

Stakeholders in the EIA Process: What is Important for Them? The Case of Road Construction

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Abstract – Public participation is one of the conditions for an effective environmental impact assessment. Quite often public participation is limited to the general public but various organizations, governmental and non-governmental institutions, business enterprises are left aside. The paper analyses the attitudes of different enterprises/organizations with focus on a road construction (Siaurine Street) case in Vilnius, Lithuania in regard to the environmental impact assessment process. The survey indicated that only a very small part of respondents from different enterprises and organizations has been approached in particular environmental impact assessment process, although the construction project was relevant for nearly half of all surveyed enterprises. Companies, located in the territory of the planned Siaurine Street, highlighted that the major significant components of environmental aspects are noise and air pollution, between socio-economic environment – suitable infrastructure, human well-being and business and job opportunities. The type of company's activity, income, number of employees and their distance to the Siaurine Street were the main factors determining respondent choices.

Keywords – *Environmental impact assessment; Participation; Road construction; Socio-economic environment; Stakeholders*

1. INTRODUCTION

Environmental impact assessment (EIA) is acknowledged as a preventative measure for sustainable development provisions and as “a key instrument” for environmental management [1] providing a platform for public participation [2]. Despite a variety of assessment forms and different aspects under consideration, public participation in the assessment process is considered as a critical factor for overall effectiveness. This is acknowledged by different type of studies [3]–[5]. According to Chanchitpricha and Bond [6] public participation could be attributed to the procedural, substantive and normative effectiveness of impact assessment processes. First, public participation serves for transparency, reduced subjectivity, information provision and conflict mitigation and avoidance. Secondly, it helps to integrate views of different stakeholders into the process and decision-making as different stakeholders might have different concerns and interests as study of Antonson [7] on written submissions shows. Third, public participation provides grounds for knowledge building and raising understanding of impact assessment benefits among stakeholders [6]. Speaking particularly about public participation in EIA, O’Faircheallaigh [8] highlights some broad purposes: obtaining public input, co-decision making, and redistribution of power in decision-making. However, according to Soria-Lara et al. [9], the integration of

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knowledge from stakeholders and the public at large is seen as one of the biggest process-related barriers during the scoping phase of EIA application in transport planning.

Gluker et al. [4] states that there is still no common definition on what “public participation” means and which form of participation (formal or informal) is more important. Reed [10] presents a variety of participation typologies regarding engagement level, direction of information flow and objectives. This author distinguishes “public” participation and “stakeholder participation”. In this paper, we consider these two terms as synonyms referring to as stakeholder participation.

International, national/regional [2], [11]–[15] legislation foresees the right to the access of information and involvement in the EIA process. However, not always foreseen legal possibilities for public participation are fully employed. For example, in the case of Poland rather late inclusion of public participation is seen as a deficiency of the whole process [13]. Some countries experience public participation deficiency even in terms of legislation [16]. The review of the EU EIA Directive [17] indicates that the directive fostered “improving public participation and transparency in decision-making”, however, in most cases member states mostly focus on the minimum requirements of the directive and overall common practices of public participation is lacking. Even having a good legal basis for participation, sometimes the public might be indifferent and inactive [12].

Among the benefits of stakeholder participation, Reed [10] mentions public trust, empowered stakeholders, fair and holistic environmental decisions, social learning, higher quality information, sense of ownership, improved implementation of decisions and so on. Gluker et al. [4] present nine overarching public participation objectives that could also be considered as participation benefits: from “influencing decisions” and “democratic capacity” to “resolving conflict” and “reflection”.

Nevertheless, participation might invoke negative outcomes as unexpected interactions between involved stakeholders discourage minorities, or decreased levels of public engagement in the process [10]. Next to acceptance and support, two other attitudes towards projects are relevant: ambivalence and rejection [18]. Hence, an inappropriate management of the participatory process may result in decreased trust in the process itself [19]. In addition, according to O’Faircheallaigh [8] the changing distribution of power in decision making might lead to the opposite of the desired outcomes, i.e., inducing officials to limit public participation. Time and cost constraints might also hamper a proper implementation of process [19].

Research on EIA is rather limited in Lithuania. So far, there are only a couple of comprehensive studies on EIA system [20] and on socio-economic aspects in the EIA [21]. Usually proponents and consultants limit public participation to the legal requirements, i.e. focus only on passive public information, and usually do not reach target groups. Quite often this limits the possible benefits of participation as such. In addition, usually the general public is addressed within EIA process. Nevertheless, stakeholders not always are interested in ongoing processes if (until) they directly are not affected. In addition, understanding of EIA is generally low even within project proponents. Therefore, this paper aims to contribute to the discussion on EIA and participation as well as to analyse stakeholder’s interests regarding EIA and the environment in the case of road construction.

The paper is constructed as follows. First, we present research approach in section 2, and then section 3 presents results. And, finally, discussion and conclusions close the paper.

2. MATERIALS AND METHODS

2.1. Legislative Basis

The role of public participation in EIA is described in Lithuanian legal framework. The Lithuanian Law on EIA defines the rights and functions of the public, ensuring public participation throughout the whole process of Environmental Impact Assessment [22]. Procedures of public information and participation in the EIA process are set in the Procedure Guide for Informing the Public and Public Participation in the Process of Environmental Impact Assessment of Proposed Economic Activities [22]. This procedure guide was approved in 2005 year – thenceforward 7 amendments were made. The Procedure Guide regulates „the process of informing the public and public participation in the environmental impact assessment of proposed economic activities, establish the procedures for informing the public and public participation, identify those responsible for informing the public and determine their functions“ (ibid). As indicated in the guide, the procedures of informing the public and public participation include:

- Announcements of the upcoming environmental impact assessment of the proposed economic activity;
- Announcement of the screening conclusion, whether or not the proposed economic activity is subject to environmental impact assessment;
- Announcement of the prepared EIA programme;
- Public presentation of the EIA report for the proposed economic activity;
- Informing the public about the decision with respect to the proposed economic activity” (ibid).

Kruopienė et al. [20] name public participation as the main strength of EIA process in Lithuania. According to the requirements, the public is informed about EIA processes and has a chance to actively participate from the very beginning (screening process) up to the final development consent. However, usually this participation is limited to the information provision following the Law requirements.

The newest changes on the EIA process and public participation are presented in a new EIA law and ordinances adopted in 2017, following renewed EU EIA directive.

2.2. Case Description

Siaurinė Street is planned as new 6.5 km long street in the northern part of Vilnius, from the Western bypass to Soldiers Street. The street would cross Vilnius municipality's sub-districts Zirmunai, Verkiai, Seskinė, Fabijoniškės, Pasilaiciai, Justiniškės and would act as a transport corridor. The procedure for environmental impact assessment for this construction was launched back in 2006. However, due to the changed economic situation in the country, the planning process has been set aside for some time. The EIA report for Siaurinė Street was only prepared in 2011 and on 20 October the report was presented at a public hearing at Vilnius City Council meeting room. The public had access to the prepared report on the EIA developer's website, as well as at planners and EIA developer's offices. The construction is planned for 2017–2018.

EIA report of Siaurinė Street was one of the first, which was developed after 9 June 2011, in line the EIA Law amendment regarding social-economic environmental assessment was adopted. For this reason, the report on the Siaurinė Street included – social-economic impact analysis [21]. It covered the socio-economic aspects such as public services, operational assurance of emergency

services (fire, medical emergency, and police), and evaluation of transport conditions in terms of mobility, economic conditions, and fragmentation of the area.

2.3. Stakeholders Survey

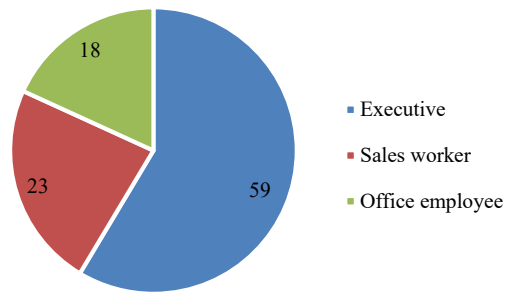
To assess the potential impact of Siaurine Street on private companies and public institutions or any organizations and their position regarding EIA, a survey was conducted. Companies and public institutions were chosen as they also might be affected by the developments, but usually lack attention within the EIA process and mainly the general public is approached.

A questionnaire was prepared by the authors and placed on the webpage – www.apklausa.lt. The questionnaire was compiled specifically for the case and was carried out in parallel with the ongoing EIA process. Questions included general questions regarding EIA, its importance, environmental and socio-economic aspects and ones specifically related to the ongoing EIA process (awareness, interest in the process and street construction). The third part of the questions was related to the company's characteristics, like ownership, area of activity, etc.

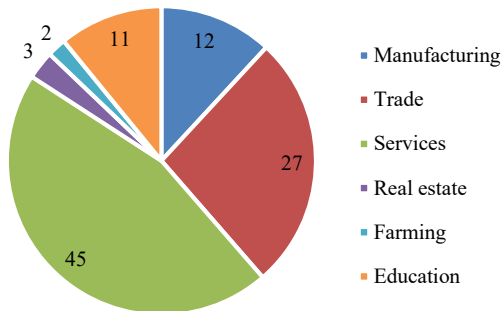
Interviewed companies were selected according to the impact area defined in the EIA report [21]. The report mainly dealt within a radius of 500 m next to the street (1 km wide zone). Protected areas and resources were examined within 1 km distance from the street (2 km wide zone) and environmental quality variation (noise, air pollution) was analysed in the street network that will be affected by constructed street [21]. 500 and 1000 meters zoning were used for grouping companies in the survey. Survey was conducted separately from the EIA process, but in the same timeframe.

In 2011 during November–December electronically 448 links to the questionnaire were sent by email to all companies (private companies, public institutions, other organizations) according to the impact area defined in the EIA report. Companies were approached via their official emails presented in the online catalogues of the companies, not targeting specific positions or persons; reached persons were representing their institutions. However, possible bias due to the position undertaken in the organization and personal attitudes might have influenced some results. Information about the companies/institutions/undertakings was compiled from the available data online: Lithuania map – www.maps.lt, Lithuanian companies' catalogue www.118.lt and catalogue of companies www.info.lt. 79 answers were received, i.e., 17.6 % of respondents took part in the survey. 81 % of them work in private companies. The percentage distribution of respondents by their position in the company, company's activity and number of employees are shown in Fig. 1. More than one-third (35 %) of companies are with annual revenues of up to 250 000 LTL (approx. 72 405 EUR), and 28 % – more than 1 million LTL (approx. 289 620 EUR). 24 % of the companies are located closer than 500 meters to the planned construction of Siaurine Street.

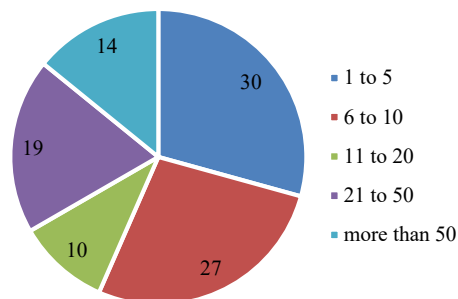
Analysis is based on descriptive statistics. The influence of various factors on certain attitudes and positions is assessed using a chi-square (χ^2) test.



(a)



(b)



(c)

Fig. 1. (a) Percentage distribution of respondents by their position in the company; (b) company's activity; (c) number of employees.

3. RESULTS

3.1. Attitudes of Enterprises Towards EIA

Companies' and institutions' opinions about the EIA process and socio-economic aspects of environmental assessment have been analysed on the basis of such key factors as business profile,

type (private, public), number of employees, position of the respondent in the company, revenue and the distance to the planned street.

The data analysis showed that 66 % of respondents from the companies know what the environmental impact assessment procedure is. All the companies working in the field of real estate and 82 % of the companies engaged in production were familiar with environmental impact assessment. This can be attributed to the fact that before beginning of planned production activities, environmental impact assessment might be an obligatory aspect depending on the production type and volume.

Employees who occupy management positions more often were aware of the environmental impact assessment procedures than those who are workers and labourers ($\chi^2 = 8.02$, $p < 0.05$). It can be assumed that persons holding senior positions are more educated and have more responsibilities in overall management. Other factors as the type of companies' activity, number of employees, company revenue and the distance to the planned street had no influence on awareness ($p > 0.05$).

Though in general EIA was rather known procedure between respondents, only 18 % of the companies surveyed knew that EIA was carried out for the planned construction of Siaurine Street. 79 % of those who knew were from private companies, 64 % were directors, and contrary than expected, 71 % those located farther than 500 meters from the planned construction of Siaurine Street. Of those respondents who knew about EIA preparation for the planned construction of the Siaurine Street, 73 % learned about it while reading an advertisement on the Internet, 20 % – reading the newspaper or a magazine. Only 7 % of companies/institutions received notification letters. However, none of the respondents participated in the public hearing of the EIA. Only 15 % of respondents, who knew about the EIA procedures, read the screening decision and the program of Siaurine Street EIA.

The fact that the construction of Siaurine Street is important to their company/institution was acknowledged by 47 % of respondents. Companies/institutions with revenue exceeding 1 million LTL more often stated that construction of the street is important for them. This can be explained by the fact that, enterprises, which receive more revenue, hire more workers, have more customers, so the construction of a new street is important for them both socially and economically. Statistical analysis identified significant differences between companies according to the distance to the Siaurine Street. Businesses or institutions located closer than 500 meters to the planned construction more often stressed the importance of the construction than the companies located farther than 500 meters ($\chi^2 = 7.66$, $p < 0.05$). The higher potential impact on them might be the reason for that.

Speaking about the positive changes of the Siaurine Street construction might bring, as much as 75 % of the companies stated that the construction of the street will reduce traffic jams, more than half (57 %) said that it would improve accessibility (Fig. 2). Only 12 % of respondents believed that the construction of Siaurine Street would increase the number of customers. All companies engaged in real estate claim that construction of the street will improve accessibility and reduce traffic jams, the same benefits were seen by enterprises with revenue higher than 250 000 LTL. These tendencies were highly related with one of the biggest problems in Vilnius – traffic congestion, which will be partly solved when Siaurine Street is built.

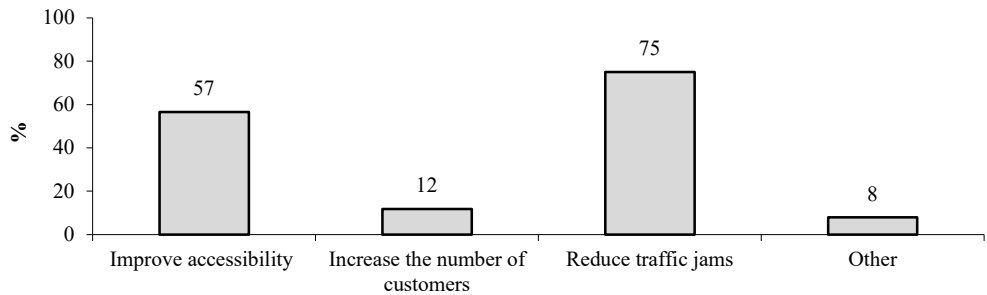


Fig. 2. Positive changes attributed to the construction of the Street. Survey results.

Those who were engaged in trade ($\chi^2 = 4.5, p < 0.05$), located within 500 meters from Siaurine Street ($\chi^2 = 6.2, p < 0.05$) and had yearly revenue higher than 250 000 LTL ($\chi^2 = 5.1, p < 0.1$) considered that the construction of Siaurine Street would improve accessibility (Table 1).

TABLE 1. DEPENDENCE OF POSITIVE IMPACTS OF THE STREET CONSTRUCTION ON THE DIFFERENT KEY FACTORS *

Key factors	Improve accessibility		Increase the number of costumers	
	χ^2	<i>p</i>	χ^2	<i>p</i>
Trade	4.5	0.03	0.73	0.39
Farming	1.51	0.22	2.81	0.09**
Revenue	5.1	0.08**	3.88	0.14
Distance	6.2	0.01	2.77	0.09**

Note: * Reduction of traffic jams and other positive impacts are not included in the table, because they do not depend on any key factors; statistically significant values ($p < 0.05$) are marked in bold.

Note: **Statistically significant when $p < 0.1$.

The increase of the number of visitors/costumers to the institution was more often acknowledged by the companies/institutions located closer than 500 meters to the planned street ($\chi^2 = 2.77, p < 0.1$).

While talking about the negative effects of the street construction, most of the respondents identified air pollution (54 %) and noise (30 %). As a negative impact, 19 % of the respondents noted increased traffic near their office. These were mostly managers (58 %) and respondents from the companies with higher revenue (70 %). 17 % of companies/institutions believe that the constructed street would also worsen health of the population. The same percentage of respondents believe that the street will have no negative impact at all. Of all the companies that opposed any negative effects 90 % are private companies. Companies engaged in production also said that the constructed street would not have a negative impact ($\chi^2 = 4.17, p < 0.05$) (Table 2). This can be attributed to the fact that private companies are profit orientated compared to state, municipality, or public ones. They are employing fewer people as well, so the negative impact might not be as important to them as to the public establishments.

State enterprises ($\chi^2 = 7.82, p < 0.05$) and those engaged in education ($\chi^2 = 8.5, p < 0.05$) more often said that the street will worsen health of the population. Companies with a minimum of staff ($\chi^2 = 9.94, p < 0.05$) more often believed that the construction of the street would increase traffic in the street next to their companies/institutions. Companies situated up to 500 meters to the street also more often stated that there will be an increase in traffic ($\chi^2 = 3.99, p < 0.05$), as well as in

noise ($\chi^2 = 5.74$, $p < 0.05$), and pollution ($\chi^2 = 4.75$, $p < 0.05$) (Table 2). However, as stated in the Environmental Impact Assessment Report [21], the project should decrease traffic in parallel streets like Ozo, Kareiviu and Ateities Streets. Their morning traffic peak is projected to fall from 17 % to 40 %. Hence, the construction of the street will improve air quality and decrease noise levels in adjacent streets, i.e. contrary to the views of some respondents.

TABLE 2. DEPENDENCE OF NEGATIVE IMPACT OF THE STREET CONSTRUCTION ON THE DIFFERENT KEY FACTORS *

	Key factors	Company	Production	Trade	Education	Number of employees	Revenue	Distance
Increase noise	χ^2	1.27	2.61	2.33	2.1	3.53	0.61	5.74
	p	0.26	0.12	0.13	0.15	0.32	0.74	0.02
Increase traffic next to company	χ^2	0.05	0.43	<i>3.09</i>	0.87	9.94	<i>4.65</i>	3.99
	p	0.82	0.51	<i>0.08**</i>	0.35	0.02	<i>0.09**</i>	0.05
Increase pollution	χ^2	0.65	2.2	0.01	1.12	2.05	0.18	4.75
	p	0.42	0.14	0.94	0.29	0.56	0.92	0.03
Worsen health of the population	χ^2	7.82	0.07	0.76	8.5	2.15	0.04	0.01
	p	0.01	0.8	0.38	0.01	0.54	0.98	0.98
Will not have negative impact	χ^2	1.08	4.17	0.7	2.29	0.78	0.51	0.01
	p	0.3	0.04	0.4	0.13	0.85	0.78	0.98
Other	χ^2	0.01	1.34	0.24	0.2	0.5	0.48	3.88
	p	0.98	0.25	0.63	0.66	0.92	0.79	0.79

Note: *Statistically significant values ($p < 0.05$) are marked in bold.

Note: **Statistically significant when $p < 0.1$.

Apart from positive and negative aspects of the street construction, respondents were asked to identify the main environmental components to be affected by construction. As in the case of negative impacts, noise was a dominating environmental component indicated. 70 % of companies/institutions indicated noise as a very important environmental aspect, which may be altered most with the construction of the Siaurine Street (Fig. 3). Not much less important was air (66 %), public health (65 %), social-economic environment (50 %), and landscape (51 %).

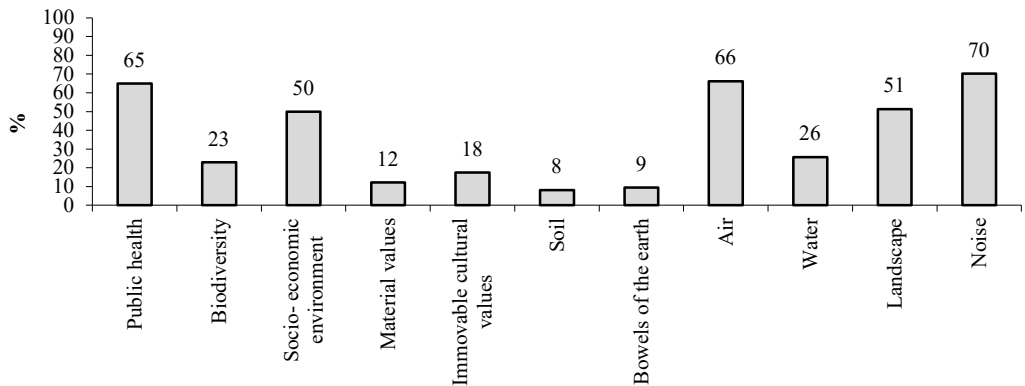


Fig. 3. Perceived changes of the main environmental components due to the construction of Siaurine Street. Survey results.

State enterprises ($\chi^2 = 3.92, p < 0.05$) and those generating more than 250 000 LTL revenue ($\chi^2 = 6.35, p < 0.05$) more often referred to public health as one of the components to be affected (Table 3). Trade companies were more often concerned about material values ($\chi^2 = 6.06, p < 0.05$) and landscape ($\chi^2 = 4.43, p < 0.05$). Meanwhile real estate companies were more often concerned with immovable cultural values ($\chi^2 = 14.67, p < 0.05$) and socio-economic environment ($\chi^2 = 3.13, p < 0.1$). Even 82 % of the companies located closer than 500 meters to the planned construction of the Siaurine Street indicated health as a component to be altered to compare to the companies located farther than 500 meters to the street ($\chi^2 = 3.12, p < 0.1$) (Table 3).

TABLE 3. DEPENDENCE OF THE MAIN ENVIRONMENT COMPONENTS TO BE CHANGED ON THE DIFFERENT KEY FACTORS *

	Key factors	Company	Trade	Services	Real estate	Farming	Education	Revenue	Distance
Public health	χ^2	3.92	1.2	3.72	0.01	0.2	3.21	6.35	3.12
	p	0.05	0.27	0.05**	0.95	0.66	0.07**	0.04	0.08**
Biodiversity	χ^2	0.99	0.03	0.2	0.93	0.61	0.06	7.07	0.03
	p	0.32	0.87	0.65	0.33	0.43	0.81	0.03	0.85
Socio-economic environment	χ^2	0.75	0.57	1.96	3.13	2.06	0.46	1.15	0.59
	p	0.39	0.45	0.16	0.08**	0.15	0.5	0.56	0.44
Material values	χ^2	0.53	6.06	0.01	0.43	2.76	0.05	0.7	2.57
	p	0.47	0.01	0.92	0.51	0.09**	0.82	0.71	0.11
Immovable cultural values	χ^2	1.54	0.01	1.54	14.67	0.44	0.46	2.5	2.15
	p	0.21	0.98	0.21	0.01	0.51	0.5	0.29	0.14
Air	χ^2	0.33	2.94	0.06	0.00	0.24	0.07	0.42	0.23
	p	0.57	0.09**	0.81	0.99	0.62	0.79	0.81	0.63
Water	χ^2	0.32	2.79	0.85	1.08	0.64	0.2	3.07	1.98
	p	0.57	0.09**	0.36	0.3	0.43	0.66	0.22	0.16
Landscape	χ^2	0.97	4.43	0.06	0.41	2.17	2.11	1.35	0.01
	p	0.33	0.04	0.8	0.52	0.14	0.15	0.51	0.93

Note: *Soil, noise, Earth's surface and bowels of the Earth are not included in the Table, because do not depend on any key factors; statistically significant values ($p < 0.05$) are marked in bold.

Note: **Statistically significant when $p < 0.1$.

3.2. Enterprise Attitudes Towards Socio-economic Aspects of EIA

Appropriate infrastructure (70 %), human well-being (58 %), business, and job opportunities (55 %) were the main three socio-economic environment components, a change in which would be significant for companies/institutions (Fig. 4). 80 % of respondents working in state institutions were in favour of the well-being of people, and 74 % in private companies – for the proper infrastructure. These results can be explained by the fact that in this survey the majority of public institutions were engaged in education (mostly enrolling children), and the creation of wellbeing is more relevant to them. Infrastructure is important to private companies because it affects corporate profit. Infrastructure change was also important for everyone involved in real estate and representing big companies.

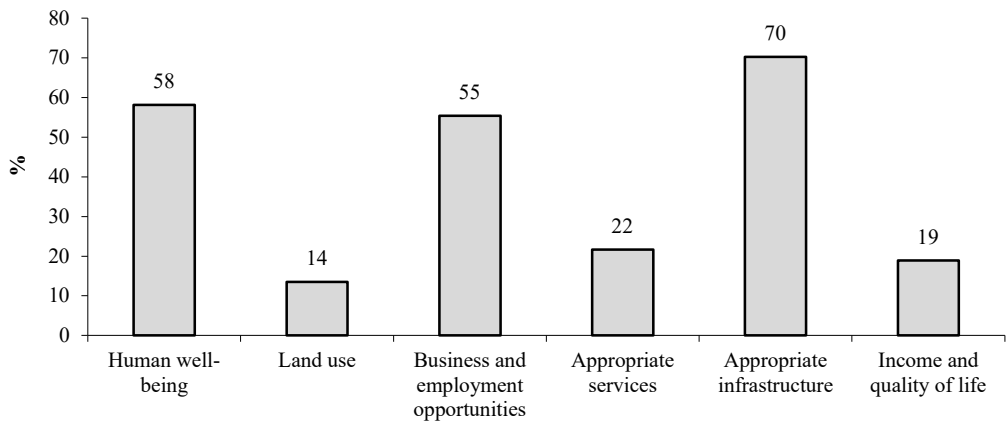


Fig. 4. Perceived most important changes of the socio-economic components due to the construction of Siaurine Street. Survey results.

Private institutions ($\chi^2 = 3.99, p < 0.05$), bigger companies ($\chi^2 = 9.52, p < 0.05$) and those not engaged in education ($\chi^2 = 6.16, p < 0.05$) were more concerned with business and employment opportunities (Table 4). It was also noted that institutions engaged in education ($\chi^2 = 4.63, p < 0.05$), were more concerned about the welfare of the people. Bigger companies in terms of the company's revenue considered infrastructure as more important aspect compared to the other companies ($\chi^2 = 5.07, p < 0.1$). In addition, the farther from the street a company was, the more it was concerned about income and quality of life ($\chi^2 = 8.04, p < 0.05$).

TABLE 4. DEPENDENCE OF THE MOST IMPORTANT SOCIO-ECONOMIC COMPONENTS ON THE DIFFERENT KEY FACTORS *

Key factors	Human well-being		Business and employment opportunities		Appropriate infrastructure		Income and quality of life	
	χ^2	<i>p</i>	χ^2	<i>p</i>	χ^2	<i>p</i>	χ^2	<i>p</i>
Company	3.47	0.06**	3.99	0.05	1.16	0.28	0.42	0.52
Production	2.72	0.09**	0.60	0.44	0.01	0.91	0.55	0.46
Services	3.59	0.06**	2.14	0.14	0.01	0.91	0.09	0.76
Education	4.63	0.03	6.16	0.01	2.55	0.11	0.01	0.94
Number of employees	1.24	0.75	9.52	0.02	4.51	0.21	1.36	0.72
Revenue	0.53	0.77	0.93	0.63	5.07	0.08**	0.15	0.93
Distance	0.27	0.61	1.69	0.19	0.40	0.53	8.04	0.01

Note: *Land used, appropriate services are not included in the Table, because do not depend on any key factors; statistically significant values ($p < 0.05$) are marked in bold.

Note: **Statistically significant when $p < 0.1$.

In summary, private companies and government agencies within street impact territory are mostly concerned about noise, air, public health, and socio-economic environment aspects. As most important socio-economic environment components are adequate infrastructure, business and employment opportunities, and human well-being.

3.3. Study Limitations and Future Research

The rather small response rate indicates not only some limitation for the results application, but also passiveness of participation in general. In line with low sample size, results are only indicative and a more comprehensive survey in terms of size and questions included could be of importance for big development projects. Results of such studies could be beneficial for policy formation and capacity building in this field in general.

4. DISCUSSION

This study is one of the first attempts to assess the attitudes of stakeholders towards EIA and environmental and socio-economic aspects in Lithuania. Study shows, that a rather small number of respondents were aware about the EIA process in the road construction case. All attempts to approach stakeholders during the process were limited to legal requirements, i.e., information provision using passive methods. Despite degree of involvement is one of the crucial steps [19], so far most of the EIA processes are limited to the information provision and public hearing in Lithuania. Even having this, participation is very limited. The public is rather passive, except some cases. On the other hand, lack of social approach in the participation process is persistent. Then the extent of public participation and the access to information are limited, the timing and duration of engaging the public is rather short, the public has limited impacts on the final decision-making [23]. Nevertheless, Kittipongvises [24] indicates, that public concern is slightly increasing regarding certain topics.

Results have also indicated that employees who occupy management positions more often were aware of the environmental impact assessment procedures. Lera-Lopez et al. [25] also identifies, that better-educated people might have developed strong positive attitudes toward environmental problems. For stakeholders the most important environmental component affected is noise. Chi et al. [26] also have found, that in the case of transport (railway project), respondents mostly complained about noise. In addition to that, other important environment components in Siaurine Street that impact the territory are the air, public health, landscape, and social-economic environment.

The most important socio-economic environment components to be affected positively are appropriate infrastructure, people's well-being and the business and labour possibilities. These choices also depended on the company-type, activity area, revenue, number of employees, and the distance to Siaurine Street. The construction of the road was more important for business undertakings located closer to the planned street; they expected to be more accessible. Educational institutions more often were concerned with health issues. Antonson [7] also has found that in the case of transport infrastructure planning, different types of institutions expressed different concerns: NGO (non-governmental organisations) focused on local issues and cultural heritage, business undertakings – on business future.

The effectiveness of the participatory process strongly depends on the process itself [10]. Luyet et al. [19] proposed a framework for successful participation. This includes stakeholder identification, characterisation, and definition of the degree of involvement, choosing and implementing proper participatory techniques, evaluation of the whole process. Regarding participation effectiveness, Reed [10] identifies eight characteristics of best participation practice. This includes building trust and equity, early as possible involvement of the stakeholders in the process, relevant stakeholders, clear participation aims, proper participation methods, experienced facilitators, integration of local and knowledge, and embedding participation institutionally. This should be taken into account in Lithuanian case, especially choosing methods and techniques to approach possible stakeholders. An option of IT technologies increasing possibilities for public participation in environmental projects [19] could be considered in the Lithuanian case and written submissions of comments might be an option to increase and improve participation [7]. Hence, there is no simple recipe for effective public participation that can be applied in all cases [27]. The specific combination of strategies and approaches that are most appropriate will depend on the situation.

5. CONCLUSIONS

In general analysis indicated some passiveness of stakeholders regarding EIA. However, results also indicate that some environmental and socio-economic aspects are important for surveyed companies. Therefore, it is important to find acceptable solutions for raising public awareness and effective participation and to include into assessment concerns of the stakeholders. For that a more detail analysis in Lithuania and other Central and Eastern European (CEE) countries could be beneficial, as attitudes and perceptions in the CEE might be different from those in Western countries – therefore results and experiences from those countries might not work in the CEE case.

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