The Research of Stakeholder Power Impact on Project Implementation

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Abstract

Purpose of the article: The article show summarized information about stakeholders and their role in project implementation based on literature review. The second part of the article is dedicated for the research about stakeholder influence on project implementation. The only condition to participate in the survey was managing projects. Although the respondents are employed in the area of south Poland, they implement projects all over Poland. The research tool was a questionnaire which was sent by e-mail to the respondents. 90 project managers from the area of south Poland were invited to join the project, and 62 people sent back a completed questionnaire.

Methodology/methods: The research was done by a questionnaire with twenty two question, which was divided into three parts. The first part was the imprint, which consisted of three questions. The second part consisted of two questions, which concerned the way of defining the word “stakeholder”. The third part concerned the topic of the research and consisted of seventeen questions.

Scientific aim: The aim of the article is presenting the results of the research which was done, to show the research results of project stakeholder influence on the project implementation.

Findings: The results received from the survey in the process of analysis and interpretation allow to put forward a thesis that stakeholders as a whole group are significant for the implementation of the whole project. Their impact is so important that it is possible to tell that they decide also about the project success or failure. Conclusions: The respondents show that stakeholders affect every area in large extent or very big extent. The fact has been proved in table 1 which shows the most frequently chosen answers by responders. However, by conducted analysis by the standard deviation it is possible to see a large dispersion of the results.

Keywords: project management, project stakeholder, research, respondends, survey

JEL Classification: M15, M19
Introduction

Projects are realized in the whole world (Spalek, 2011). It is not important if they concern a family event, house building or if they are big and expensive infrastructure projects, for example projects of building ICT infrastructure (Biskupek, Spalek, 2016). Every project is limited by three basic constraints called “the golden triangle” in each project: time, budget and scope (Spalek, 2014). Wysocki (2011) defines projects as: “sequence of unique, complex and related tasks, which have a common aim and are allocated to realize in a specified term, fixed budget and established requirements”. From the above definition also result direct features of projects, which include (Heerkens, 2002):

- determined in time – it means every project has a beginning and an end;
- consisting of activities which create the whole;
- it is the answer for the need or to solve problems;
- its aim is to make money or save money;
- it ends with creation of the final product or service;
- it is unique and realized only once – it means that there will never be a project realized in the same way, in the same conditions, with the same people who coordinate and affect them;
- with its implementation is associated a specific dose of ambiguity and uncertainty.

This uncertainty which was mentioned as one of the features of a project results directly from the relation between the project and uncontrolled elements which surround it (Youker, 1992). One of the roles of the team who realize the project is to limit the uncertainty. Therefore at the project planning stage there were done many analysis, for example economic analysis, technological potential analysis or environment analysis, including stakeholder group analysis. This analysis is the main part of stakeholder management (Aaltonen, 2011). Project managers use this process to understand and interpret correctly the stakeholder environment, to make the right decisions for the right stakeholders group. This analysis allows the project manager to predict possible problems, which can arise from the groups of stakeholders, who have a business in its implementation (Jepsen, Eskerod, 2009). Stakeholder management is accented by many authors who show that right management helps them not only to achieve project success but help the whole organisation to survive as well (Rowley, Moldoveanu, 2003).

1. Project stakeholders

One of the significant elements of project management are stakeholders (Wiśniewska, Świadek, 2014). S. Tchorzewski (2013) considers the identification of stakeholders and their role in project as a decisive factor for the project success or failure. According to ICB (2009) stakeholders can be named “people or groups who are interested in project su-
access or failure or undergo limitations which result from the project”. According to PMI (2013) project stakeholders can be defined as: “an individual, group, or organization, who may affect, be affected by, or perceive itself to be affected by a decision, activity, or outcome of a project”. According to J. D. Frame (1995) stakeholders can be divided into inside and outside stakeholders (Figure 1).

Inside stakeholders are a group which is called the most important, because they are important for the strategy. They are formally bound with the organisation which implement the project, for example through an employer contract. Outside stakeholder group are people who aren’t formally members of the organisation which implements the project. However, they can exert a big meaning or they can be under a big meaning of the project. Due to its specification, the group requires constant supervision of the project manager (IFC, 2007). T. L. Young (2000) single out two most important stakeholders of each project who are: customer and the producer of the project.

S. Tchórzewski (2013) proposed a different division of project stakeholders:
- white – (the division into inside and outside stakeholders doesn’t matter) people or institution which can benefit from the project implementation;
- black – people or institution (also here the division into outside and inside stakeholders doesn’t matter) who don’t accept the project implementation.

One of the roles of a project manager is to recognize all stakeholders, to establish their expected benefit or waste and order them according to their importance for the whole project. The manager of the project should thoroughly analyze project stakeholders. The analysis of stakeholders is one of the most important elements initial phase of the project (Lacko, 2000). This process consists of three stages (Bukłaha, 2007):
- stakeholder identification;
- preparation of their characteristics, with rating of their power impact;
- designing the action strategy in reference to everyone.

The first of above mentioned stages is related with pointing at the difference between groups, people or institutions who are still reasonably homogeneous (Trocki, Gruczy, 2007):
- which can have impact on the project;
- on which the project can have impact;
- which will be involved in the project;
- which can be a support, can become partners in project, even in terms that the project could be implement without them;
- which can become the conflict party of a project.

They can perceive its implementation as a danger for their business.

There are many ways for identification of stakeholders, one of them is a brainstorm meeting. During the brainstorming all parties of the project get a formal name (Calvert, 1995). One of the easiest and most popular ways to group stakeholders is the division into outside and inside stakeholders (Winch, 2004). An example of this division has been shown in the above picture (Figure 1).

The next stage in the stakeholder management process is making their characteristics and rating their influence powers. The characteristics should be built this way that the document should show not only the expected contribution from the stakeholders but for example their money expectations, too. Stakeholder contribution in the project implementation can take different forms, it can be a thing, specific behavior (for example skills to make fast decision) or motivating attitude. Stakeholders behavior which can be treated as a support for the project can be estimated by matrix stakeholder engagement. It is a technique proposed by B. McElroy’a and C. Mills’a (2003). This matrix is constructed this way that it shows involvement of every stakeholder in the moment and the type of the involvement which is desirable by the project manager to finish the project successfully. Authors of the matrix mark out the following types of involvement:
- active opposition;
- passive opposition;
- neutral position;
- passive support;
- active support.

Project manager is obliged also in the process of stakeholder management to define expectations and benefits, which stakeholders expect instead of their contribution or submission relative to the implementation of the project (Jepsen, 2009). Compensation for the inside stakeholders can be for example their money expectations, too. Stakeholder contribution in the project management, definition of the target, access to the results of the project, ads, a positive image, etc.

The characteristics of the stakeholders can be done based on the following criteria:
- the stakeholder meaning for the project;
- the stakeholders attitude to the project;
- project influence on the whole business;
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- strong and weak sides of stakeholders;
- basics and possibilities of business execution;
- quality and quantitative characteristics.

The next stage in the process of stakeholder analysis is assessing the power of their influence on their project. This research should be done on all previously identified project stakeholders. To do the analysis of their influence right, there can be done a rating based on two criteria. One of them is articulation of aspiration and the second is the possibilities of impact on the project to satisfy them. The assessing power can be rated by project management team or the project manager also based on experience which he had got on project implementation in the past (Jepsen, Eskerod, 2009). The stakeholder characteristic can be done based on survey and direct talks (Varvasovszky, Brugha, 2000).

The third stage in the stakeholder analysis is designing action strategy for each of them. The strategy should be done this way to deliver the needed information about inclinations of every stakeholder to deliver the needed contributions and resources (Jepsen, Eskerod, 2009). According to B. McElroy and C. Mills (2003) it is possible and even recommended to do a stakeholder engagement matrix on this stage. A well-known statement is that stakeholders favourable to the project are much more submissive than those with negative attitude. Much more attention demand these people who can constitute about the project success or failure.

Yang et al. (2011) give a list of fifteen key factors in stakeholder analysis (in order of importance):
1. Stakeholders should be managed with respect for social rules, responsible business rules (economically, based on law, ethical rules and caring on the natural environment).
2. Stakeholders needs should be tested (the ones which are involved in the project).
3. You should take care of proper and frequent communication with stakeholders.
4. You should make every effort in order to properly understand the areas of stakeholders interest.
5. You should properly and accurately identify project stakeholders.
6. You should maintain and promote good relations with stakeholders.
7. You should analyze both the conflicts and alliances between stakeholders.
8. You should accurately predict the impact of stakeholders on the project.
9. You should formulate appropriate management strategies stakeholders.
10. You should evaluate the attributes (strength, concern, closeness) of stakeholders.
11. You should effectively resolve conflicts between stakeholders.
12. You should clearly formulate a mission statement presenting the project.
13. You should anticipate the reactions of stakeholders to implement the developed strategies.
14. You should analyze the changes in the relationship and influence of stakeholders.
15. You should continuously evaluate the behavior of stakeholders.

2. Empirical research

The survey has been made among project managers who are working in south Poland on the territory of dolnośląskie, opolskie, śląskie and świętokrzyskie voivodship. On this territory live over 9,763,891 people, which is about 25.37% of the whole population of Poland. The whole population in 2015 was 38483957 (Mały Rocznik Statystyczny, 2015). On the territory where the survey about research of stakeholder power impact on project course has been made there are located important economy centers like Wrocław, Opole, GOP (ahead with Katowice) or Kielce. In this cities are also located important R & D centers and universities (of national importance, as well as international). On the territory of above given voivodship are also seated big international and national companies. All these institutions realize hundreds of various projects every year. These projects sometimes have budgets of millions of złoty, and are implemented only in Poland or in a bigger area than one country. One example where the project was located on the whole area of dolnośląskie voivodship was projects of building ICT infrastructure in dolnośląskie voivodship (Biskupek, Spalek, 2016).

2.1 Method studies

The survey has been made among project managers who are working in companies located on the territory of south Poland, exactly on the territory of dolnośląskie, opolskie, śląskie and świętokrzyskie voivodship. It does not depend on the work position of the respondents. The only condition to participate in the survey was managing projects, no matter if the company position name was project manager, manager of projects, project coordinator, project specialist, etc. Although the respondents are employed in the area of south Poland, they implement projects all over Poland. The research tool was a questionnaire which was sent by e-mail to the respondents, after earlier information contact which was executed by
a phone call or via e-mail. The whole research began with a pilot study. The aim of this stage was checking the structure of the questionnaire and excluding incomprehensible questions. The whole process was divided into three stages:

1. Pilot study, which was done by 10 respondents. The aim was checking the questionnaire.

2. Phone call or e-mail with the respondents, to speak about their participation in the research, for example to give the right e-mail address on which the questionnaire should be sent.

3. The right research, which consisted of sending the questionnaire to the indicated e-mail address to people who signalled on the above stage readiness to run the research. The only condition to participate in the research was managing projects, no matter what the name of the position in the company.

90 project managers from the above mentioned research area were invited to join the project. From the 90 invited people 62 sent back a completed questionnaire (the success rating was 68.8%) by e-mail. The questionnaire was made by cafeteria questions and right questions.

The aim of the research was to analyze the stakeholder influence on the project implementation.

Because of the small research sample size, the whole research has a quality character, and the analysis was done by using descriptive statistics tools.

### 2.2 Survey questionnaire

The survey questionnaire included two pages and was divided into three parts. The first part was the imprint, which consisted of three questions. The second part consisted of two questions, which concerned the way of defining the word “stakeholder”. The third part concerned the topic of the research and consisted of seventeen questions. The whole questionnaire included twenty two questions. When the author built the questionnaire, he decided to squeeze in so many questions to ensure its reliability and focus of the respondent from the first to the last question. The chosen number of questions was supposed to encourage people to join the research.

The author asked the experts in the questionnaire to answer the question about the stakeholder influence of the each stages of project. In the research the stakeholders were treated like one group, without dividing and specification of sample groups.

The questionnaire was leaned on the Likert five gradual scale, where the power was specified as: (5) very big impact, (4) big impact, (3) limited impact, (2) small impact, (1) no impact.

### 2.3 Survey questionnaire results

In the first of twenty two questions, which like the next two was a cafeteria question, the respondents were asked the question about their experience in project management. The results were as follows: 24% answered that they have been managing projects for shorter than two years, 48% answered that they have been managing it between two and five years. The interval 5–10 years chose 19% of the respondents, 8% of them managing projects more than 10 years (Figure 2).

In the next question respondents were asked about the quantity of completed projects. The results were
as follows: 5% of them completed not more than three projects, 19% of the respondents chose the answer between three and five. The largest group with 65%, was the group which completed between five and ten projects. More than ten projects were completed by 11% (Figure 3) of respondents.

The last question in the cafeteria questions group concerned the type of implemented projects. Here 40% of the respondents implement IT projects, 18% chose the answer infrastructure projects, 15% implement construction projects and 10% implement organisation projects. The answer “other projects” was chosen by 18% (Figure 4).

The first question from the second group, was to give the answer to the question who are for project managers stakeholders. 81% respondents decided that they are people/groups/institutions who have a business in project implementation, 6% of them answered that stakeholders are only the team which implement the project. The answer “only outside people” was chosen by 10%. However, 3% don’t mark out this notion (Figure 5).

The second question from the second group was related to the way of dividing project stakeholders. 32% of respondents chose the answer that they divide stakeholders into outside and inside stakeholders.

![Figure 3. Number of completed projects. Source: Authors' own study.](image)

![Figure 4. Type of implemented projects. Source: Authors' own study.](image)
For the division into white and black stakeholders vote 19%. However, 40% use an individual dividing, which depends of the type of implementing project, 8% don’t use any division (Figure 6).

The table below (Table 1) shows most frequently chosen answers by the respondents in the third part of the questionnaire, it is the part about stakeholder influence power of the project implementation.

From the above table it is possible to conclude that stakeholders impact on the project implementation is significant, because in seven cases the impact was specified as big impact (BI) in six cases it was specified as limited impact (LI) in three cases it was very very big impact (VBI), while only in one case the most frequently answer was small impact (SI). There was no impact answer (NI) in the group of most frequently. Also in the question on generally stakeholders impact of the project implementation the most frequently answer was big impact (BI).

The above statement confirms the table below (Table 2) in which are presented the rarest answers chosen by respondents.

The above analysis shows that the rarest answer is no impact (NI). The answer was chosen thirteen
Table 1. Most frequently chosen answers by responders, where VBI means very big impact, BI big impact, LI limited impact, SI small impact.

| Number | Description of the stakeholder impact | Maximum value in the answers |
|--------|--------------------------------------|-----------------------------|
| 1      | Identification of stakeholders       | VBI                         |
| 2      | Influence of the project define stage| BI                          |
| 3      | Influence of the project planning stage| BI                        |
| 4      | Influence on the scope of the project| LI                         |
| 5      | Influence of scheduling               | VBI                         |
| 6      | Influence on the project budget       | LI                          |
| 7      | Inclusion in the quality assurance plan| BI                        |
| 8      | Influence on order                    | LI                          |
| 9      | Influence of the implementation phase of the project| BI                        |
| 10     | Influence on the risk of the project  | BI                          |
| 11     | Influence on completion of the project successfully | VBI                  |
| 12     | Current information to stakeholders   | LI                          |
| 13     | Influence on the work of the project team| LI                      |
| 14     | Influence effective communication in the project| BI                      |
| 15     | Influence on the closing phase of the project| LI                     |
| 16     | Influence on the Go-Live phase of the project| SI                      |
| 17     | Influence on the course of the entire project| BI                   |

Source: Authors’ own study.

Table 2. Rarest answers chosen by respondents, where VBI means very big impact, SI small impact and NI no impact.

| Number | Description of the stakeholder impact | Minimum value in the answers |
|--------|--------------------------------------|-----------------------------|
| 1      | Identification of stakeholders       | NI                          |
| 2      | Influence of the project define stage| NI                          |
| 3      | Influence of the project planning stage| NI                        |
| 4      | Influence on the scope of the project| NI                          |
| 5      | Influence of scheduling               | NI                          |
| 6      | Influence on the project budget       | NI                          |
| 7      | Inclusion in the quality assurance plan| NI                        |
| 8      | Influence on order                    | NI                          |
| 9      | Influence of the implementation phase of the project| NI                     |
| 10     | Influence on the risk of the project  | NI                          |
| 11     | Influence on completion of the project successfully | NI                   |
| 12     | Current information to stakeholders   | NI                          |
| 13     | Influence on the work of the project team| NI                      |
| 14     | Influence effective communication in the project| SI                      |
| 15     | Influence on the closing phase of the project| VBI                    |
| 16     | Influence on the Go-Live phase of the project| VBI                  |
| 17     | Influence on the course of the entire project| NI                   |

Source: Authors’ own study.
Table 3. Interpretation of the research results by using median, where VBI means very big impact, BI big impact, LI limited impact and SI small impact.

| Number | Description of the stakeholder impact | Value of the median in answers |
|--------|---------------------------------------|---------------------------------|
| 1      | Identification of stakeholders        | 7 (LI)                          |
| 2      | Influence of the project define stage | 11 (LI)                         |
| 3      | Influence of the project planning stage | 10 (SI)                        |
| 4      | Influence on the scope of the project | 7 (VBI)                         |
| 5      | Influence of scheduling               | 11 (LI)                         |
| 6      | Influence on the project budget       | 9 (VBI/SI)                      |
| 7      | Inclusion in the quality assurance plan | 14 (LI)                        |
| 8      | Influence on order                    | 11 (SI)                         |
| 9      | Influence of the implementation phase of the project | 12 (LI) |
| 10     | Influence on the risk of the project | 13 (LI)                         |
| 11     | Influence on completion of the project successfully | 9 (LI) |
| 12     | Current information to stakeholders   | 14 (BI/SI)                      |
| 13     | Influence on the work of the project team | 15 (VBI)                   |
| 14     | Influence effective communication in the project | 12 (LI) |
| 15     | Influence on the closing phase of the project | 13 (BI/SI) |
| 16     | Influence on the Go-Live phase of the project | 14 (LI) |
| 17     | Influence on the course of the entire project | 14 (VBI/LI) |

Source: Authors’ own study.

Table 4. Interpretation of the research results by using standard deviation, where VBI means very big impact, BI big impact, LI limited impact, SI small impact and NI no impact.

| Number | Description of the stakeholder impact | Arithmetic average | Value of the standard deviation in the answers |
|--------|---------------------------------------|--------------------|-----------------------------------------------|
| 1      | Identification of stakeholders        | 12,40              | 12,99 (LI/BI)                                 |
| 2      | Influence of the project define stage | 12,40              | 11,22 (LI)                                    |
| 3      | Influence of the project planning stage | 12,40              | 10,41 (SI)                                    |
| 4      | Influence on the scope of the project | 12,40              | 10,95 (VBI)                                   |
| 5      | Influence of scheduling               | 12,40              | 8,14 (SI)                                     |
| 6      | Influence on the project budget       | 12,40              | 8,84 (VBI/SI)                                 |
| 7      | Inclusion in the quality assurance plan | 12,40              | 5,03 (NI)                                     |
| 8      | Influence on order                    | 12,40              | 8,44 (SI)                                     |
| 9      | Influence of the implementation phase of the project | 12,40 | 8,99 (SI)                                    |
| 10     | Influence on the risk of the project | 12,40              | 6,47 (NI)                                     |
| 11     | Influence on completion of the project successfully | 12,40 | 8,44 (SI)                                    |
| 12     | Current information to stakeholders   | 12,40              | 6,49 (VBI)                                    |
| 13     | Influence on the work of the project team | 12,40              | 6,58 (SI)                                     |
| 14     | Influence effective communication in the project | 12,40 | 4,04 (VBI)                                   |
| 15     | Influence on the closing phase of the project | 12,40 | 3,13 (VBI)                                   |
| 16     | Influence on the Go-Live phase of the project | 12,40 | 6,15 (BI)                                    |
| 17     | Influence on the course of the entire project | 12,40 | 10,53 (BI/LI)                                 |

Source: Authors’ own study.
times. The second rarest answer was very big impact (VBI), which was chosen three times. The third rarest answer which was chosen only one time was small impact (SI). Also here in the last question, which was dedicated to the stakeholder impact for the project implementation the rarest answer chosen by respondents was no impact (NI).

The author has also made an interpretation of the results by using median and standard deviation. The table below (Table 3) shows the results by using median.

The definition of median says: “In that series of ordered numbers, the number which is in the middle of the series when we talk about odd numbers. For even numbers of elements – arithmetic average of the middle numbers” (Krysicki at al. 2006). The above results, where to the numerical answers was assigned the nearest for the five gradual scale of stakeholder impact of project implementation, confirm the above answers which were presented like the rarest answers. The author also done an interpretation by using standard deviation (Table 4).

To make the results which are presented by using standard deviation more understandable, the author decided to add the arithmetic average column. Since 62 completed questionnaires were analyzed, the arithmetic average was in every question the same and there was even 12.40. Part of the standard deviation results is similar to the arithmetic average, what means that data can be reliable. This state of affairs is presented for example by questions about identification of stakeholders (question number 1), influence of the project defining stage (question number 2). Partly in this group can be counted questions about influence of the project planning stage (question number 3), influence on the scope of the project (question number 4) and influence on the course of the entire project (question number 17). Standard deviation in the other questions more or less deviate from the arithmetic average, so it is possible to accept that data is distributed, which can mean that the data is unreliable. In this situation there is a suggestion to deepen the research in order to confirm the result of this research.

3. Conclusion

According to PMI (2013) stakeholder is “a person, a group or an organisation, which can affect decisions, actions or project results. They can undergo the actual or perceived by them self-affect resulting by decisions, actions or project results from the project side”. It is important to manage the stakeholders actively during the project implementation. Unfortunately, many project managers due to no time dictated by a tight schedule or lack of knowledge and skills in project management skip the important part of the whole process. It can result in negative consequences for the whole project, from lengthening the implementation time through costs increase to the possibility to cut off the whole project. It is important to remember that a stakeholder can be the best friend for the project manager or his biggest enemy, who can prevent smooth project implementation.

The results received from the survey in the process of analysis and interpretation allow to put forward a thesis that stakeholders as a whole group (without using any division) are significant for the implementation of the whole project. Their impact is so important that it is possible to tell that they decide also about the project success or failure, and it is necessary to manage them not only in the planning phase by doing recognition of them, but also in the realisation phase (by estimating their impact and business which they have in project implementation) and project closing phase. The respondents show that stakeholders affect every area in large extent or very big extent. The fact has been proved in table 1 which shows the most frequently chosen answers by responders. However, by conducted analysis by the standard deviation it is possible to see a large dispersion of the results. It should result in deepening the research.

The conducted survey was limited by a small number of respondents and territorial range, based in four provinces. These are the two main reasons to continue the research more broadly, with more respondents involved, to make the results more generalized.

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