost all economies in the world. However, it is likely that, particularly in the case of Lithuania, insufficient attention is paid to the integrated coordination of actions among the participants of the knowledge economy. This is highly evident at the institutional level. The authors are convinced that the importance of collective actions is reflected in the fundamental principles of the knowledge economy, where, as a phenomenon, the knowledge economy consists of combining groups of preconditions characteristic of its emergence into a chain and, following the principles of sequence and cyclicity, creating an environment for its dissemination and pervasiveness. Consequently, this paper addresses the problem of selecting marketing tools for promoting the development of the knowledge economy. Previous studies have examined individual elements of the knowledge economy or the aspects of the mechanisms of its functioning, for example, Melnikas (2016) suggested the importance of intellectual potential in determining society's ability to foster the values of the knowledge-based society; Mazur and Malkowski (2021) developed this idea further by analysing the country's socio-economic policies and public mindset

as key factors for progress. The individual elements of the knowledge economy were examined more closely by Adamczewski (2016), who presented in detail the challenges and opportunities of information and communication technologies; Vovk and Braga, in their paper of 2017, argued the advantages of fostering the values of the knowledge economy; Tudzarovska-Gjorgjievska (2014) analysed the challenges in adapting the values of the knowledge economy. A study on the individual elements of the knowledge economy through the lens of marketing was conducted by Bolisani and Scarso (2012), in which the researchers presented their vision for interpreting the 4Ps marketing mix in the context of the knowledge economy. Thus, while there is no deficiency of research on the expression of the knowledge economy, there is a noticeable lack of research on examining the very development opportunities or presenting the applied solutions for the implementation of development; moreover, most of the research is limited to the expression of one of the elements of the knowledge economy when examining narrowly focused problems. Consequently, the study has aimed to develop and propose an instrument for the formation of knowledge economy development strategies and to design a model of marketing tools to promote the development of the knowledge economy.

2 Literature review

2.1 The importance of marketing in the activities of non-profit organisations

Many non-profit organisations follow the approach of entities that dedicate their entire activity to solving specific societal problems or phenomena. The same applies to the marketing of non-profit organisations and the marketing solutions they use. The activities of non-profit organisations are often identified with brand promotion, and it is believed that this merely reinforces a non-profit image in the public eye. According to Andreasen (2012), non-profit marketing does not include simple commercial marketing concepts but rather more complex cases, with the consequent statement that commercial marketing is a narrower application of non-profit marketing.

Authors draw attention to the importance of the "exchange of offers" element in the marketing of a non-profit organisation. The process is relatively simple in business: an individual exchanges money for products or services of perceived value. A balance of perceived values regulates the process. Meanwhile, the services and products of non-profit organisations are often more abstract, and their values are much more challenging to perceive objectively. Each transaction, therefore, brings a non-profit organisation closer to achieving its specific mission. At the same time, participants can receive numerous benefits, such as

a sense of security, community recognition, contributions to society's well-being, the creation of a sustainable environment for future generations, and, in some cases, direct material benefits.

Miller (2010) and Andreasen (2012) argue that often non-profit activities are based on changing people's behaviour for social good, or as Shah and George (2021, p. 572) put it, "the ultimate objective of an NPO is usually to make a 'positive difference" which often involves intangible performance outcomes. It is not necessary to limit oneself to behavioural changes; rather, one should evaluate positive changes in well-being; therefore, the authors add the dimensions of change: attitudinal and behavioural. To clarify the distinction between the financial objectives of marketing for profit organisations and the social welfare objectives of marketing for non-profit organisations, the concepts of social marketing and political marketing are identified (Duralia, 2017; Stan & Epuran, 2019; Ștefan et al., 2020). Social marketing, as part of the marketing of a non-profit organisation, makes sense when it is used to persuade individuals or groups to change their behaviour for personal and/or social benefits (Andreasen, 2012). The result of a successful campaign is the solution to the primary objective (problem), preferably a positive behaviour change. Meanwhile, when offering more traditional goods and services, it is worth using the elements of political marketing. Jha (2008) explains the need to distinguish the political argument and highlights the responsibility of political institutions to formulate sustainable policies for social and economic change, as the pursuit of profit must not motivate their activity. If this happens, the institution is discredited, and the social interest is sabotaged. Hence, the desired result here is the exchange of mutual benefits, where a politician, their team, and the party, by proposing and implementing the idea, gain the trust and support of the voter (consumer) (e.g., victory in the next elections), and fulfil their obligations expressed through a positive change in the welfare of the individual and society.

The discussed expression of marketing for a non-profit organisation through social and political marketing is reflected in the scheme (Figure 1) depicting the interaction among the marketing elements of a non-profit organisation.

Figure 1 demonstrates that an organisation plays an intermediate role, that of an enabler of products (or services), by linking the available resources to the recipients who need them. This scheme also reflects the operational dimensions needed to organise activities:

1. Planning. The process needed to ensure a clear sequence of actions to achieve the strategic objectives.

2. Positioning. Non-profit organisations face the challenge of convincing consumers and other stakeholder groups that the need for their products (or services) exists in the first place.

3. Communication. It is divided into several directions,

addressing the needs of stakeholder groups while considering each group's role in the operational process.

4. Resources. Expressed in two values: funds—various forms of tangible and intangible assets, and time—the object of exchange among stakeholder groups such as volunteers, participants, and end consumers.

It should be noted that Figure 1 is a stylised reference to commercial marketing to emphasise that this form of marketing is the main supplier of the traditional marketing principles. In other words, all tools and solutions have been and are adapted from the theory and practice of commercial marketing. Figure 1 also reflects the principle of marketing as a process: the process is carried out until the objectives are achieved.

The foundation of activities of a non-profit organisation is built upon the needs of the stakeholder groups (their needs may vary from group to group), the organisation's mission (the idea for which it exists), communication decisions (consumers do not know what social benefits they need), and the perception of value (only perceived benefits are considered valuable). The process of accumulating added value is cyclical and requires constant evaluation and calibration, following the principle that the potential value tends to become essential.

2.2 Solutions for developing instruments for market segmentation

The segmentation process involves extracting a segment defined by available and interesting variables (Vukasović, 2020). Two groups of variables are usually distinguished:

1. Descriptive variables: geographic, demographic, socioeconomic, psychographic;

2. Behavioural variables: benefits sought, desired usage, purchasing patterns, loyalty, participation in the decision-making and dissemination process, brand attitude, sensitivity to marketing mix elements.

Daniel et al. (2015) present the following typical steps in the process of market segmentation:

1. Establishing criteria (variables) for the division of the overall market into homogeneous sub-markets;

2. Extracting data based on the established criteria;

3. Dividing the total market with the help of the data obtained.

4. Selection of sub-markets for the segment-related application of processes;

5. Performing segment-oriented marketing activities in selected markets.

According to the researchers, the process is relatively simple and easy to apply. However, Canhoto et al. (2013) note that academic research often focuses on the ideal conditions for segmentation (frequently referred to as laboratory environments), whether it concerns the very base, the model, or the method. Authors emphasise that segmentation under real-world conditions is far from smooth (this idea is supported by Scheuffelen et al., 2019). Hence, practical guidelines for the segmentation process lack solid empirical support. Similarly, although there are many normative guidelines for segment selection, research on
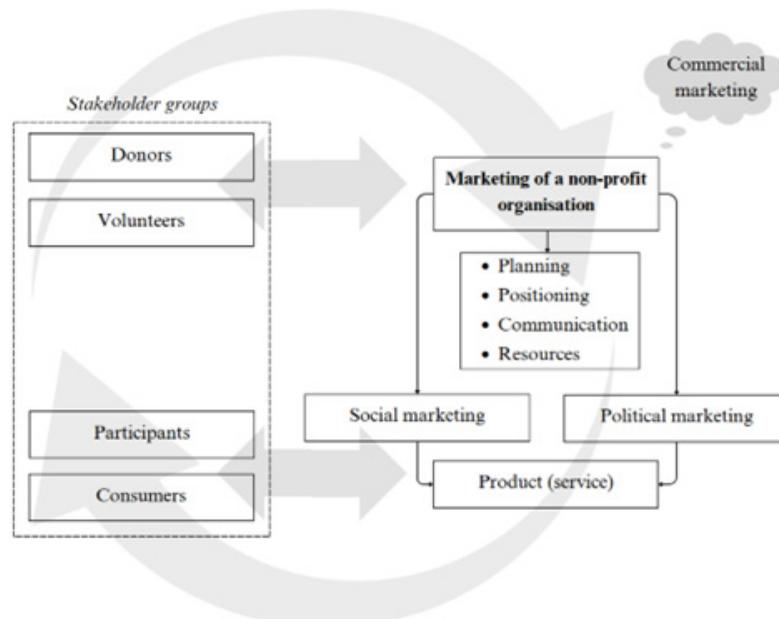

Figure 1: The interaction of marketing elements of a non-profit organisation
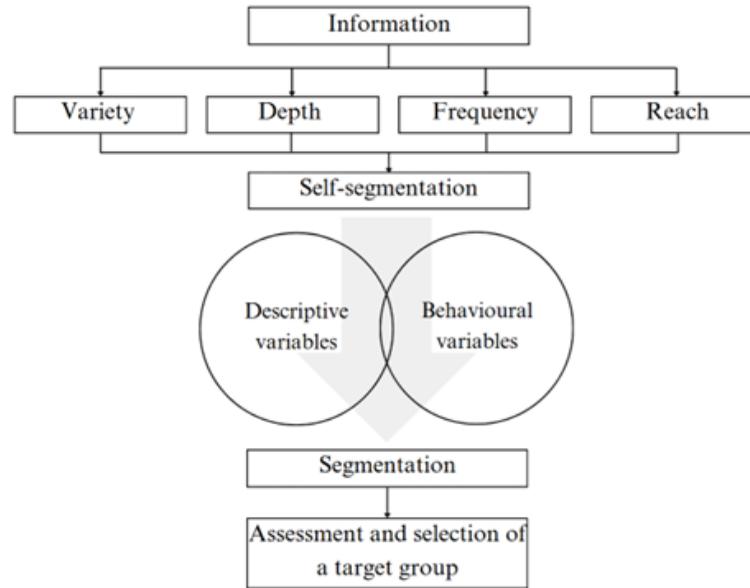Source: own elaboration

Figure 2: Conceptual model of market segmentation
Source: prepared by the authors, based on research by Boyd et al. (2012)

how organisations actually select segments successfully is still lacking.

Taking into account the challenges associated with the application of the segmentation process—the volume of segments, the set of criteria, the impact of the environment, the value relevance of segments, the relative benefits of the proposal—the concept of segmentation proposed by Boyd et al. (2012) has been used. This process is called the "self-segmentation process". The concept is based on research that has found a tendency for people to interact with those who are similar to themselves across various parameters or parameter sets. A similar idea was expressed by Scheuffelen et al. (2019) in their research on the responses of different market groups to various online marketing tools, i.e., groups are formed based on their responses to the marketing tool, not vice versa. From a philosophical point of view, Madeira et al. (2015) consider that the effect of the phenomenon of belonging to a group is the need to belong, to be part of a group, of not being unique and therefore isolated, i.e. the "unique individual" has to find (and may naturally develop) common aspects with other individuals in order to integrate, be part of a group. The a priori or "common-sense" segmentation approach is mentioned by Dolnicar and Leisch (2014), who recall that some marketing managers used to choose a single market segmentation criterion and then apply a complex set of variables. The insights from the previously discussed authors are combined into a conceptual segmentation model (Figure 2).

The proposed conceptual framework comprises a three-stage process. In the first stage, information about the essence of the product, service, or idea is provided to the potential consumer population. The researchers believe that the selected parameters should help identify the appropriate segments more accurately. The parameters for presenting information include: variety (detailed or specialised), depth (abstract or complex), frequency (how often the information is presented), and reach (in specific places or at specific times). The parameters can both limit and encourage consumer engagement. In this way, part of the population influenced by the provided information is "purified", meaning that a segment based on the parameters closer to the study than the primary random population of subjects is automatically distinguished. The second stage is the traditional segmentation based on the selected descriptive and behavioural variable sets. The final stage—the assessment and selection of a target group—is advisory in nature.

2.3 Transforming society's readiness to foster the values of the knowledge economy

As early as 1996, the Organisation for Economic Co-operation and Development (OECD) defined a knowledge economy as "… economies which are directly based on the production, distribution and use of knowledge and

information" (OECD, 1996, p. 7). This is reflected in countries' economies through rising investment in high technology, high-tech industries, workforce qualifications, and related productivity. According to Mazur and Malkowski (2021), the foundation of such an economy is "the application of human know-how in all production processes", with an emphasis on the visible and measurable part of the process of the knowledge economy. An important concept is presented by Tudzarovska-Gjorgjievska (2014), who recites the main idea of Romer and Grossman's "theory of growth", where researchers classified education, skills training and knowledge as "non-rival" goods which could "diffuse knowledge" through the economy, thereby enhancing competitive and entrepreneurial incentives, which in turn could create new employment opportunities in dynamic sectors and companies, as well as increasing productivity and fostering economic growth. However, the author (Tudzarovska-Gjorgjievska) emphasises that political and societal openness is essential for successful transformation towards a knowledge economy. Mazur and Malkowski (2021) support the idea, adding that technological and organisational progress depends on a country's socio-economic policies and societal mindset changes. The researcher's insights suggest that knowledge is a commodity of the knowledge economy, produced, disseminated, and consumed within this environment. Its leading enablers are the political system and society, and its primary consumers are businesses and the same society (Wierzbicka, 2018, expresses a similar idea). Hence,

forming the preconditions for developing the knowledge economy requires a transformation of society to foster the values of the knowledge society. The proposed concept of the levels of readiness is presented in Figure 3.

The initial level of perception is limited to the dissemination of information about the values of knowledge; it answers the question "What is it?". The use of educational marketing solutions (e.g., speeches by authorities, presentations, general information disseminated in media, etc.). At the next level of projective perception, tools are selected to reflect the necessity and benefits of implementing the knowledge economy; they answer the question "Who needs it?". Values are expressed through tools that reflect benefits (e.g., expert opinions and forecasts, media coverage and debates, presentations of success stories, thematic seminars, public conferences, etc.). The final level—the level of application—involves solutions to specific proposals through active engagement, therefore, a mature, prepared and informed society is needed to perceive their value; this level answers the question "How to do it?" or "What to do?", accordingly, measures are selected that involve the implementation itself (e.g. promotion of upskilling / re-skilling courses, promotion of training, dissemination of initiatives for change in the education system, penetration and development of information and communication technologies, etc.). The scheme implements the approach of selecting marketing solutions that depend on society's readiness.
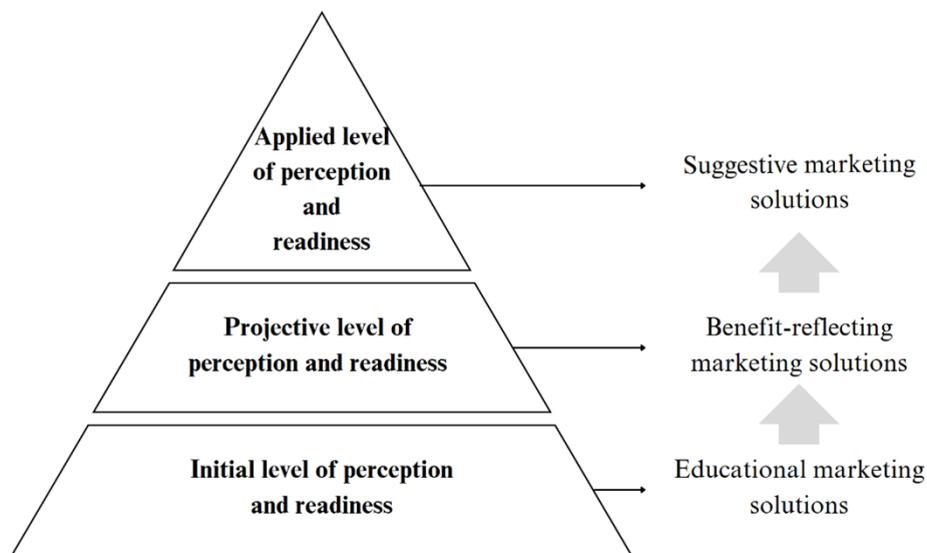

Figure 3: Transforming societal readiness to foster the values of the knowledge economy
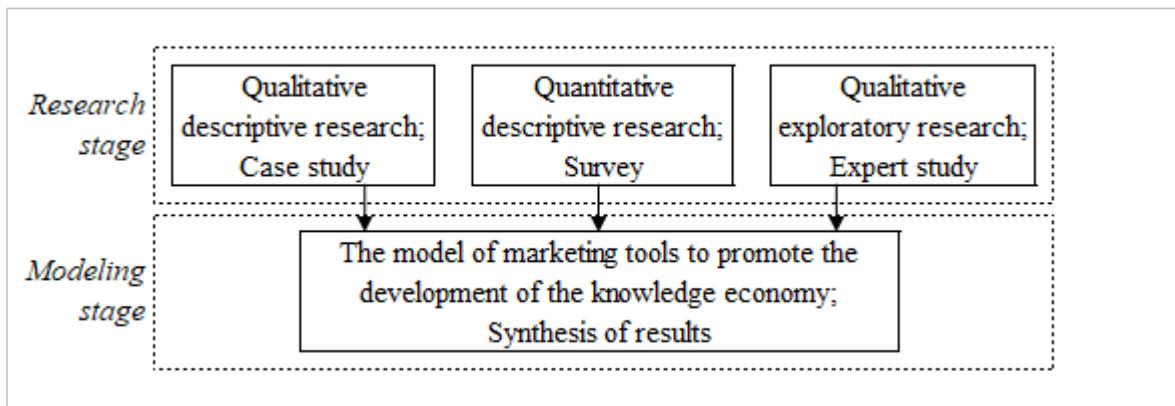Source: own elaboration

Figure 4: Methodological scheme for identifying marketing tools
Source: own elaboration

3　Methodology

Two research tasks have been set: to identify the expression of marketing tools in different environments of the knowledge economy (stage one) and to systematise marketing tools to promote the development of the knowledge economy (stage two). The tasks are united by a research purpose: designing a marketing tool model to promote the development of the knowledge economy (Figure 4).

The first stage involved preparing for the research studies, conducting them, organising the collected information, analysing the data, assessing the implications of the proposed hypotheses and defended statements, and generating summary conclusions. The second stage encompassed designing the model based on the research findings from the first stage.

The first sub-study. Case study:

The study aims to identify „good practice" marketing tools used in the country to promote the development of the knowledge economy.

Objectives of the study:

1. To identify selected country politicians, non-profit organisations, and non-government organisations that have contributed to developing the knowledge economy in the chosen country;

2. To identify the marketing tools used by selected country politicians, non-profit organisations, and non-government organisations to promote the values of the knowledge economy;

3. Rank the identified tools, highlighting the predominant marketing solutions.

Type of research. Qualitative descriptive research.

Research method:

1. Search and selection of information available in the public domain;

2. Identification of measures to promote the knowledge-based economy's development through a ranking method. The ranking is based on the frequency with which the same tools are used in individual cases, thereby highlighting marketing solutions that have led to their development.

Study parameters:

a) Justification of the country selection for the study. The country selected for the study is the USA. The choice has been based on: a high score in the development of the knowledge economy (referring to the ranking results in the Global Knowledge Index (GKI), the USA has been among the leading countries for the past 5 years); among the countries considered, the USA is distinguished by a freer and more accessible data; English language is used for information presentation and accumulation (English is given priority over other languages to reduce the risk of misinterpretation);

b) The tools used to search and select information: Web browser Firefox, search engine Google; Web browser Edge, search engine Bing; Artificial intelligence ChatGPT (used to search for primary sources of information);

c) The study's time frame covers the period since the active launch of knowledge economy programmes and development objectives in the USA and the emergence of active attempts to inform the public about the knowledge economy's elements, benefits, and prospects. Thus, the study's starting point is assumed to be the beginning of Al Gore's vice presidency in 1993.

The second sub-study. Survey:

The study aims to identify opportunities to promote the development of Lithuania's knowledge economy.

Objectives of the study:

1. To determine the Lithuanian population's readiness to foster the knowledge economy's values;

2. To identify marketing tools to promote the develop-

ment of the knowledge economy in Lithuania.

Type of research. Quantitative descriptive research;

Study method:

a) To present the characteristics of respondents' answers, a percentage analysis has been employed.

b) Cronbach's alpha coefficient was used to assess internal consistency;

b) To test the hypotheses, the X2 (Chi) test has been used;

c) The Spearman correlation calculation method was used to determine the strength of statistically significant correlations.

d) Methodology for determining the level of readiness to foster knowledge economy values:

1) The questions have been grouped into clusters corresponding to the elements of the knowledge economy (economic and social context; human resources, innovation system; ICT; operational and environmental context).

2) Value units have been assigned to the answer choices, where the lowest value is assigned to the low readiness value and the highest value to the high readiness value (e.g. in a question with three answer choices, the first choice is assigned zero value units, the third choice is assigned two value units, etc.);

3) results have been aggregated; mean and median values have been calculated; data have been normalised on a scale from 0 to 6 value units;

4) The resulting data have been distributed across three levels of public readiness, with the initial perception level assigned data values ranging from 0 to 2.99 value units, the projective perception levels assigned values ranging from 2.00 to 3.99 value units, and the applied perception level assigned values ranging from 4.00 to 5.99 value units.

Study parameters:

a) The general population (statistical population) has included the adult population of Lithuania (age group of 18 years and older): 2348613 (source: Lithuanian Official Statistics Portal (accessed December 14, 2023));

b) The sampling method – simple random sampling;

c) Method of information collection. Respondents were asked to fill in a pre-prepared questionnaire. The questionnaire was designed using the Qualtrics platform.

d) A sample representing the general population should comprise at least 400 respondents, as calculated using the Paniotto formula. More than 1000 questionnaires have been received, of which 410 have met the eligibility criteria (the most common reason for non-eligibility was incomplete answers).

e) Survey data processing. The data, graphs, and tables were processed and prepared in Microsoft Excel. Statistical indicators were prepared using the electronic platform DATAtab. The descriptive part of the study was prepared in Microsoft Word.

The third sub-study. Expert study:

The study aims to identify marketing tools to address the problems of the knowledge economy development.

Objectives of the study:

1. To identify the problems and shortcomings of the development of the knowledge economy in Lithuania.

2. To identify marketing solutions for the implementation of the knowledge economy development in Lithuania.

Type of research. Qualitative exploratory research;

Research method. The methodology of the expert study was based on the Delphi method, in which a series of steps summarising and synthesising were used to identify the dominant results most consistent with the views of the whole group of experts. The Rain of Thoughts approach has been used to stimulate proposal generation for marketing measures. The experts have been involved in a multi-stage exploratory activity:

1. In the first stage of evaluation, the experts were given a questionnaire of questions relating to each aspect of the knowledge economy.

2. The researchers summarised the results and compiled a summary of the prevailing opinions.

3. In a second reflective phase, the experts were presented with the summary drawn up in the first phase.

4. The researchers summarised the results of the experts' reflections and suggestions for marketing solutions returned to them and compiled a summary of recommended marketing tools.

Study parameters:

a) Search for experts: Experts from institutions directly related to the development of the knowledge economy in Lithuania have been invited to participate. The experts might include: government representatives, representatives of the education sector, representatives of scientific research and experimental development activities, representatives of institutions engaged in the development of information and communication technologies, and representatives of activities promoting the development of innovative business.

b) The method of selecting experts is random expert selection. Randomness has been emphasised in the freedom of choice regarding participation, subject to the condition of matching subject-matter competences.

c) Topic orientation – experts must be familiar, directly or indirectly through professional activity, with one or more aspects of the knowledge creation process in the knowledge economy;

d) Method of collecting information. Multi-stage discussion by means of a questionnaire with open-ended questions and statements;

e) Processing of the survey data. The data, graphs, and tables were processed and prepared in Microsoft Excel, while the descriptive part of the study was prepared in Microsoft Word.

Model creation:

The study aims to structure the marketing tools and create a model to promote the development of the knowl-

edge economy.

Research method. The model is designed by synthesising the results of the analysis from the previous stage:

1. The process of synthesising the results has been carried out in five stages corresponding to the components of the conceptual knowledge economy marketing complex.

2. Tools have been identified and included in relation to the cause-and-effect sequence of actions accompanying the logical implementation of the conceptual marketing complex;

3. The sequence of implementation actions has been expressed in the formulation of questions:

a) What is the object of development?

b) Who will disseminate the intended object?

c) What is the development position of the dissemination object?

d) What measures could lead to a change of position?

e) What selection decisions could contribute to the effectiveness of the measures?

f) What is the outcome of the model?

Criteria for the study:

a) The analysis is only carried out after all three sub-studies planned in the previous stage of research are completed;

b) The proposed development tools must be realistically implementable.

4 Results

4.1 The evaluation of the case study results

The case study has assumed that by examining the development practices of the knowledge economy already implemented in other countries, it is possible to identify the tools that have contributed to their success. Based on this assumption, the task of this study has been to identify the "best practices" of marketing tools applied in a country to promote the development of the knowledge economy.

The ChatGPT instrument has been used to search for US politicians who contributed to the spread of the idea of the knowledge economy. The selection's reliability was 72%; of the 18 candidates proposed for the research, 13 were confirmed to have contact with the knowledge economy. The proposals of the candidates who were not confirmed were largely wrong due to their active involvement in climate change issues and/or support for changes to the general U.S. economy. However, the content was not related to the context of the knowledge economy. Consequently, 13 USA politicians who actively promoted the idea of the knowledge economy were selected for further research. Also, the ChatGPT instrument suggested US non-profit and non-governmental organisations that have contributed to the dissemination of the knowledge economy. The accuracy of the selection was 58%: almost every second candidate suggested was falsely associated with organisations actively contributing to the dissemination of the knowledge economy in the USA. Two factors of misattribution can be identified: the pursuit of commercial activities as the organisation's main objective, or the exclusive generation of the resources needed to develop the elements of the knowledge economy. Certainly, in a general sense, they all impact the development of the elements of the knowledge economy, but this does not mean they are associated with disseminating the very idea of the knowledge economy; therefore, they were not suitable for the study.

The analysis of the research results has enabled the identification of the marketing tools most commonly used by USA politicians, non-profits, and non-governmental organisations to spread the ideas of the knowledge economy to their voters, consumers, and later, the public. The results have been consolidated by identifying the secondary impact factors applied in selecting tools (Figure 5) and compiling a summary of recommended tools (Table 1).
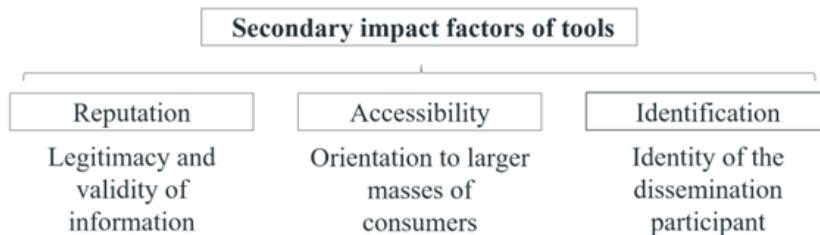

Figure 5: Secondary impact factors of the selection of tools
Source: own elaboration

Table 1: Summary of recommended tools for disseminating the idea of the knowledge economy

No.	A group of participants in the dissemination of the idea of the knowledge economy	Secondary impact factors of tools			Priority content by the knowledge economy element
		Reputation	Accessibility	Identification	
		Dissemination tool			
1	Politicians	Internal media	External media	Personal webpage	Human resources
2	NPO and NGO	Events	Social network platforms	Organisation's webpage	Operational and environmental context

Source: own elaboration

Secondary impact factors are recommended when formulating strategies for disseminating the idea of the knowledge economy and selecting alternative sets of marketing tools. That is, when selecting dissemination channels, the optimal combination would be: a dissemination tool that ensures the legitimacy and validity of information, in other words, reputation (thus making the content attractive to large and respectable participants of information dissemination); a dissemination tool that guarantees accessibility and popularity by orienting to larger masses of consumers; a dissemination tool that plays the role of the carrier of the main idea and defines the identity of the participant.

In Table 1, the recommended tools are grouped by the secondary impact factors of the tool and by their attribution to the dissemination participants group. It has been determined that the recommended set of tools for disseminating the idea of the knowledge economy for politicians would be the following: internal media—official government or national media channels (government websites, etc., to give reputational weight to the disseminated information and attract the attention of the mainstream media); external media—well-known and popular channels for mass dissemination (usually broadcasting information of essential content to attract the attention of the broadest possible audience); a politician's personal webpage—open, accessible, reflecting specific activities and ideas, reliable, informative, and revealing the politician's main vision (dissemination of information associated with the politician through easily accessible and targeted content). The recommended set of tools for organisations would include: events—public forums, happenings, conferences, fairs, etc. that attract respectable participants in the dissemination of expert information (over time, reputational weight is created as the international audience notes events); social network platforms—for mass dissemination of information (there is no reason not to take advantage of the dissemination opportunities offered by social networks at a relatively low cost); the organisation's webpage—the key

tool for identity-building for organisation, reflecting the direction, goals, and objectives of the organisation (currently it is the most important information asset of an organisation). When forming the content of information, the following prioritised elements of the knowledge economy are distinguished: human resources, operational and environmental context (although we claim that the knowledge economy consists of five elements, the research nevertheless has shown that participants involved in idea dissemination paid most attention to information covering the development of human capital: education, self-education, career opportunities, retraining, etc.), and the involvement of business in the implementation of innovations in its activities (availability of innovative solutions and ensuring a favourable environment for their implementation).

It can also be argued that a case study based on the principle of "best practice" can help objectively identify the marketing tools that have contributed to the development of the knowledge economy and prepare recommendations for their application.

4.2 The evaluation of the survey results

Researchers (Chlivickas & Melnikas, 2016; Melnikas, 2014; Żelazny, 2015) have highlighted that society is both the initiator and the main consumer of the knowledge economy, but the process is active and productive only if participants are aware of its importance and place in their daily activities. Naturally, this statement raises research-worthy questions: how does society perceive the values of the knowledge economy, and are there unexplored opportunities to promote readiness to adapt to these values? Based on the statement, the task of this study is to identify opportunities to promote the development of Lithuania's knowledge economy.

Figure 6 shows the results of the evaluation of the Lithuanian population's readiness to foster the values of the knowledge economy.
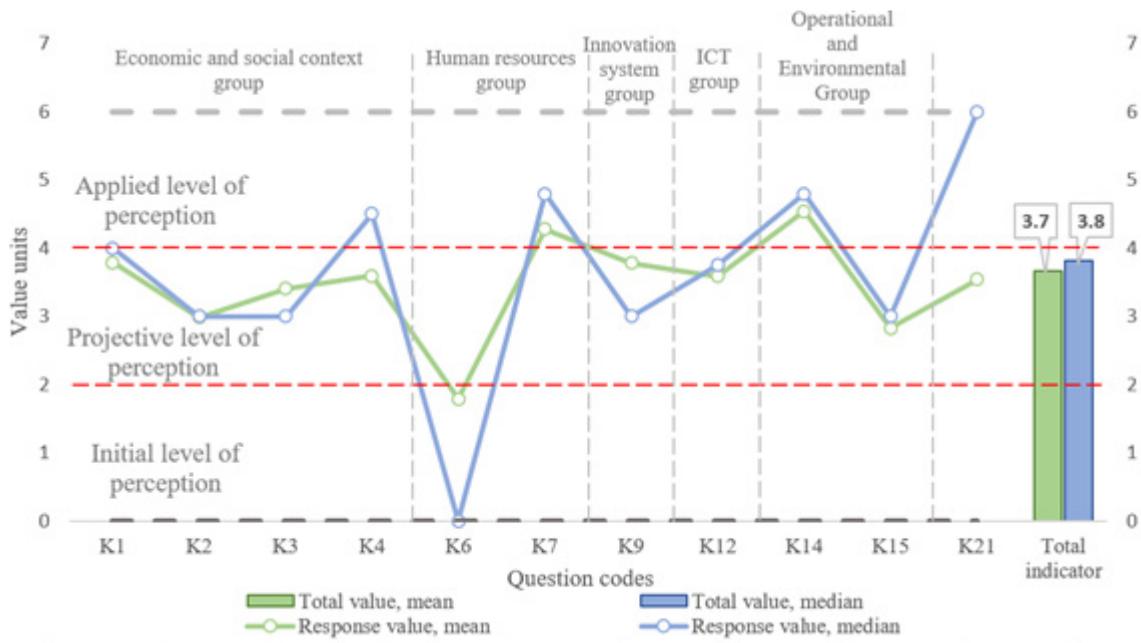
Figure 6: The level of readiness of the Lithuanian population to foster the values of the knowledge economy
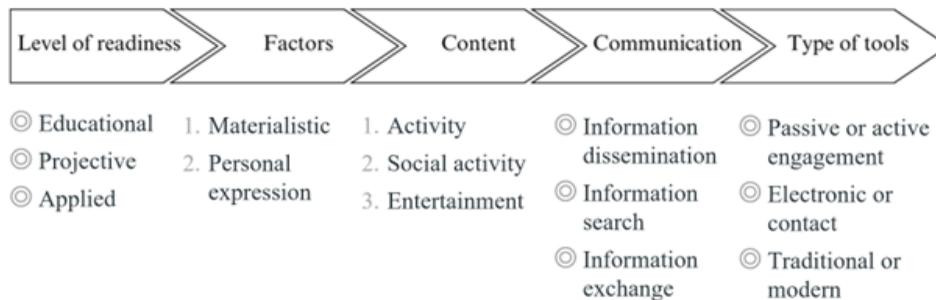Source: own elaboration

Figure 7: Summary of tools recommended to disseminate the idea of the knowledge economy
Source: own elaboration

The readiness of the Lithuanian population to foster the values of the knowledge economy has been assessed by identifying levels of perception and recommending appropriate marketing tools for each group of knowledge economy elements and the overall environment. As can be seen, the results lie between the hypothetical perfect maximum and minimum. Moreover, this section is divided into three levels of perception, corresponding to society's readiness. It should be noted that the mean value indicates a more accurate position, while the median value more accurately reflects the distribution of choices toward some extreme level. Evaluating the results of questions in the

economic and social context group, it can be seen that the respondents' views on economic issues were quite positive, closer to the level of applied perception. As a result, their willingness to accept new ideas and challenges is correspondingly more favourable. The results of the human resources group are mixed. Respondents' views on higher education in Lithuania were rather negative, but they were well aware of the purpose and benefits of lifelong learning. The evaluation of answers about the group of innovations system reveals that respondents demonstrated good awareness about the importance of scientific research and the consequences of an inappropriate development strategy.

Answers to questions about the group of ICT demonstrate that respondents' involvement in electronic service solutions was at a fairly high level, suggesting that a larger proportion of respondents tend to foster the values of the information society and are more open to innovations. The results of the questions in the group of elements of the operational and environmental context show that respondents were well aware of the opportunities and prospects for creating innovative businesses, but expressed a lack of confidence in their ability to create new businesses. The total score of the responses has revealed that the level of perception of the knowledge economy was above average and close to the upper limit of the applied perception level. The purpose of the additional question was to determine the respondents' motivation for showing interest in the ideas of the knowledge economy. The results show that 59% of respondents were inclined to learn the definition of the knowledge economy. Consequently, using the concept of self-segmentation, it can be argued that more than 50% of target consumers are open to ideas and proposals of the knowledge economy.

Based on the analysis of survey results, a summary of the formation of marketing tools for decisions to develop the knowledge economy has been compiled (Figure 7).

In the first stage of formation, the impact of targeted tools is determined based on the target audience's level of readiness. The purpose of tools at the initial level of perception is educational; the purpose of tools at the projective level of perception is to reflect benefits; and tools at the applied level of perception are shaped as specific propositional solutions. In the second stage, depending on the target audience, the influencing factors are taken into account, with different types of motivators and incentives being more relevant to various consumer groups. In the third stage, the justification for content formation to influence the target audience is determined, taking into account the characteristics of the environment in which the impact tools are implemented. In the fourth stage, the target audience's priority communication channels are identified by answering the questions "How and what kind of infor-

mation will be disseminated?" "Which information search channels do potential consumers use?" and "What tools do potential consumers use to exchange information?" Based on the results of the previous stages, marketing tools meeting the characteristics of the target audience are selected: for information dissemination: passive engagement tools (various forms of advertising) or active engagement tools (events, personal conversation or email); form of informational impact: electronic tools (a webpage, social account, e-mail) or contact tools (personal consultation, open day, fair); tools for information exchange: traditional tools (phone calls, e-mail and text messages) or modern tools (social media, instant messaging, video chat). Consequently, given the target audience, the maximum possible set of impact tools is selected.

During the survey, the following aspects limiting its efficiency were identified: insufficient distribution of respondents across age and income groups.

4.3 The evaluation of the expert study results

As defined by the researchers (Jucevičienė & Šajeva, 2008; Kriščiūnas & Daugelienė, 2006), the knowledge economy is the process of acquiring, creating, and disseminating knowledge, expressed through the development and growth of the overall economy and the dissemination of innovations. However, society is heterogeneous; thus, such processes should be initiated by relevant institutions and business entities. In this statement, research questions can be noted: how do Lithuanian institutions participate in disseminating the values of the knowledge economy in society, what role does business play in supporting these efforts, and what unexploited dissemination instruments can promote the development of the knowledge economy. These questions formed the basis for the formulation of the task of this study: to identify the marketing tools to address the problems of knowledge economy development.
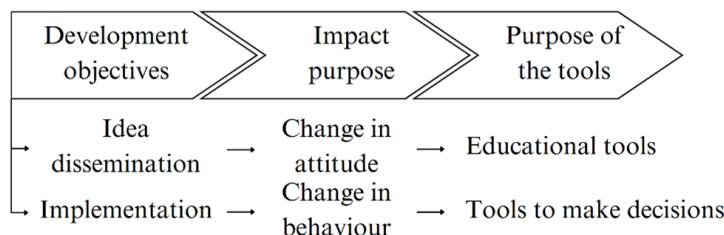

Figure 8: Summary of marketing tools for achieving knowledge economy development objectives
Source: own elaboration

Figure 8 presents a summary of marketing tools compiled from the analysis of expert study results to achieve the objectives of knowledge economy development.

A summary of the tools and solutions generated by experts, taking into account the identified problems and weaknesses of the knowledge economy, is provided. Based on the results of the expert study, two objectives are set for the development of the knowledge economy: disseminating the idea of the knowledge economy and implementing the knowledge economy. In the first case, the activity is limited to the dissemination of information about each element to familiarise the target consumer with the benefits of the knowledge economy, thereby changing attitudes into ones more favourable to the development and the readiness of society to accept the disseminated values. In the second case, the activity is organised to encourage the target consumer to take action (change behaviour and habits, undertake new activities and initiatives, engage in educational activities, etc.). It is worth noting that experts were more inclined to recommend educational tools to address the identified problems and weaknesses of the knowledge economy; only in the human resources group was a higher proportion of the tools solution-oriented suggestions. Experts believe that most of the objectives of knowledge economy development can be achieved through promotional campaigns that disseminate examples of best practices. To encourage decision-making that supports the values of the knowledge economy, experts suggested using training, seminars, and conferences that combine educational and skill-development activities with initiatives needed throughout the education chain (learning programs, modules, studies, non-formal learning solutions, etc.). Events and various discussion tools (discussion events among representatives of business,

government, and society, community meetings, alternative electronic forms of collaboration, etc.) were proposed as alternatives to educational activities, emphasising the necessity of collaboration. Alternative decision-making tools included research, surveys, studies, and strategy formulations - proposals that more closely reflect the importance of planning the development of the knowledge economy, which directly impacts all subsequent choices of tools.

In the course of the expert study, the following aspects limiting the usefulness of the research results have been identified:

1. Due to the small number of respondents, the research results may lack the number of opinions that are necessary to confirm objectivity. The recommended number of respondents should be at least 10 experts.

2. Due to lower activity and productivity in the second session, it is recommended that a revised survey be designed that combines closed-ended questions with open-text fields. The original survey included only open-text fields.

4.4 The model of marketing tools to promote the development of the knowledge economy

Three sub-studies have been conducted to design a model of marketing tools to promote the knowledge economy. Based on the results analysis of each sub-study, summaries of the peculiarities of the establishment and selection of promotion tools identified in the respective studies have been concluded. Their synthesis is expressed in the designed model of marketing tools to promote the knowledge economy. The model is presented in Figure 9.
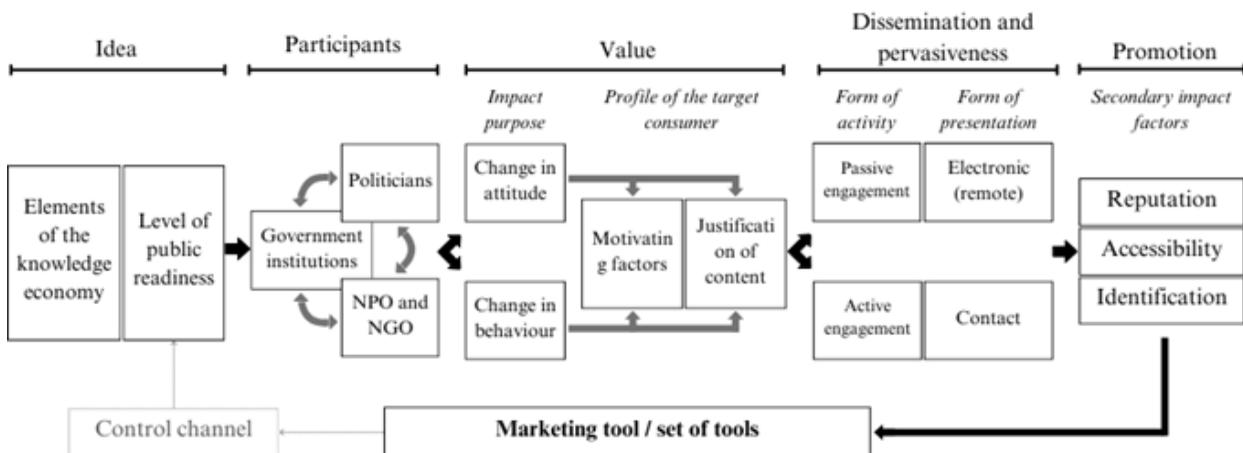

Figure 9: The model of marketing tools to promote the development of the knowledge economy
Source: own elaboration

The implementation of the marketing tools model to promote the development of the knowledge economy proceeds in five stages that correspond to the components of the conceptual marketing mix of the knowledge economy. The conceptual nature of the proposed complex is expressed as an adaptation required by the complexity of applying the traditional complex in the context of the knowledge economy, which encompasses the specificities of quality and value interpretations, as well as the perception of the phenomenon. The fundamental change is the replacement of the elements of product and price by the elements of idea and value, in terms of their perception and experience only in perspective, where the idea is a proposition, as in this case the promotion of the values of the knowledge economy (e.g. the idea of developing human capital potential or the cultural transformation of society through the implementation of the values of the knowledge society), and the value is communicated as a promise or an example (e.g. a change in the well-being of society, or a case of a good experience). The remaining elements – dissemination and diffusion, promotion and actors – are closer to the context of the elements of a traditional marketing mix, but taking into account the specificities of the knowledge economy as a marketing object, i.e. the choice of the channels of dissemination and diffusion, the tools of promotion, and the actors who will disseminate the idea.

In the first stage, the idea of the knowledge economy is identified. It may encompass the phenomenon as a whole or a specific group of elements of the knowledge economy. It is noted that the result of the identification of the idea may be any objective corresponding to the expression of the knowledge economy: an idea, decision, activity, vision, product, service, promise, etc. Also, in this stage, through exploratory research, the level (educational, projective, or applied) of society's readiness to accept the ideas of the knowledge economy is determined. Depending on the pursued strategic objectives, targeted exploratory research can be conducted to assess the level of readiness for a particular idea, or the general level when an idea is at the conceptual stage of development.

In the second stage, the role of participants is determined. This can involve an individual politician, a group of politicians, an organisation, or public authorities. The model is a stylised representation of interactions among participants, highlighting the need for cooperation. Politicians, NPOs, and NGOs are involved in disseminating the idea, while public authorities provide the necessary instruments (various forms of funding, legislation, legislative projects, institutional structures, etc.).

In the third stage, the society's readiness level to foster the values of the knowledge economy is essential. The impact depends directly on it. To change attitudes, the proposed tools have an educational impact, while to influence behaviour, the chosen tools encourage participants to take action. At the same stage, the target consumer is identified

as a segmented group comprising individuals, communities, businesses, organisations, sectors, or combinations. Based on the results of the exploratory research, the factors motivating the target group and the prioritised content are identified, and a target consumer profile is created. It is used in later stages. Thus, at this stage, taking into account the identified level of society's readiness and the consumer profile, the projection of the idea's value (perceived benefit) is maximised.

In the fourth stage, a group of tools appropriate to the idea, impact objective, and target consumer profile is selected. By form of activity, tools can be: tools for passive engagement (e.g., various forms of advertising), which do not require the consumer's direct involvement in the process of information dissemination; and tools for active engagement (e.g., training, personal conversation), which require direct participation. The delivery tools can be electronic or remote (e.g., a web page, a social account), or contact or physical (e.g., a personal consultation, an open day). The grouping of the forms of activity and presentation in the model is based on the conducted research; however, there may be exceptions in individual cases.

In the fifth stage, the secondary impact factors–reputation, accessibility, and identification–of tools are taken into account. Although these impact factors are considered in creating differentiated sets of tools, they should also be taken into account when selecting individual tools for idea dissemination — i.e., evaluating reputation (the ability to attract public media), accessibility (to achieve mass dissemination), and identity (to substantiate the value of the disseminated idea). This stage considers additional promotional opportunities to ensure the idea reaches the target consumer.

The model includes a control mechanism: periodic activity is recommended. The development strategy of the knowledge economy defines a monitoring strategy to ensure the effectiveness of the tools. Exploratory research enables the identification of high-priority communication tools to help implement monitoring more effectively.

The marketing tools model to promote the development of the knowledge economy ensures an effective selection of marketing tools based on the needs and opportunities of the target consumer. The model accounts for a dynamic environment and rapidly changing consumer priorities, thereby emphasising its universal applicability. It can be argued that the successful development of the knowledge economy is influenced by a data-driven, systematic process for selecting marketing tools.

5 Discussion

While many forms and tools can be used to express the idea of the knowledge economy and to disseminate it, in planning its implementation, we recommend taking into

account the principles of the cyclical nature of the knowledge economy and the strict sequencing of the knowledge creation chain. This helps avoid unexploited and neglected elements of the knowledge economy, thereby disrupting the development of the knowledge economy, which requires consistency. By emphasising the importance of inter-institutional cooperation, we recommend creating an environment that fosters it by establishing dedicated units to build and foster inter-institutional relations. To increase business involvement, we recommend prioritising initiatives that promote co-creation. We found that the study respondents had a fairly good understanding of the values of the knowledge economy, but still had doubts about its successful implementation. Therefore, solutions are needed to shape new attitudes and raise awareness to influence established norms, beliefs, prejudices, stereotypes, and a lack of information. In the model, we note that the dissemination of any idea must begin with understanding the target audience by identifying its needs, expectations, readiness to learn, and openness to new suggestions. We argue that only marketing tools selected based on continuous data can be applied to strategic decisions to promote the development of the knowledge economy.

In our study, we observed a lack of publicity among Lithuanian politicians when they declared their ideas, compared with the active involvement of US politicians. We recommend that public figures in Lithuania use the marketing tools highlighted in the study to disseminate ideas, proposals, promises, initiatives, and other activities aimed at influencing public opinion. It is also within the will of politicians and political organisations to establish and coordinate institutes for inter-institutional cooperation. Businesses have the opportunity to engage in active idea dissemination. We have identified effective cases of cooperation; thus, politicians, political organisations, and non-profit and non-governmental organisations could contribute more significantly to developing ideas by using businesses' platforms, resources, and infrastructure. We see a continuation of the present study in the form of a national strategy for developing the knowledge economy, i.e., guidelines for implementing the established preconditions. We also recommend other possible directions for research continuation: the applicability of the development model in a commercial environment, the dissemination of ideas through social and public projects, and the adaptation of the model and concepts to objectives implemented in international contexts.

However, we must emphasise that the research conducted reflects the development opportunities in Lithuania. Therefore, the presented concepts and findings should be applied within the context of the target country's existing conditions. These include the political regime, the openness of society, the state of the education system, the supportive environment for development, and the level of technological development.

6 Conclusions

Through a case study, we have identified the secondary impacts of the tools on the choice of tools or the composition of their set: reputation, accessibility, and identification. The tools most commonly used by US politicians are internal media (reputation factor), external media (accessibility factor), and personal websites (identification factor). The tools used by NPOs and NGOs to disseminate their ideas consisted of events (reputation factor), social media platforms (accessibility factor), and the organisation's webpage (identification factor). After analysing the survey results, we have identified the groups of high-priority marketing tools: for passive engagement: various forms of advertising; for active engagement: events, personal conversation, an e-mail; for electronic (remote) engagement: a website, social account, an e-mail; contact engagement: personal consultation, open day, fair; for traditional engagement: phone calls, e-mails, text messages; modern engagement: social media, instant messaging, video chat. In the same study, we have confirmed that differentiation of marketing tools according to demographic indicators of gender, age, income, and education is not purposeful in preparing the development strategy of the knowledge economy. Based on the results of the expert evaluation, we have identified the most commonly proposed marketing tools: educational and attitude-changing, advertising campaigns, and dissemination of best practices; decision-making and behaviour-changing: seminars, training, conferences, and changes in the education system. In the same study, we have confirmed that inter-institutional cooperation is key to the successful development of the knowledge economy.

After synthesising the results of three sub-studies, we have designed a five-stage marketing tool model to promote the development of the knowledge economy. The process of idea dissemination begins with formulating the idea and assessing public readiness to accept the knowledge economy's ideas. The role of participants involved in the dissemination process is identified (politicians, NPOs, and NGOs are engaged in the dissemination of the idea, while government institutions initiate the necessary instruments for this), and the possibilities for their cooperation are determined. Depending on the level of public readiness, the objective of the impact is chosen: to change attitudes or behaviour towards the proposed idea. The target audience is identified, and its profile is developed based on motivating factors and content justification. Combining the results of the actions listed above, an appropriate set of tools is selected (passive or active engagement and electronic (remote) or contact (physical) forms of presentation). Finally, the secondary impact factors of the tools (reputation, accessibility, and identity) are taken into account to maximise the effectiveness of the set. We recommend implementing a control mechanism to monitor the effectiveness

of the tools and make timely corrections, using indicators that correspond to the areas of impact of the disseminated idea promoted by the selected marketing tools.

References

Adamczewski, P. (2016). ICT solutions in intelligent organisations as challenges in a knowledge economy. *Management (1429-9321)*, *20*(2), 198–209. 10.1515/manment-2015-0060.

Andreasen, A. R. (2012). Rethinking the Relationship Between Social/Nonprofit Marketing and Commercial Marketing. *Journal of Public Policy & Marketing*, *31*(1), 36–41. 10.1509/jppm.09.035.

Boyd, D. E., Clarke, T. B., Spekman, R. E. (2012). A Proposed Model of Antecedents of Self-Segmentation in Social Networks. In K. J. Shanahan (ed). *Society for Marketing Advances Conference Proceedings* (pp. 156). Retrieved from https://www.societyformarketingadvances.org/_files/ugd/080efa_5d-32d2a2b37147608d544196b419b00e.pdf.

Bolisani, E., Scarso, E. (2012). Knowledge Marketing: Issues and Prospects. In J. G. Cegarra (ed.). *Proceedings of the 13th European Conference on Knowledge Management* (pp. 100–107). Academic Publishing International Limited.

Canhoto, A., Clark, M., Fennemore, P. (2013). Emerging segmentation practices in the age of the social customer. *Journal of Strategic Marketing*, *21*(5), 413–428. 10.1080/0965254X.2013.801609.

Chlivickas, E., Melnikas, B. (2016). *Viešasis valdymas: aktualijos ir sprendimai globalizacijos ir žinių visuomenės kūrimo sąlygomis*. Technika.

Daniel, I., Frost, S., Baier, D. (2015). Market Segmentation Using Color Information of Images. *International Journal of Electronic Commerce Studies*, *6*(1), 137–144. 10.7903/ijecs.1400.

Dolnicar, S., Leisch, F. (2014). Using graphical statistics to better understand market segmentation solutions. *International Journal of Market Research*, *56*(2), 207–230. 10.2501/IJMR-2013-073.

Duralia, O. (2017). The Implications of Nonprofit Marketing on the Behavior of European Citizens. *Revista Economica*, *69*(5), 171–183. Retrieved from http://economice.ulbsibiu.ro/revista.economica/archive/69515duralia.pdf.

Jha, S. M. (2008). *Marketing Non-Profit Organisations*. Himalaya Publishing House.

Jucevičienė, P., Šajeva, S. (2008). Žinių valdymas. Mokomoji knyga. Technologija.

Kriščiūnas, K., Daugėlienė, R. (2006). Žiniomis grįstos ekonomikos link: žinių raiška ir skvarba. Technologija.

Madeira, A. B., Da Silveira, J. A. G., Toledo, L. A. (2015). Marketing Segmentation: Your Role For Diversity in Dynamical Systems. *GESTÃO.Org: Revista Eletrônica de Gestão Organizacional*, *13*(1), 71–78. Retrieved from https://periodicos.ufpe.br/revistas/gestaoorg/article/view/22025.

Mazur, R., Malkowski, A. (2021). Significance of Employee Innovation for Knowledge Economy Based on the Case of Industrial Companies Located in West Pomerania. *Scientific Papers of Silesian University of Technology. Organization & Management / Zeszyty Naukowe Politechniki Slaskiej. Seria Organizacji i Zarzadzanie*, *152*, 155–168. 10.29119/1641-3466.2021.152.12.

Melnikas, B. (2014). *Tarptautinis verslas: inovacijos ir žinių ekonomikos kūrimas*. Technika.

Melnikas, B. (2016). Šiuolaikinės visuomenės intelektinis potencialas: aukštosios technologijos, tinklaveika bei kūrybinių industrijų plėtra. *Public Administration* (16484541), *1/2*(49/50), 29–41.

Miller, K. L. (2010). *The Nonprofit Marketing Guide. High-Impact, Low-Cost Ways to Build Support for Your Good Cause*. Jossey-Bass, A Wiley Imprint.

Organisation for Economic Co-operation and Development. (1996). *The Knowledge-Based Economy*. (OCDE/GD(96)102). https://one.oecd.org/document/OCDE/GD(96)102/en/pdf.

Scheuffelen, S., Kemper, J., Brettel, M. (2019). How Do Human Attitudes and Values Predict Online Marketing Responsiveness? Comparing Consumer Segmentation Bases Toward Brand Purchase and Marketing Response. *Journal of Advertising Research*, *59*(2), 142–157.

Shah, D., George, M. (2021). Linking Marketing to Nonprofit Performance. *Journal of Public Policy & Marketing*, *40*(4), 571–583. 10.1177/0743915620978538.

Stan, A., Epuran, G. (2019). Approaching the processes of political communication from a marketing perspective. *Series V: Economic Sciences*, *12*(61), 49–54. 10.31926/but.es.2019.12.61.1.7.

Ștefan, S. C., Simion, C.-P., Popa Ștefan, C., Potcovaru, A.-M. (2020). Enablers and Barriers of Technology Transfer in Romanian Organizations in the Context of the Knowledge-Based Economy: A Factor Analysis. *Management Research & Practice*, *12*(4), 40–48. Retrieved from https://mrp.ase.ro/no124/f4.pdf.

Tudzarovska-Gjorgjievska, E. (2014). Towards Knowledge-based Economies: Challenges and Perspectives in the Western Balkans. *AICEI Proceedings*, *9*(1), 373–391. 10.5281/zenodo.4553242.

Vovk, M., Braga, D. (2017). Knowledge Economy of the EU: Strengths and Weaknesses. *Marketing & Management of Innovations*, 4, 292–300. 10.21272/mmi.2017.4-26.

Vukasović, T. (2020). Understanding the Consumers' Personal Characteristics as the Starting Point for Targeted Marketing. *Management (18544223)*, *15*(1), 29–41. 10.26493/1854-4231.15.29-41.

Wierzbicka, W. (2018). Information infrastructure as a pillar of the knowledge-based economy - an analysis of regional differentiation in Poland. *Equilibrium (1689-765X)*, *13*(1), 123–139. 10.24136/eq.2018.007.

Żelazny, R. (2015). Information society and knowledge economy - essence and key relationships. *Journal of Economics and Management*, *20*(2), 5–22. Retrieved from http://cejsh.icm.edu.pl/cejsh/element/bwmeta1.element.desklight-9606cbb2-3b20-43c4-b2b4-85a471577e3c.

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Identifikacija marketinških orodij za spodbujanje razvoja ekonomije znanja: primer Litve

Ozadje/Namen: Namen raziskave je identificirati marketinška orodja, ki spodbujajo razvoj ekonomije znanja, ter oblikovati razvojni model, utemeljen na empiričnih rezultatih. Prispevek analizira teoretične vidike neprofitnega, socialnega in političnega marketinga, uvaja koncept samo-segmentacije ter predlaga strategijo za krepitev družbene pripravljenosti na uveljavljanje vrednot ekonomije znanja.

Metode: Raziskava je bila izvedena v dveh zaporednih fazah. Prva faza je zajemala tri delne študije: študijo primera, kvantitativno deskriptivno raziskavo in kvalitativno eksploratorno raziskavo. Druga faza je vključevala oblikovanje razvojnega modela na podlagi ugotovitev iz prve faze.

Rezultati: Študija primera je omogočila identifikacijo sekundarnih dejavnikov vpliva, ki določajo izbor posameznih orodij ali oblikovanje njihovega celostnega nabora. Analiza anketnih podatkov je razkrila skupine najpomembnejših marketinških orodij. Na podlagi ekspertnih ocen je bil oblikovan nabor najpogosteje predlaganih orodij. Celovita sinteza rezultatov je privedla do oblikovanja usklajenega petstopenjskega modela za spodbujanje razvoja ekonomije znanja.

Zaključek: Predlagani model odraža ključna spoznanja: izbira marketinških orodij je pogojena s pripravljenostjo in odprtostjo družbe za sprejemanje novih idej; uspešnost diseminacije je odvisna od medinstitucionalnega sodelovanja; učinkovita diseminacija zahteva jasno opredeljeno ciljno publiko; nabor marketinških orodij pa mora temeljiti na rezultatih nenehne analize podatkov.

Ključne besede: *Ekonomija znanja, Marketinška orodja, Razvojni model, Družbena pripravljenost, Litva.*