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SoLoMo marketing as a global tool for enhancing awareness of eco-innovations in Slovak business environment

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Keywords: marketing communication; digital marketing; SoLoMo marketing; eco-innovations; environmental awareness; corporate social responsibility; CSR

Abstract

Research background: Thanks to globalization, a number of new possibilities and available technological solutions have emerged, thus modernizing marketing communication activities and bringing a broad spectrum of business opportunities to the single European market which enterprises may use to their benefits. Changes are much more frequent than ever before. Therefore, it is important to search for innovative solutions which contribute to more effective fulfillment of goals, generate positive changes or increase value for customers and as a matter of fact, enhance innovative performance and business competitiveness.

Purpose of the article: The paper deals with the presentation of eco-innovations in the business environment using creative tools of online marketing communication. Eco-innovations are a phenomenon which is present across all business activities and processes including marketing communication. The authors study such marketing activities of businesses which are part of corporate social responsibility, generate business growth and finally help to improve the global environment. The authors also present the partial results of their own quantitative marketing research in order to describe the application of SoLoMo marketing tools in the presentation of eco-innovations in the Slovak business environment.

Methods: The authors prepared a standardized questionnaire on a sample of 300 Slovak businesses. To test the dependence or independence of the variables, a Chi-squared test and Fisher's exact test were used.

Findings & Value added: Despite the generally growing trend of the use of modern online marketing tools, the research showed that Slovak businesses do not inform sufficiently about their eco-innovation activities, do not address all prospective target groups and do not make enough effort to enhance environmental awareness of the wider public. The results of the research will serve as basic information for the following specific studies, the main aim of which is to spread awareness among consumers and to eventually provide them with practical recommendations. In addition, the given theoretical part of the paper represents a valuable summary of information about the modern SoLoMo marketing concept while providing a detailed overview of other relevant research studies in the given field. Therefore, the paper portrays an overview of opportunities for the implementation of digital tools of marketing communication in small, medium-sized and large enterprises.

Introduction

At this point, specific forms of non-traditional tools of marketing communication will play the key role, as they may help to face consumers' growing immunity to commercials and marketing communication and, what is more, to enhance environmental awareness in the presentation of eco-innovations in the global environment. Businesses are starting to think ecologically and become environmentally friendly. In recent years, a company's environmental image has become more important because businesses have already noticed that those consumers who care for our planet are becoming more and more interested in ecological products. The modern age has brought lots of opportunities for the marketing message to be better communicated and, what is more, digital tools are also becoming the centre of attention. These include, for instance, the SoLoMo marketing concept interlinking social media, geolocation services and mobile devices. Social media have become the most popular type of digital media and up to 42% of the world population access them through their mobile devices that can be easily tracked (*We are social*, 2019). This growing trend has also become noticeable in the Slovak business environment.

The main goal of this paper is to evaluate the extent of the use of the SoLoMo marketing concept when presenting the eco-innovations of Slovak businesses as well as spreading awareness of this concept among Slovak enterprises.

In the course of the quantitative marketing research, we used the method of a standardized written questionnaire with a majority of closed questions. The sample consisted of 300 respondents. When evaluating and interpreting the results of the scientific research, we used specific mathematical-statistical methods — notably correlation analysis and analysis of contingency tables. The main part of the research was statistical testing of predetermined research assumptions and hypotheses by means of a Chi-squared test and Fisher's exact test.

The paper consists of the following main parts: an introduction stating the whole thematic focus of the paper as well as the research objective, a literature review defining the theoretical basis for the given research topic and the research methodology specifically describing the sample and statistical methods applied with the results being interpreted in the following chapters named results, discussion which presents and evaluates the outcomes of the research and conclusion which summarises the paper.

Literature review

The lifestyles of users keep changing when it comes to fast developing interactivity of information and communication technologies, such as web browsers, virtual communities on social network sites and cross-platform devices e.g. Apple Watch. Mobile technologies can be used by anybody with no limitation on age, gender, culture or place. They have become an integral part of our life (Hladíková, 2018; Hsieh, 2016). Digital marketing has changed the way businesses communicate with their clients worldwide (Diez-Martin *et al.*, 2019).

SoLoMo marketing represents multi-channel communication strategies which connect three basic elements — social media, geolocation services and mobile devices. The abbreviation SoLoMo consists of three terms: Social, Local and Mobile (Mago, 2018; Hsieh, 2016). It is a concept which provides mobile device users (smartphones, tablets) with access to locally oriented advertisements and sale offers which are displayed in the mobile browser according to their exact geographical location. Simultaneously, social network sites, massively supported through mobile device platforms, are becoming an integral element in communication between the consumer and the business, with communication no longer limited to discussion among friends (Amirkhanpour, 2013). Users want to be heard by the brand; in the best case, to engage with the brand (Ajina, 2019; Vanko, 2018; Scuotto *et al.*, 2016). The impact of social media on consumer buying behaviour is identified in the research (Cetina *et al.*, 2018). The authors show the influence of online social network sites on certain aspects of consumer buying behaviour, mainly in identifying the need, information search, evaluation of alternatives, decision making and post purchase evaluation. The impact of SoLoMo technologies on mobile device users is studied in another research (Hsieh, 2016). The author pointed out that numerous users have not only focused on diversified formats of information, multiple connections and media of Web 3.0 technology, but have also paid more attention to reliability and accuracy. SoLoMo was theoretically described as a novel

concept of providing smartphone users with access to locally focused promotions and special business offers through mobile searches based on their current location (Amirkhanpour, 2013). The study (Yang & Lin, 2017) is trying to investigate determinants and their long-term application in the services of SoLoMo marketing. Research results indicated that perceived convenience, social and emotional value and perceived novelty and fashion have significant and positive effects on the continuance intention of SoLoMo services.

SoLoMo marketing requires business entities to adjust their planning to make real-time decisions according to social, geolocation and mobile feedback from their target group. Services of SoLoMo marketing can also be used when enhancing the relationship with a customer both in the online and offline environments (Yang & Lin, 2017). Geotargeting can be applied if the customer consents to providing his location to third parties by means of various geolocation services and applications e.g. Foursquare, Google Maps etc. (Amirkhanpour, 2013).

Mobile marketing is a particularly vital form of communication with the customer because right here in utmost heads his attention. Technological changes cause business entities to react promptly, to use modern digital marketing tools and thus meet requirements of their customers in the highly competitive virtual environment, where customers mainly ask for high-quality service (Hsieh, 2016).

Businesses are recommended to use modern tools of digital marketing when communicating positive topics, such as enhancing environmental awareness and promoting eco-innovations. A key benefit of eco-innovations is bringing positive change to improving environmental conditions. These are necessary for reaching sustainable economic growth (Zaušková & Rezníčková, 2018; Ball *et al.*, 2018; Munodawafa & Johl, 2017). Eco-innovations help improve the environmental as well as the economic performance of businesses (Dewick & Foster, 2017). The application of eco-innovations in the business environment of SMEs is further dealt with in the research (Pigozzo *et al.*, 2018). Despite the high business, innovation and sustainability potential linked with eco-innovation and industrial symbiosis, limited implementation can be observed in small and medium enterprises. The topic of marketing and sustainability is discussed in a separate research (Diez-Martin *et al.*, 2019). The paper describes the impact of green marketing on consumer's buying decisions (it primarily refers to product eco-labelling), while also suggesting reducing the existing gap between society and business on sustainability issues.

Digital marketing in the presentation of organic food production and accentuation of sustainability and ecological acceptance by eco-labelling is

described in the study (Jiang *et al.*, 2019). The emphasis is mainly placed on online food shopping, which tends to provide more available information about specific products. The negative impact of the economic model “take, make, dispose” is discussed in the research (Rodríguez-García *et al.*, 2019), which refers to this model as rather unsustainable in the long-term at the global level. It damages natural resources and causes major social and environmental problems (Jurišová, 2016). The circular economy, as a new business model, considers waste to be a new raw material. Generally, the circular economy can be outlined as a cycle of the extraction and transformation of resources and the distribution, use and recovery of goods and materials (Prieto-Sandoval *et al.*, 2017). According to the authors, circular economy implementation requires cyclical and regenerative eco-innovations to achieve sustainable development that meets expectations for economic, environmental and social prosperity in both the short and long term. Businesses should focus on corporate social responsibility and benefit from the stable competitive advantage it can provide (Putri & Sari, 2019; Pistol & Tonis, 2017). Such research can provide feedback to companies on eco-efficient and eco-innovative actions that could increase their environmental performance value.

Research methodology

The main aim of the research is to determine the rate of awareness as well as the implementation of the SoLoMo marketing concept when presenting eco-products and eco-innovations in Slovak businesses. The topic of digital marketing is becoming popular worldwide, which requires further implementation in the marketing strategies of Slovak businesses. Modern marketing tools including the SoLoMo marketing concept are particularly important when enhancing consumer environmental awareness.

We conducted our own quantitative marketing research during the months of May and June 2019. The research focuses primarily on small and medium-sized enterprises while comparing them with results obtained from large enterprises. The sample consists of 300 respondents, of which 147 are small enterprises, 66 medium-sized enterprises and 87 large enterprises. Businesses were not anonymous — the header stated the stamp, name and position of the person responsible, his/her signature and contact information (a phone number or an e-mail address). Consequently, businesses were classified on the list according to this data and thus a database was set up for future research needs. The results were processed using MS Excel software.

As for their geographical location, the sample was mainly made up of businesses operating in Western Slovakia (205), followed by businesses located in Central Slovakia (65) and in Eastern Slovakia (30). The companies we studied came from all regions across Slovakia. As for their field of business, the majority are operating in the metallurgy and construction industry (49), the food industry (43) and the building industry (31). Other areas are as follows: the pharmaceutical and chemical industry; the energy industry; the electronics industry; the wood-processing industry; agriculture. As for their field of business, respondents also marked “other” (116), e.g. the automotive industry, the glass industry, tourism, transportation, logistics, IT, textile and the clothing industry. As for their legal form, they are mostly limited companies (Ltd) (214), joint-stock companies (54) and other (32).

In order to strictly define the topic, the authors have set up basic assumptions and hypotheses with their validity having been either confirmed or rejected. There were five basic research assumptions and one hypothesis:

A1: Over 50% of respondents have an active approach to environmental protection.

A2: Over 40% of respondents use social media in their eco-innovation process.

A3: Over 30% of respondents use geolocation tools to identify an exact location of material, goods, employees or for better targeting of the message to the public.

A4: Less than 30% of respondents have used some form of mobile marketing tools when promoting goods during last five years.

A5: Less than 10% of respondents have ever encountered the term SoLoMo marketing.

H1: There is dependence between the field of operation of businesses and opinion on the protection of the environment.

When evaluating and interpreting the outcomes of the scientific research, we mainly used correlation analysis and contingency table analysis. The key part of the whole research was statistical testing of predetermined research assumptions and hypotheses by means of a Chi-square test of independence and Fisher’s exact test. The zero hypothesis of these tests is

that all variables are independent. The main precondition of application of the Chi-square test of independence is that at least 50% of theoretical counting rates have to be above 5, and none of them will be equal to zero. In case both variables are ordinal and the contingency table is of 2x2 size, it is wise to use the Linear-by-linear association as an alternative to the Chi-square test of independence. This method takes into consideration the ordinality of variables in contrast to the Chi-square test of independence, i.e. it is considered to be the most reliable alternative.

When assessing the outcomes, we relied on the calculation of coefficients determining the statistical significance of selected relations, i.e. the Goodman and Kruskal Tau coefficient, Somers' delta (the reciprocal symmetric coefficient) and Gamma and Lambda coefficients. To quantify the rate of dependence among variables, different types of contingency and association coefficients can be used. When analysing dependence of one (independent) variable on the other (dependent) variable, the Lambda coefficient may be applied to quantify the influence of the independent variable on the dependent variable. Values of this coefficient range from 0 to 1 and may be interpreted as a percentage of errors in predicated values of the dependent variable which can be reduced by determining values of the dependent variable. This coefficient is appropriate for variables of the nominal type. The Goodman and Kruskal Tau coefficients may also be applied in this case or the Somers' delta coefficient (or only referred to as Somers' d). In contrast to the previous coefficient, this one is suitable for the pair of ordinal variables where both the dependent and the independent variable are easily recognized. The values range from -1 to 1. The Gamma coefficient may also be used especially in case of different categories within one variable.

Results

At the beginning of the questionnaire, businesses filled in their contact data, including the number of employees to be split into three basic categories — small, medium-sized and large enterprises. We also asked about the field of their business and the region/area they operate in. Furthermore, we asked them about their specific relation to environmental protection. There were five answers to choose from. The results are shown in Figure 1:

- active (demonstrating activity, producing activity) — 166;
- passive (not demonstrating activity, rather passive and uninterested) — 7;

- reactive (a reaction after a change has occurred; insufficient planning) — 27;
- preventive (searching for potential risks to prevent occurrence of problems) — 58;
- proactive (forward thinking, foreseeing events and planning changes) — 42.

The businesses we questioned mainly stated “active” (55.3%), which reflects positive changes in the overall social climate and the pro-active approach of both businesses and public towards environmental protection, standards of corporate social responsibility as well as their positive attitude to environmentally friendly and sustainable products. These questions only confirmed the worldwide trend of corporate ecological approach in Slovak businesses, thus enhancing the need for the promotion of eco-innovations through modern marketing communication so that large target groups of consumers and public could be properly targeted.

We were interested in whether there is direct dependence between the field of business of Slovak companies and their environmental approach. Such dependence was studied by means of a Chi-square test of independence of the pair of qualitative variables. All conditions were not met, however, to apply a Chi-square test of independence, i.e. 80% of theoretical rates should be over 5. Therefore, the answers for the given question were put as follows: the categories “active”, “proactive”, “reactive” and “preventive” were merged into one category “active”. Still the main condition of application was not met either. We decided to apply a Fisher’s exact test. It is calculated in an iterative manner and therefore to avoid complications in calculations of the p-value of the test, not original but merged categories of answers were used for the given question. The results are given in Table 1. P-value of the test is 0.388 (in green), which is above the predefined value of significance of 0.05. Therefore, a zero hypothesis about independence in the field of business of companies and their answers to environmental approach may not be completely rejected. Furthermore, association coefficients were expressed to define the power of influence on the field of business of companies when studying answers to the given question. The Goodman and Kruskal Tau coefficients were of 0.021, which means that answers to the question about the company environmental approach are not influenced by their field of business. Even the p-value of significance of coefficient association demonstrates that this impact is statistically insignificant.

The next step was to find out whether the businesses use social media for their eco-innovation processes applied within the company. 130 (43.3 %) of respondents answered “yes” while 170 of them answered “no” to this question. Businesses prefer using social network sites such as Facebook (106), Instagram (54), less often YouTube (25) or LinkedIn (10). Other social media include company blogs (32) or various chat rooms and forums (22). Podcasts as a type of social media are used only in two businesses out of the total of 300 even though it has recently reported growing popularity worldwide. The results are shown in Figure 2. We also discovered that businesses using social media for communication plan their posts and their content in advance, which is part of their company strategy (60 businesses). More or less a similar group of respondents acts impulsively and flexibly when being active on social network sites (70).

We were also interested in the dependence between the field of business and the use of social media within the eco-innovation process implemented in the businesses. This relation was studied by means of a Chi-square test of independence of the pair of qualitative variables. To meet the main precondition for application of a Chi-square test of independence, i.e. min. 80 % of theoretical frequencies have to be above 5, we merged two similar categories “energy industry” and “electronics industry”. The results of the Chi-square test are presented in Table 2. The P-value of the test equals 0.330 (in green), which exceed the value of significance of 0.05. Therefore, we cannot reject the zero hypothesis of independence of the field of business and answers to the given question. Consequently, we defined association coefficients in the field of business in relation to use of social media within the eco-innovation company process. Both coefficients express very low dependence with the p-value being statistically insignificant. These results only confirm the previous finding of the Chi-square testing. The field of business has no impact on company environmental activities whatsoever.

We also studied the relationship between two questions: the importance of particular media for promotion of environmental topics and whether the given medium is being actively used (Facebook, Instagram and YouTube). Dependence between these two questions was tested by means of a Chi-square test of independence. The main precondition for testing was duly met. The P-value of the test equals to 0.004, which is below the level of significance of 0.05. Therefore, the zero hypothesis about dependence was rejected and the alternative hypothesis with two variables being dependent was accepted. The power of dependence is expressed by two coefficients Sommers’ d (the reciprocal symmetrical coefficient) and Gamma referring to mutual dependence. These coefficients are appropriate for the pair of

ordinal variables. We discovered that both coefficients are statistically significant. They express low or medium dependence between the role and use of social media. Values of coefficients are negative which confirms one important hypothesis: the more important the medium, the more it is used.

The next step was to find that 134 (44.7%) of businesses use a geolocation tool to better identify the exact position of materials, goods, employees or proper targeting of the message. 166 (55.3%) of businesses answered “no”. Businesses tend to use geolocation tools to track shopping history (46), identify the location of their staff (44), products (40) as well as to properly target marketing communication at their customers (37). From the category “others”, they mainly stated identifying the location of company vehicles. As for the manner of use of geolocation services in businesses, they prefer using GPS systems and navigation (101), mobile telecommunication networks (62), geolocation mobile apps (58), camera records and photos (46) or wi-fi hot spots (41). Biometric data, e. g. fingerprints or speech recognition (9) or drones (5) are only rarely used.

The research also showed that only 69 (23%) of businesses have used some mobile marketing tools when promoting goods over the last five years. Up to 231 (77%) of businesses answered “no”. As for their popularity, mobile applications came first (69). We also studied the influence of the field of business on the use of mobile applications in company online communication. To verify this dependence, a Fisher’s exact test of dependence was applied. The results are presented in Table 3. The P-value of the test equals to 0.0007 (in green), which is lower than the predetermined value of significance of 0.05. Therefore, the zero hypothesis about dependence was rejected and the alternative hypothesis with two variables being dependent was accepted. Consequently, the values of Lambda and Goodman and Kruskal Tau coefficients were calculated. Both coefficients have rather low dependence. The Lambda coefficient in the p-value of testing is statistically rather insignificant, while the Goodman and Kruskal Tau coefficients are statistically significant. To summarize, we can assume that the field of business of companies has a low, but statistically significant, impact on the question. The coefficient may suggest that changes in answers to this question are to 9.1% caused by changes in the field of business of the given company. Other popular tools of mobile marketing include mobile banners, advertising in mobile browsers, SMS marketing or QR codes. Businesses hardly ever use NFC, or they have not enough information about this technology. Some respondents also mentioned mobile websites.

For the question whether businesses have ever encountered the term SoLoMo, only 28 of them answered “yes” (9.3%). They have mostly heard of it in business conferences or in their own campaigns or self-study on the

Internet. Up to 272 (90.6%) answered “no” whereas 28 (9.3%) of them stated that despite their unfamiliarity with this term, they would be interested in further information about application of this concept into their eco-innovation processes.

Discussion

The main aim of our research was to determine the extent of application of SoLoMo marketing tools in the Slovak business environment when presenting eco-products and eco-innovations. Based upon the results, we were able to eventually verify the predetermined research assumptions and hypotheses. It is still a rather new and unknown research topic. Therefore, it should serve as a basis for further studies focusing on the environmental awareness of consumers. From the sample of 300 businesses, we have discovered that 166 of them (55.3%) had a rather “active” approach to environmental protection, which only confirmed the validity of our first assumption. Consumer lifestyles and continuous desire for tangible property have created huge inequality in nature and the ecosystem as such. We are currently facing unstoppable pollution and the deterioration of the environment, continual exploitation of natural resources, unbearable amounts of waste, all resulting in water, soil and air pollution or the total degradation of nature. We have to understand the urgent need for a change and the promotion of all alternatives for the benefit of humans and nature. Implementation of eco-innovations can help remedy the current state and encourage changes in human thinking. Such innovations, however, have to be supported by proper and modern tools of marketing communication in order to reach all generations (Zaušková & Rezníčková, 2018; Ball *et al.*, 2018). In our opinion, we have to increase the number of businesses with an active environmental approach. To be active just in the case of crisis or have a passive approach is not enough. However, our research has not confirmed any dependence between the field of business of Slovak companies and their environmental approach. Our hypothesis has not been confirmed.

Businesses have to be able to properly promote outcomes of their own activities, spread knowledge and boost environmental awareness of the wider public. Today’s modern age offers various tools of marketing communication in the online environment (Lies, 2019). The SoLoMo marketing concept is just one of them — connecting social media, geolocation services and mobile devices. The results of the research have shown that up to 130 (43.3%) businesses use some social media in their eco-innovation processes, notably Facebook, Instagram and YouTube. The second assumption

has been confirmed as well. Social media are considered the most widespread and the most accessible type of digital media. They only have to be properly applied for influencing a consumer and his behaviour in the online environment as well as for proper education. Social network sites have to fulfil two important functions — to provide entertainment as well as education. Use of social media varies from case to case. They can be fully adapted to the specific business environment or their field of business. The number of social media users has had a growing tendency worldwide. There were around 3.5 billion active social media users in 2018, which is a 9% increase on a year-on-year basis. There are 462.5 million active social media users in Europe with a 3.2% annual increase (*We are social*, 2019). However, contrary to the cited work, our research indicates that this potential is still not properly used in Slovakia.

Implementation of mobile devices in any kind of online communication with a consumer is a real must. Consumers spend most of their time using them, thanks to social media. There were around 4.4 billion active Internet users worldwide in 2019, with 3.98 billion of them browsing the Internet from their mobile devices (52% of the worldwide population). It is interesting to note that people were online 6 hours and 42 minutes per day in 2019, a slight drop from 2018. We spend 3 hours and 14 minutes with our mobile devices on average, with this value increasing year after year. On the contrary, the use of the Internet on desktop computers has reported a considerable drop (*We are social*, 2019). We must admit that implementation of mobile devices into the marketing strategies of Slovak businesses is necessary even in the field of environmental protection. Mobile devices use various forms of geolocation services and applications with all these systems being part of mobile phone settings and which offer various personalized messages. In this context, the results of the research have confirmed the third and fourth assumptions, i.e. a geolocation tool is currently used by 44.7% of businesses while some mobile marketing tools are used by 23% of businesses. A low rate of use of mobile marketing may be caused by unwillingness to apply modern communication tools into the company marketing strategy, insufficient funds or a lack of interest.

The abovementioned minuses may have a direct impact on familiarity with the SoLoMo marketing concept as the research has shown that only 9.3% of respondents were aware of this term. However, despite these facts, 28 respondents were interested in further information about this topic.

Conclusions

The results of the research have demonstrated that Slovak businesses do not use the full potential provided by tools of digital marketing despite their relative availability. We mainly focused on the presentation of eco-products and eco-innovations in small, medium-sized and large enterprises. In our opinion, these businesses do not sufficiently address all target groups they could educate in the environmental field. Therefore, we are suggesting more detailed analyses of target audiences and the market the companies operate in while defining specific age cohorts or generations, which can enable better segmentation and personalized messages. Nevertheless, it is still crucial to focus on specific consumer segments, such as kids, millennials as well as the elderly (Pistol & Tonis, 2017; Oklander & Oklander, 2017). We may even define a new target group — Generation C, i.e. the connected generation which is not limited by age but by the way it uses and spends time on the Internet (Piatrov & Kusá, 2016). The results of the research have also shown that small and medium-sized enterprises tend to communicate less than their larger counterparts. Their main disadvantage can be a lack of financial resources, qualified staff, lower earnings or absence of a company marketing department (Mura, 2019). It is modern online marketing which offers a set of available tools including the Phygital or SoLoMo concept. We have to bear in mind that eco-innovations are our future (Ball *et al.*, 2018). It is therefore also necessary to adapt to this trend in the business environment and to try to reach wider target groups.

Our research, however, had its weak sides such as insufficient participation of some Slovak businesses in the given research or their unwillingness to implement modern tools of digital marketing. Companies are often disinterested in providing information unless they act anonymously. What is more, they rarely have enough information about the particular tools of digital marketing due to the fact that there is no specific marketing department or members of staff within a company, which renders the provision of information complicated. Insufficient funds are also a question mark.

The research also studies new approaches to the application of marketing communication tools for increasing environmental awareness. The SoLoMo marketing concept is unique and connects up-to-date digital marketing trends — social media, geolocation services and mobile devices. Theoretical background of the paper summarizes an innovative approach applicable in green businesses and their communication. The outcomes of the research represent a basis for further studies in the given field focusing on the B2C market — customers. It is necessary to study their preferences and needs to set up and elaborate an appropriate company marketing strate-

gy while paying attention to the proper presentation of results of eco-innovation processes.

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Annex

Table 1. Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	6.169 ^a	8	.628	.533		
Likelihood Ratio	6.465	8	.595	.622		
Fisher's Exact Test	7.243			.388		
Linear-by- Linear Association	1.902 ^b	1	.168	.193	.101	.021
N of Valid Cases	300					

a. 10 cells (55.6 %) have expected count less than 5. The minimum expected count is .09.
b. The standardized statistic is -1.379.

Table 2. Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	8.033 ^a	7	.628	.330
Likelihood Ratio	6.109	7	.595	.323
N of Valid Cases	300			

a. 2 cells (12.5 %) have expected count less than 5. The minimum expected count is 4.33.

Table 3. Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	19.579 ^a	7	.007	^b
Likelihood Ratio	20.401	7	.005	^b
Fisher's Exact Test	18.432			.007
N of Valid Cases	300			

a. 3 cells (18.8 %) have expected count less than 5. The minimum expected count is 2.30.
b. Cannot be computed because there is insufficient memory.

Figure 1. What is your company approach to environmental protection?

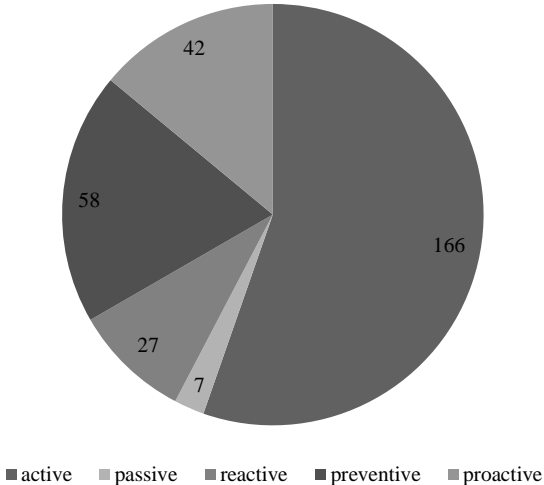


Figure 2. Social media used for eco-innovation processes within companies

