



## **STAKEHOLDERS IMPACT ANALYSIS IN HIGHER EDUCATION STUDY PROJECTS**

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### **Abstract**

The environment of higher education institutions became more and more dynamic and market oriented. Comprehending raising problems and possibilities is not an easy task. In order to cope with it higher education institutions initiate and implement various projects. However changing environment of higher education institutions affects project management activities and projects results as well. Beside of the importance of the implemented projects results, one of the main challenges of higher education projects is the identification and harmonization different stakeholders' needs, expectations and their impact to project activities and project results.

Based on growing higher education stakeholders' impact on higher education institutions projects the purpose of this paper is to determine and analyse the impact of stakeholders on higher education study projects.

To explore raised problem the paper integrates logical and systematic scientific papers analysis. The research process focusses on higher education study projects examples and empirically based on Olander (2007) stakeholders' impact index. In order to determine higher education study projects stakeholders influence research calculates stakeholder's impact index in relation to the project lifecycle stages.

The analysis of higher education study projects stakeholders' points to the future research area. Longitudinal research results could provide contributions to project management theory.

**Key words:** *Higher education institutions, study projects, stakeholders.*

**JEL code:** *O22, I23.*

### **Introduction**

Changing environment, increasing competitiveness brought changes to higher education institutions. Higher education institutions management processes expanded from student oriented approach to partnership oriented approach. Consequently these changes brought the changes of stakeholders connected to higher education institutions (Mainardes et al., 2010). For example students have more and more power related with study process, employers require creating a system of learning wide spectrum and interdisciplinary knowledges, the financially strict conditions of government institutions forces of finding new sponsorships ways.

For some years scientific literature has identified projects or innovative approaches as a key source of higher education competitive advantage (Harrow, 2014). However at the organizational level, project management literature focus on the business field for e.g. construction projects rather than on the higher education projects. Even more the awareness of changing environment requires reviewing a fundamental shift of higher education project stakeholders' management. Stakeholder opposition has been reported as the main reason for project failure (El-Gohary et al. 2006). Moreover Beringer et al (2013) states that stakeholder management are key success elements for project management. As higher education project

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stakeholders can make an important impact to the project results it becomes one of the central issues in order to achieve a high quality and coherent project results.

To address this gap in higher education projects stakeholders' management research filed, this article takes the first step in understanding stakeholder impact to higher education projects by the setting up research question: How to determine the impact of stakeholders and to assure their successful management while implementing higher education projects? Based on the Stakeholder theory approach, paper uses a systematic review approach to formalize higher education projects stakeholders' identification and provides impact analysis based on developed and tested Olander (2007) stakeholder impact index.

### Literature review

#### Origins for project stakeholders' analysis

A considerable amount of literature has been published on stakeholders' analysis. As well as in project management area there has been published demanding amount papers on understanding stakeholders' definition. While scientific literature on stakeholders' management can be traced back to 1980s, project stakeholders' theory construction is a much more recent development. A dominated theoretical issue related with stakeholders' definition in the field of project management was based on general stakeholders' definitions. As reported by Freeman (1984:46) stakeholder is "any group or individual who can affect or is affected by the achievement of the organization's objectives". Similarly, Eden and Ackermann (1998: 117) suggest defining stakeholders as "a people or small groups with the power to respond to, negotiate with, and change the strategic future of the organization".

The diversity of stakeholders' definitions implies that project stakeholders' definition combines broad and narrow approaches. Typically broad project stakeholders' definitions initially focus on the Freeman (1984) definition and shows project impact on stakeholders. For example PMI (2004) stakeholders describe as a persons or organisations, who are actively involved in the project or whose interests may be positively or negatively affected by the performance or completion of the project. Similarly Edum-Fotwe and Price (2009) stakeholders describe as individuals or group of individuals and organizations directly involved in the activities of the project. The narrower project stakeholders' definition highlights the individual interest of a particular stakeholder (Aaltonen & Kujala, 2010). Numerous studies have argued that project stakeholder could be defined as a person or group of people who are interested in project success and cares about environment which the project operates (Turner, 2014). For example McElroy and Mills (2000) uses a narrower approach and stakeholders describe as an individuals or groups who have interests on the project success and are acting at the same project environment. Moreover, detailed examination of projects stakeholders' definition by Miles (2015) indicated that there is no any of logical and systemic construction of project stakeholders' definition. Rather than doing so the author suggest focusing on the delineation of the stakeholders' contextual analysis.

Project stakeholders' analysis is an important part of project stakeholder management (Missonier, & Loufrani-Fedida, 2014). Typically stakeholders' analysis refers to the project planning phase. During that stage it is necessary to understand how different stakeholders may impact project results. However, according to Olander and Landin (2005) successful transactions with stakeholders are built on project team awareness on stakeholders. A negative



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stakeholders' perception or inadequate management can obstruct a project. As project stakeholders may be affected by project processes or project results they must not be ignored in project management (Beringer et al., 2013). Moreover scientists focus on a pivotal role of the project stakeholders' relationships analysis. As reported by Schiller et al (2013) stakeholders concept emphasize the importance of the stakeholders relationships' during project evolution process by answering to these questions: are the stakeholders being affected by or are they affected something or someone? In order to understand why this is so, recent scientific contributions have showed the importance of stakeholders' dynamics during the project lifecycle (Aaltonen & Kujala, 2010). Aaltonen and Kujala (2010:383) argue that "<...> each phase of the project lifecycle presents different environmental and social risks and opportunities for the project and for the stakeholders<...> so <...> different stakeholder engagement practices need to be employed during the different phases of the lifecycle". In a general approach, the main purpose of project management to win stakeholder support in order to make issues driven project processes than stakeholders driven (Jergeas et al., 2000).

According to Missonier and Loufrani-Fedida (2014:1108) "the management of a project's stakeholder means that the project is explicitly described in terms of the individuals and institutions that have a stake or an interest in the project". In this context, the ground on which stakeholders hold a power relative to project possibility to change depending on the impact which the stakeholders has. According to Van Offenbeek et al (2016:46) "developing an eye for the varying nature of issues, the forms of interrelatedness between project stakeholders, and how issues are intertwined with stakeholders' developing positions and views, may be a start in dealing with issues more consciously and choosing more deliberately and strategically which issues to prioritize".

While a number of studies have addressed the relationships between the various project stakeholders, the project stakeholders' identification and clustering as an operational construct is a gap in project management literature. In order to accomplish project stakeholders' analysis adequately, Gibson (2000) proposes to decompose project stakeholders into two project stakeholders' groups which are directly and indirectly related to the project activities. Winch (2004) suggests dividing project stakeholders into internal stakeholders who primary supports the projects (for. e.g. project owners, project client or client organization, project management team, user of final project result, suppliers, contractors, subcontractors, employees, creditors, financiers and etc.) and external stakeholders who are not formal members of the project, but may affect or be affected by the project or project results (for e.g. local and national authorities and governments, social organizations, political organizations, local communities, the general public, environmental agencies, interests groups, real estate owners, nearby residents, trade and industry, social services, media or anyone who believes he or she has a stake in the project). Kloppenborg (2009) developed a stakeholder grid which classifies project stakeholders into internal or external to the organization executing the project whether are they affected by the project processes or project results.

Project stakeholders' analysis incorporates different methods potentially useful to set up analysis, which can be classified into empiricism and rationalism analytical perspectives (Yang, 2014). Empiricism analytical perspective is based on the experienced way of stakeholder analysis. While rationalism analytical perspective is based on the almost all stakeholders' analysis results. According to Yang (2014) empiricism analytical perspective of project stakeholders' could be measured by focus groups, interviews, stakeholder circle methodology,



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surveys, workshops, while rationalism analytical perspective of project stakeholders' could be measured by snow-ball sampling and social network analysis. Most of the project stakeholders' analysis methods can be recognized as a 'diagnostic behavioural instrument' (Davis, 2016 cite Pinto & Slevin's, 1987). However in the domain of the project stakeholders' management project stakeholders' analysis goes only beyond the project planning phase. It represents a significant gap in a more detail internal and external project stakeholders' analysis questions during different phases of the project lifecycle.

### Origins for higher education stakeholders' analysis

With prospects of changing higher education environment, accelerating growth of different stakeholders' impact requires a new way of thinking about overcoming obstacles and acting on new opportunities. The higher education stakeholders' perspective might help higher education institutions to analyse reactional interaction of various stakeholders' (Jongbloed et al., 2008). Mainardes et all (2010:77) states that "identifying the stakeholders involved in higher education institutions is a fundamental step towards not only establishing competitive advantages for teaching institutions but also towards identifying their needs and setting up the means to meet them". Successful transactions with stakeholders are built on understanding stakeholders and determine their relevance to an organization or project (Brugha & Varvasovszky, 2000).

With the number of common characteristics higher education institution stakeholders could be analysed from organizations and individuals point of view. Mainardes et all (2010) propose that in many cases higher education institutions stakeholders are being analysed according to the influence or benefit gained from higher education institution. As higher education institutions are a complex and multifaceted systems, every stakeholder has a particular role dependent on their specific needs (Voss, Gruber & Szmigin, 2007). The core stakeholders of higher education institutions are students. As the main funder of higher education, another important group of stakeholders are government institutions (Jongbloed, Enders & Salerno, 2008). Lecturers and administrative staff are the other groups of stakeholders who have a significant impact on higher education institutions development. Table 1 presents findings related with higher education stakeholders groups.

Table 1

### Higher education stakeholders groups

| Researches                        | Higher education stakeholders  |
|-----------------------------------|--|
| Wagner, Hassanein and Head (2008) | Students: undergraduate or graduate students who are enrolled at a university or college. Instructors: who may have (or have not) face-to-face interaction with their students. Educational institutions: include colleges and universities. Content providers: instructors. Technology providers: include broad range of service providers. Accreditation bodies: organizations that assess the quality of education institutions as a whole or higher education institutions developed programs. Employers: those organizations that will hire graduates of higher education institutions. |
| Jongbloed, Enders and             | Governing entities: State & federal government; governing board; board of trustees, buffer organisations; sponsoring religious organisations. Administration: President  |



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| Researches                         | Higher education stakeholders  |
|------------------------------------|--|
| Salerno (2008);<br>Marić (2013)    | (vice-chancellor); senior administrators. Employees: Faculty; administrative staff; support staff. Clienteles: Students; parents/spouses; tuition reimbursement providers; service partners; employers; field placement sites. Suppliers: Secondary education providers; alumni; other colleges and universities; food purveyors; insurance companies; utilities; contracted services. Competitors: direct: private and public providers of post-secondary education; potential: distance providers; new ventures; substitutes: employer-sponsored training programmes. Donors: individuals (including trustees, friends, parents, alumni, employees, industry, research councils, foundations). Communities: neighbours; school systems; social services; chambers of commerce; special interest group. Government regulators: Ministry of Education; buffer organisations; state & federal financial aid agencies; research councils; federal research support; tax authorities; social security; Patent Office. Non-governmental regulators: Foundations; institutional and programmatic accrediting bodies; professional associations; church sponsors. Financial intermediaries: Banks; fund managers; analysts. Joint venture partners: Alliances & consortia; corporate co-sponsors of research and educational services. |
| Avci, Ring, and Mitchell (2015)    | Government: federal government institutions that are responsible for grant and aid funding, mandating laws, assessment and regulation processes. Parents and students, as well as student government associations. Governing board: responsible for electing, hiring, firing higher education institution presidents or faculty deans; responsible for the financial stability of institutions, compliance issues with federal and non-federal regulator bodies. Presidents as well as upper administrators. Faculty and staff. Communities. Donors such as foundations: Community Foundations, Family or Personal Foundations, Special Purpose, Foundation, Company Foundations, National Independent Foundations, who have significant effects on program development and higher education institutions operations.  |
| Chapleo, and Simms (2010)          | Students: sub-divided in a number of ways - prospective, current, or alumni; UK based or overseas; undergraduate or post graduate. Parents: as 'fundlers' and influencers. Schools: as a source of students as well as influencers. Student bodies such as The Student Union and National Union of Students. Local businesses and national business organisations. Staff of the university: divided into 'academic' and 'non-academic' staff groups. Academic and research bodies, including funding councils: Quality Assurance Agency, Higher Education Statistics Agency, Higher Education Funding Council and research councils. Regionally focused stakeholders: local government, local community, local police and community forums. The Government: Department of Education, Department of Innovation, Universities, etc. Societies, bodies and groups relevant to universities: 'learned' societies, such as the British Academy of Management, networking societies such as the Association of Business Schools, professional bodies. Trustees and governors.  |
| Mainardes, Alves and Raposo (2013) | Students. Teacher staff and (or) researches. Employers. Research and development partner companies. National government: ministries, accreditation bodies. Municipality hosting the university (local public authorities). Non-teaching staff. Other universities and/or higher education institutions: public or private. The university/s surrounding local community: populations, company, services. Secondary level schools. Student families. Research and development actors: incubators, technological parks, patent agencies, research centres, external researches. Society in general. Senior university management: rectory team, general counsel. Professional orders. Private financiers: business angels, risk capital firms, investors.  |





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| Researches | Higher education stakeholders   |
|------------|---|
|            | Business/commercial associations. Ex-students. Scientific communities and their publications and outputs. European Union. International students. |

*Source: Wagner, Hassanein and Head (2008); Jongbloed, Enders and Salerno (2008); Marić (2013); Avci, Ring, and Mitchell (2015); Chapleo, and Simms (2010) Mainardes, Alves and Raposo (2013).*

As can be seen from the table, different scientist demonstrates different approach and different research data regarding to the groups of higher education institutions stakeholders. Moreover, it shows that higher education institutions extend their recognizing of the importance of different stakeholders included in the all higher education institution processes.

According to Jongbloed et al (2008) for mapping the relationships with higher education institutions external and internal stakeholders three attributes: power, legitimacy and urgency could be used. It may help to identify crucial stakeholders to deal with and which relationships to maintain. Detailed examination of higher education institution stakeholders by Bjørkquist (2009) showed that mapping stakeholders relationships with higher education institutions could be managed from voting, economic and political point of view. By the examining the effects of group influences, the author offers:

- to the group of voting add internal stakeholders as: University College Board, academics, students and technical-administrative staff, elected rector, faculty boards, elected deans and heads of department, appointed deans and heads of department; and external stakeholders as: external members of the University College Board, Tele mark county, the parliament, the government and the ministries;
- to the group of economic influence add internal stakeholders as: students; and external stakeholders as: the government, the parliament, the ministries, regional and local businesses contracting teaching and research;
- to the group of political influence add internal stakeholders as: students; and external stakeholders as: Tele mark county, regional and local businesses contracting teaching and research.

As can be seen from given examples, higher education institutions stakeholders can vary depending on the power to influence the higher education institutions decisions, processes and activities as well. Mainardes et al (2013) indicate that no one stakeholder holds a static position and the level of their influence can vary over the time. Understanding stakeholders' influence over higher education institutions can be done by evaluating various stakeholders influence over the time.

### Origins for higher education projects stakeholders' impact analysis

Typically project success is measured by the time, costs and performance. According to Dvir et al (2003) there are a lot of evidences that project was executed as planned on time, within the budget and with perceived project results but turned out to complete failures. The problems is even more sense when the kind of project activities depend on the stakeholders impact on the outcomes of earlier project activities. It shows that if the time of project stakeholders' identification is usually the phase of project planning, the project could fail in 'neglecting' stakeholders' possible impact during project life cycle. According to stakeholder theory all the projects should allow to take into account the complexity of all project activities



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and the returns of the activities results for all stakeholders. As stakeholders may influence projects in various stages: insights regarding to the probable stakeholders' reaction to a project activities and (or) outcomes necessarily need to be in parallel during the periods of project life cycle. In order to delineate the impact of projects stakeholders Yang (2014) proposed rationalism and empiricism analytical perspectives. Moreover delineation of stakeholders' perspectives requires analysing the different foundations for stakeholders influence such as power, legitimacy or urgency.

To summarise, the higher education stakeholders' review, the paper authors highlights that most of the research carried out in the higher education institutions context still employs almost the same groups of stakeholders. Consequently there is still much to be done ensuring higher education institutions stakeholders in a more contextual way, for example as higher education projects. As there are no scientific evidences about the higher education project stakeholders, this study contribute towards by using higher education stakeholders groups presented in the 1st table.

After outlining the higher education projects stakeholders' analysis, the other question that has to be answered is: how to measure stakeholders' significant impact on different project lifecycle stages. As different stakeholders impact analysis models (Stakeholders cooperation / threat model, Friedman and Miles stakeholder model, Mitchell's stakeholder salience model, stakeholder circle™ model, stakeholder grid, power / interest matrix, Rowley's stakeholder network model) emerge various stakeholder attributes, they are only used to identify important project stakeholders. According to the Wessinger (2012) the potential project stakeholders' impact index should include the information about: the source of stakeholders' power that makes them important in the context of the project; the level of stakeholders influence the project using their source of power; and stakeholders' possible interactions to look after their interests.

In order to achieve the objectives set, higher education projects stakeholders' impact analysis theoretically based on Olander (2007) developed projects stakeholders' impact index. Projects stakeholders' impact index provides a measure of the degree of stakeholders' impact in relation to the project. As the project stakeholders may influence projects in various project stages, the higher education project stakeholders' impact index incorporates different project lifecycle stages. Moreover the project stakeholder impact index emphasizes the role of internal and external project stakeholders. Internal higher education project stakeholders' impact index of each lifecycle stage of the project could be calculated as follow:

$$ISII_j = ViII \times A \times Pos \quad (1)$$

Where:  $ISII_j$  – concrete project stage stakeholders impact index,  
 $j$  - project lifecycle stage,  
 $ViII$  – vested interest–impact index,  
 $A$  - stakeholder attribute value,  
 $Pos$  - position value.

External stakeholder impact index of each lifecycle stage of the project could be calculated as follow:

$$ESII_j = ViII \times A \times Pos \quad (2)$$

Where:  $ESII_j$  – concrete project stage stakeholder impact index.

The stakeholder attribute value ( $A$ ) is assessed by the weighing of power, legitimacy or urgency attributes. The position value ( $Pos$ ) is numerically assessed as: active opposition,



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passive opposition, not committed position, passive support position and active support position. If stakeholders' impact index is positive, the concrete stage of the project has a favourable stakeholder impact; if it is negative, the stakeholder impact is unfavourable.

### Research methodology

To verify the usefulness of the empirical insights, a qualitative research strategy within interview method was completed. The data for the analysis was carried out during 2014 - 2015. The case of two ongoing higher education study projects was analysed. Because of the lack of higher education projects stakeholders existing research, the use of case study method contributed to understanding how higher education project stakeholders' impact index is actually conducted. Data was completed through structured interviews with the projects stakeholders and based on the initiation, planning, execution, control, and closing project life cycle phases (PMI, 2008). Firstly, the internal and external project stakeholders were identified and analysed. The analysed study projects included 16 project stakeholders who were indicated at the stage of project initiation. The first and the second study project had the same amount of identified stakeholders (see 2 table).

Table 2

### Higher education study projects stakeholders groups

| <b>1<sup>st</sup> project</b>                                |   |
|--|---|
| <b>Stakeholder</b>   | <b>Description</b>  |
| Embodiment institution                                       | European Social Fund Agency which was carrying out of project agreement obligations.  |
| The head of the project                                      | University representative who was carrying out the project agreement obligations and took responsibility for the project implementation activities. |
| Project team   | These were responsible for the implementation of project activities, coordination, and control and project finance management.                      |
| Project employees: scientists, researchers, etc.             | These were responsible for the certain organized activities, for e.g. research.   |
| Target group of the project: university administrative staff | These were responsible for the internal study quality system design and implementation.   |
| The Ministry of Higher Education                             | Was carrying the content of the project completion with the provisions of the national program.   |
| Project participants   | Students, faculties' members, alumni and others. They were responsible for providing information.   |
| Final project result users                                   | Students, teachers, and other persons associated with University.   |
| <b>2<sup>nd</sup> project</b>                                |   |
| Embodiment institution                                       | European Social Fund Agency which was carrying out of project agreement obligations.  |
| The head of the project                                      | University representative who was carrying out the project agreement obligations and took responsibility for the project implementation activities. |
| Project team   | Responsible for the activities of the project implementation, coordination, monitoring and finance management.                                      |
| The Ministry   | Ministry of Education and Science, which carried out the project contract   |





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| 1 <sup>st</sup> project    |  |
|----------------------------|--|
| Stakeholder                | Description  |
|                            | liabilities. The representatives of the ministry were responsible for project approval and funding.                          |
| Partners of the project    | Union of the Architects which was carrying out the obligations of the project contracts.                                     |
| Project participants       | Integrated studies students. Students will use new learning materials and tools.   |
| Final project result users | All university staff and students who will be able to use project results and developed study material.                      |
| Teachers                   | During the project implementation there were carried teachers training sessions, which were linked to the curriculum update. |

Source: information based on the empirical research data.

Secondly the level and probability of higher education projects stakeholders was evaluated (from 1 to 5) and calculated vested impact index (ViII), thirdly the attributes for each higher education study project stakeholders' during project different life cycle phases were evaluated, finally the position of each stakeholder was evaluated by the calculation of internal and external higher education project stakeholders' impact index.

### Pilot study research results

The higher education project stakeholders' impact index has been calculated as the mean of the influence of each study project stakeholder (see 3 table). The mean was calculated by summing the scores for influence for each column in the influence matrices (personal, positional and political). The average score for the 1<sup>st</sup> higher education study project internal stakeholders' impact index for analysed study projects implementation phase was 2.6 external stakeholders' impact index for analysed projects was 1.915.

Table 3

### Project 1. Project life cycle phase: initiation.

#### The calculation of Higher education study project stakeholders' impact index

| Stakeholders                                     | Attributes* |            |         | Position        | Higher education study project stakeholders' impact index |     |     |                                       |
|--|-------------|------------|---------|-----------------|---|-----|-----|---------------------------------------|
|  | Power       | Legitimacy | Urgency |                 | ViII  | A   | Pos | ISII <sub>j</sub> , ESII <sub>i</sub> |
| Embody institution                               | 0.4         | 0.3        | 0.3     | Active support  | 1.00  | 1   | 1   | 1                                     |
| The head of the project                          | 0.4         | 0.3        | 0.3     | Active support  | 1.00  | 1   | 1   | 1                                     |
| Project team                                     |             | 0.3        | 0.3     | Active support  | 1.00  | 0.6 | 1   | 0.6                                   |
| Project employees: scientists, researchers, etc. | 0.4         | 0.3        | 0.3     | Active position | 1.00  | 1   | -1  | -1                                    |
| Target group of the project: university          |             |            | 0.3     | Active support  | 0.57  | 0.6 | 1   | 0.342                                 |



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| Stakeholders                     | Attributes* |            |         | Position         | Higher education study project stakeholders' impact index |     |     |                                       |
|----------------------------------|-------------|------------|---------|------------------|---|-----|-----|---------------------------------------|
|                                  | Power       | Legitimacy | Urgency |                  | ViII  | A   | Pos | ISII <sub>j</sub> , ESII <sub>i</sub> |
| administrative staff             |             |            |         |                  |   |     |     |                                       |
| The Ministry of Higher Education |             |            | 0.3     | Active position  | 0.45  | 0.4 | -1  | -0.18                                 |
| Project participants             |             |            | 0.3     | Neutral position | 0.60  | 0.3 | 0   | 0.18                                  |
| Final project result users       |             |            | 0.3     | Active support   | 0.77  | 0.3 | 1   | 0.213                                 |

Source: information based on the empirical research data.

\* The distribution of attributes weights was based on Olander (2007) example, and varied from 0.4 till 0.3, where power distribution max. was 0.4, legitimacy and urgency - 0.3.

Table 3

### Project 2. Project life cycle phase: initiation.

#### The calculation of Higher education study project stakeholders' impact index

| Stakeholders               | Attributes* |            |         | Position         | Higher education study project stakeholders' impact index |     |      |                                       |
|----------------------------|-------------|------------|---------|------------------|---|-----|------|---------------------------------------|
|                            | Power       | Legitimacy | Urgency |                  | ViII  | A   | Pos  | ISII <sub>j</sub> , ESII <sub>i</sub> |
| Embodiment institution     | 0.4         | 0.3        | 0.3     | Active support   | 1   | 1   | 1    | 1                                     |
| The head of the project    | 0.4         | 0.3        | 0.3     | Active support   | 1   | 1   | 1    | 1                                     |
| Project team               |             | 0.3        | 0.3     | Active support   | 0.69  | 0.6 | 1    | 0.414                                 |
| The Ministry               | 0.4         | 0.3        | 0.3     | Active position  | 1   | 1   | 1    | 1                                     |
| Partners of the project    |             | 0.3        | 0.3     | Active support   | 0.77  | 0.6 | 1    | 0.462                                 |
| Project participants       | 0.4         |            | 0.3     | Active position  | 0.20  | 0.7 | -0,5 | -0.07                                 |
| Final project result users |             |            | 0.3     | Neutral position | 0.69  | 0.3 | 0,5  | 0.104                                 |
| Teachers                   |             |            | 0.3     | Active support   | 0.60  | 0.3 | 0,5  | 0.09                                  |

Source: information based on the empirical research data.

\* The distribution of attributes weights was based on Olander (2007) example, and varied from 0.4 till 0.3, where power distribution max. was 0.4, legitimacy and urgency - 0.3.

The average score for the 2<sup>nd</sup> higher education study project internal stakeholders' impact index for analysed study projects implementation phase was 2.407 external stakeholders' impact index for analysed projects was 1.575.

Analysis revealed that the relative importance of different stakeholders depends on the evaluation of stakeholder attributes. Olander (2007) found that project stakeholder impact analysis data shows that the power is the most important attribute to affect the project's



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decision-making process. Accordingly, adopting methodology for the higher education projects stakeholders' analysis provides objective insights.

### Discussion and Conclusions

The higher education projects stakeholders' impact index could be implemented as a tool to identify and evaluate higher education project stakeholders' impact on different project life cycle stages. The calculation of the index gains to understand how the results of project activities affect the higher education projects stakeholders.

This is the first pilot study which incorporates study project stakeholders as a pivotal dimension for the project performance results. Previous studies have not addressed the higher education projects stakeholders' analysis comprehensively. The operationalization of higher education institutions study projects impact index and the pilot findings represent an important extension of Olander (2007) conceptualization of stakeholders' impact index. More specifically, it's significant impact on the higher education projects stakeholders' impact index supported by the theoretical insights and enabling role for higher education project stakeholder impact management, which have not been previously tested.

Another important finding turns to the impact of higher education internal and external project stakeholders. There was find out that low level of external higher education project stakeholders may change rapidly moving through the project lifecycle stages. This extends the traditional higher education situation where usually project authorities ignore the role of external higher education project stakeholders. Indeed the higher education project stakeholders' impact index may help to indicate the value of each project life cycle results.

While is acknowledged that many factors are outside domain of the project management which influence project performance, the theoretical part of higher education projects stakeholders analysis enhance our understanding of such phenomena. This study also has implications for higher education projects management practice. The first implication is the need of recognize the central role of the stakeholders impact index during each stage of project life cycle. The second implication for project management points the need to find the other measures of higher education project stakeholders attributes. The results of this study indicated that higher education project stakeholder's power, legitimacy and urgency attributes do not explain the crucial role of project stakeholders.

There is also limitation of this study. The study is not representative of all higher education projects. The case study was completed from two projects data. Also the study was time constrained and the researchers only had limited access to project stakeholders..

However this study also points to the areas of potential future research. As is often the case, longitudinal research could prove valuable contributions to project management theory development. Research from the different higher education projects perspectives would complement and add findings to this study.

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