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# Strategic, fundamental and means objectives of different stakeholders in collaboration between universities and surrounding society

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**ABSTRACT**

Universities play an important role in the development of society. However, it is not always clear what the objectives of collaboration between a Higher Education Institution (HEI) and external stakeholders from the surrounding society are. In this study, value-focused thinking was applied to construct structures of strategic, fundamental and means objectives of different stakeholders working practically with collaboration between an HEI and the surrounding society. Respondents in three groups of stakeholders from a university and external parties were interviewed. Focus in this study is on general objectives of collaboration between an HEI and the surrounding society. Based on the interviews and feedback, objectives were identified and SSFMO (Structure of Strategic, Fundamental and Means Objectives) was constructed from each respondent's answer. Generally, the fundamental objectives differed more between the stakeholders than the means objectives did. How SSFMOs could be used in practical collaboration projects is discussed in the paper.

## Introduction

The role of universities has changed over time and universities have played an important role in developing society in different ways. Education was the main mission that universities had from the beginning and later, research became the second main mission. Nowadays collaboration with the surrounding society often called 'the third mission', is an important mission of higher education institutions (HEIs), as discussed for example by Etzkowitz et al. (2000) and Sánchez-Barrioluengo (2014). However, both authors question whether the different missions should be distinguished from each other. Collaboration activities span technology-oriented interaction of universities and companies, but also link the university to civil society (Göransson, Maharajh, and Schmoch 2009). In the model by Youtie and Shapira (2008), HEIs are parties of innovation systems, linking research with application and commercialisation of products and taking a role of catalysing economics as well as social development. Furthermore, HEIs actively attempt to use knowledge and scientific results to promote development in their own region as well as in a larger context. Governmental agencies and universities have made efforts to increase academic engagement with the society surrounding the university, for reasons such as to generate legitimacy in society and to stimulate economic growth (Perkmann et al.

2013). In many countries the governmental policy includes a goal of integrating the third mission with the overall mission of the HEIs (Nelles and Vorley 2010).

In this study, surrounding society to HEI is defined in a broad way, to include external stakeholders from private companies, public organisations and nongovernmental organisations outside the HEI, and the stakeholders can be local, regional or national depending on the particular project.

In Sweden it is mandatory for HEIs to collaborate with the surrounding society. The Swedish Higher Education Act chapter 1 §2 states that: *The mandate of higher education institutions shall include third stream activities and the provision of information about their activities, as well as ensuring that benefit is derived from their research findings* (Swedish Higher Education Act 1992:1434). The Act in Swedish includes the phrase 'to collaborate with the surrounding society' ('att samverka med det omgivande samhället') (Högskolelag 1992:1434). This raises the question of what is meant by collaboration and what its objectives are. In the Swedish context, people at universities prefer not to use the term 'third mission' of collaboration. One reason for this is that collaboration could be seen as something not so important – a third task that comes last and could be done if there is time for it. Another reason is that companies and organisations

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may demand different kinds of work from universities 'because you must perform your third mission'.

Rybnicek and Königsgruber (2019) point out that a collaboration between a university and external stakeholders from the surrounding society can involve different objectives and face different constraints. The contrast between different objectives enhances the value of collaboration but is also a source of complications. Furthermore, Rybnicek and Königsgruber (2019) describe that objectives refer to strategies, visions, goals, plans, or expected outcomes of the collaboration. If the objectives of stakeholders are unclear or not compatible with each other, it is hard to make the collaboration successful. It is important that the stakeholders establish a shared understanding of their respective objectives and create a win-win situation where both partners can get a useful result, even if their objectives differ. However, there are also problematic situations, e.g. if patents, and related confidentiality, decrease the possibilities to publish research results (Sánchez-Barrioluengo 2014).

Focus on this study is on objectives of collaboration between an HEI and the surrounding society generally, i.e. not on a specific collaboration project. To investigate the stakeholders' objectives, value-focused thinking was applied to analyse interviews of respondents in three stakeholder groups. Structures of strategic, fundamental and means objectives (SSFMOs) were constructed based on interviews and feedback discussions. The resulting SSFMOs are used for comparisons between the stakeholder groups and for a discussion of how SSFMOs could be used in practical collaboration projects. The use of value-focused thinking in construction of SSFMOs for collaboration between the university and external stakeholders has, to our knowledge, not been presented before.[1] Our study has a focus on a Swedish university, and the applicability to other contexts of the method used and the results found are discussed in the paper.

## Value-focused thinking

Values are fundamental to everything we do, and values should therefore be our driving force in the decision-making process (Keeney 1996), regardless of whether a decision maker is an individual person, an organisation, or a company. This is the basis for value-focused thinking (VFT) as a contrast to alternative-focused thinking. Briefly, when one starts with alternatives one may focus on the alternatives that are available from the beginning (Keeney 1992). When one starts with values and objectives, new alternatives may be found during the process. The aim in applying VFT is to organise unstructured and creative thinking into a structure that can facilitate decision makers to make informed decisions that can be agreed upon by several stakeholders (Keeney 1992). The process of structuring objectives, based on underlying values, helps to understand what a decision maker cares about in a specific context (Dhillon and Torkzadeh 2006). VFT has previously been applied in different decision situations, e.g. concerning decisions of a large hydroelectric-based electric utility (Keeney and McDaniels 1992), information system security (Dhillon and Torkzadeh 2006) and in the context of sustainability in the built environment (Alencar, Priori Jr, and Alencar 2017).

The process of working with a decision problem, according to VFT, includes identifying objectives that can be strategic, fundamental or means objectives. To organise and illustrate different stakeholders' various objectives, one can create an SSFMO, a structure of strategic, fundamental and means objectives. The strategic objectives are long-lasting and rarely change over time. Fundamental objectives are based on something that the decision maker wants to achieve (Keeney 1996). They are valuable for their own sake. The means objectives are used to achieve the fundamental objectives. They can be used to create alternatives that enable fundamental objectives to be achieved (Alencar, Priori, and Alencar 2017). Fundamental objectives are structured in hierarchies while means objectives are structured in networks (see Clemen and Reilly 2014). The upper levels in a hierarchy represent more general objectives and the lower levels describe important elements of the more general objectives. Means objectives can be linked and affect several different fundamental objectives (Clemen and Reilly 2014). Whether an objective is a means or a fundamental objective depends on the context.

In order to distinguish between fundamental and means objectives, it is useful to ask the question: *Why is this objective important*? (Keeney 1988). It is also possible to ask the stakeholders: *What do you want to achieve in this situation*? (Keeney 1996).

Figure 1 shows a schematic model of a structure with strategic, fundamental and means objectives.

## Methodology

To investigate, in a Swedish context, what different stakeholders' objectives of collaboration between an HEI and external stakeholders from the surrounding society are, three respondents from three different stakeholder groups were individually interviewed with semi-structured interviews.

The respondent groups are:

Group (1) Senior advisors in collaboration at Linnaeus University, Sweden, belonging to the university administration. The function of senior advisor in collaboration is an administrative role at the university and one of the tasks is to facilitate
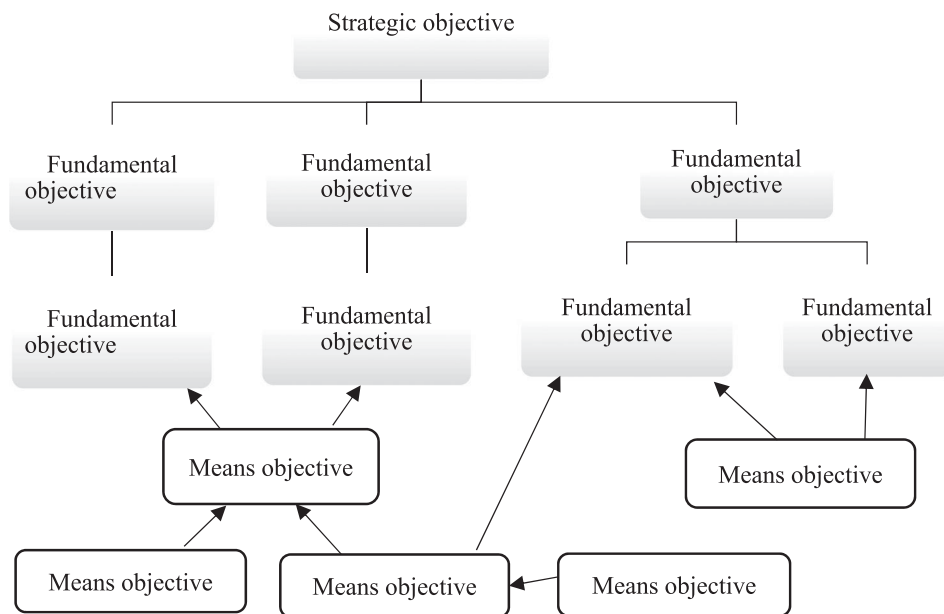
**Figure 1.** A schematic model for structures of strategic, fundamental and means objectives (SSFMO).

researchers, teachers and students to collaborate with the surrounding society.

Group (2) Persons working with research and teaching at Linnaeus University, representing different faculties and different subjects. One professor, one senior lecturer and one lecturer were interviewed.

Group (3) Persons in organisations working with collaboration outside the university. The respondents in this group have different workplaces, representing different organisations: respondent A works at a region, respondent B works at a municipality and respondent C works at a research institute which has the collaboration between different stakeholders as one of its main focuses.

Due to the situation with Covid-19, we were not able to interview any private company. Intended private companies for the study were busy reorganising their operations based on the prevailing conditions and were not able to set a time for an interview.

A total of nine people (eight females and one male) from three different stakeholder groups were interviewed, three persons from each group. The selection of respondents was based on their experience, interest, and knowledge of collaboration between the university and external stakeholders from the surrounding society.

The respondents were informed about the purpose and content of the work as well as the ethical approach of the study and they have given consent to be interviewed. Participation in the study has been completely voluntary.

Each respondent chose how the interview was to be conducted: as a physical meeting, over the telephone or via other digital media. The respondents received the main questions in advance (see below), so that they had the possibility to prepare themselves. The

interviews took between 10 and 30 min and were recorded. Respondents in the shorter interviews had a noticeably clearer picture of collaboration and what their objectives were. The respondents in the longer interviews had reasoned more about collaboration and their objectives.

The main questions for the semi-structured interviews:

(1) What is collaboration from your point of view?
(2) What do you want to achieve with collaboration between the university and external stakeholders?
(3) What are important activities in collaboration for you and your organisation?
(4) Do you and your colleagues at the university/ organisation discuss different activities and ideas about collaboration between the university and external stakeholders?

In addition to the main questions, follow-up questions were asked. Specifically, several *Why is this important* questions were key during the interviews. The answers to these questions were used to separate the fundamental and means objectives from each other during the analysis phase.

General ideas from the interviews were written down and these notes and the recorded interviews were both used during the analysis of what the respondents mean by collaboration and for the construction of SSFMOs. The work with the SSFMOs was based on value-focused thinking. The work was iterative and the SSFMOs were revised a few times during discussions between the authors. After this, each respondent had an opportunity to give feedback on his/her SSFMO in writing or orally, for example, if [s]he wanted to change something in the SSFMO. The three SSFMOs in group 1 participants

were merged to a combined group 1 SSFMO, and the respondents gave feedback on the combined SSFMO, too. Similarly, a combined SSFMO for group 2 was constructed and feedback was elicited. No combination was done for group 3 because all respondents represent different organisations.

## Results

In this section, SSFMOs are presented on a group basis for the group of senior advisors as well as for the group of researchers and teachers.[2] Individual SSFMOs are presented for the group of external stakeholders because each stakeholder represents a different organisation.

### Strategic objectives

The strategic objective for senior advisors is to follow the university's vision: to set knowledge in motion for sustainable societal development (Figure 2), based on the interview with one of the respondents. The other respondents named contribution to the country's development and benefiting the world as strategic objectives. These two objectives were interpreted to include the university's vision, and the respondents accepted this when giving feedback on the combined SSFMO. The strategic objective of the group of researchers and teachers focuses on benefits to society (Figure 3). Also, the external stakeholders' strategic objectives deal with benefits for

society, either explicitly or implicitly as societal or regional development (Figures 4–6).

### Fundamental objectives

To solve societal challenges, to strengthen education and research at the university, to contribute to skill enhancement and to develop the region are the fundamental objectives at the highest level in the SSFMO of the senior advisors (Figure 2). The fundamental objectives of the group of researchers and teachers include contributing to benefit society with knowledge through education and research (Figure 3). Furthermore, to develop as a researcher and to increase research connection in undergraduate education are fundamental objectives of the group of researchers and teachers, as well as to increase contacts with the surrounding society and to contribute to increased innovation in society.

The fundamental objectives of two of the external stakeholders from the region and municipality (Figures 4 and 5) have a focus on developing the community locally and regionally. The third external stakeholder's fundamental objectives are about solving challenges, promoting innovation, and helping companies to become competitive (Figure 6).

### Means objectives

All groups have mediation activities, networks, meeting points or other common projects as central means objectives to achieve collaboration (Figures 2–6).
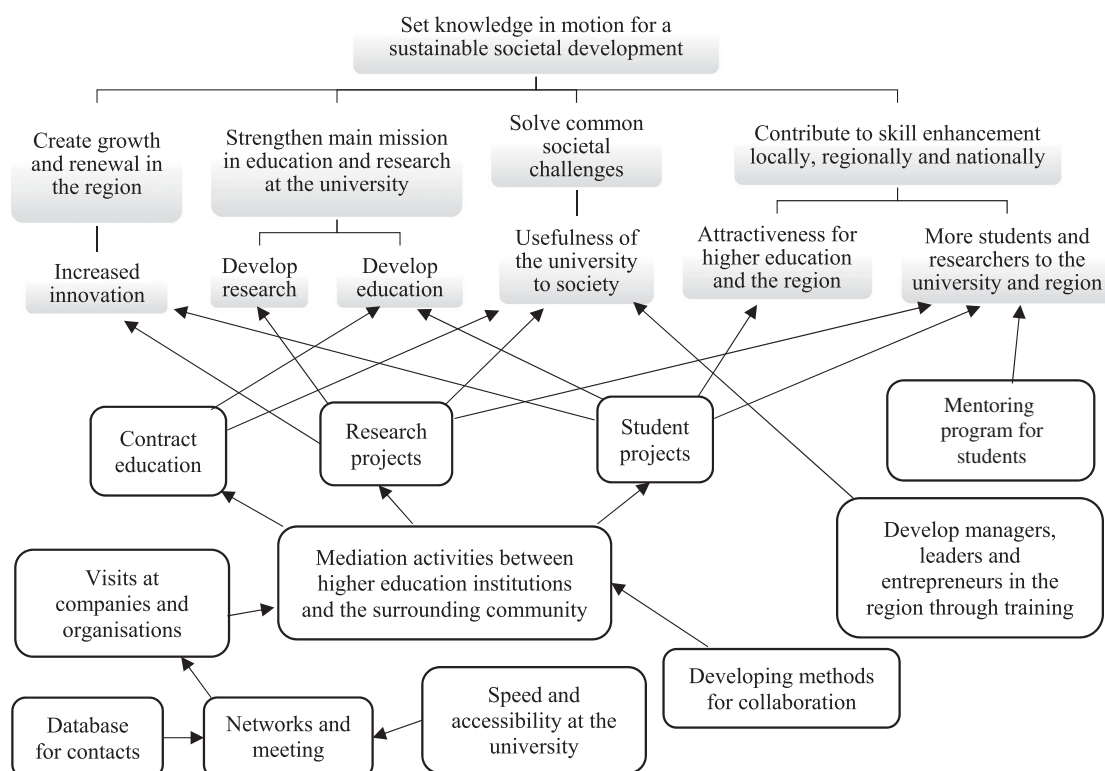


**Figure 2.** Structure of strategic, fundamental and means objectives of senior advisors in collaboration.
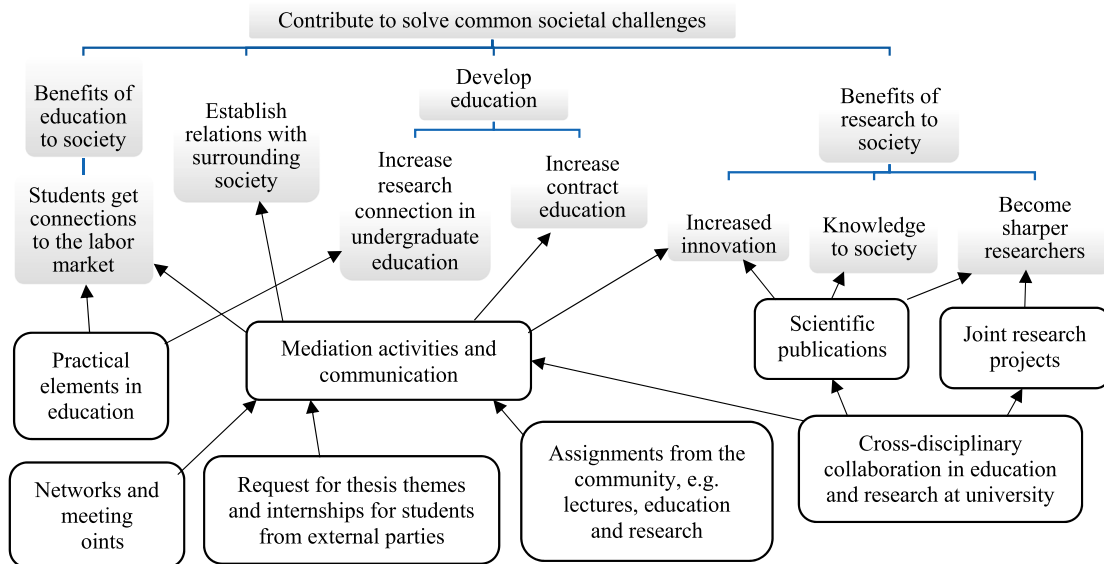
**Figure 3.** Structure of strategic, fundamental and means objectives of researchers and teachers.

Something that distinguishes the group of researchers and teachers from the two other groups of respondents is that they have internal cross-disciplinary cooperation as a means objective to achieve the fundamental objectives. One of the respondents from the group of researchers and teachers pointed out during the interview that when several researchers from different subjects work together it is easier to solve challenges in society. On the other hand, to be able to work together both internally and externally between the university and the surrounding society all of the stakeholder groups mention networks, meeting points and mediation activities as important means objectives, in order to reach the fundamental objectives.

The means objectives of two of the external stakeholders illustrate that it is important to make use of the students' presence in the area and take advantage of the students' knowledge and activities, in order to achieve the fundamental objectives (Figures 4 and 6). The role of the students is also included in the means objectives of the third external stakeholder (Figure 5). Communication, making research available, establishing relations with researchers and exchange of knowledge are included in the means objectives of the external stakeholders, to reach different fundamental objectives.

## Discussion

This study focuses on objectives of different stakeholders working with collaboration between an HEI and the surrounding society. Value-focused thinking
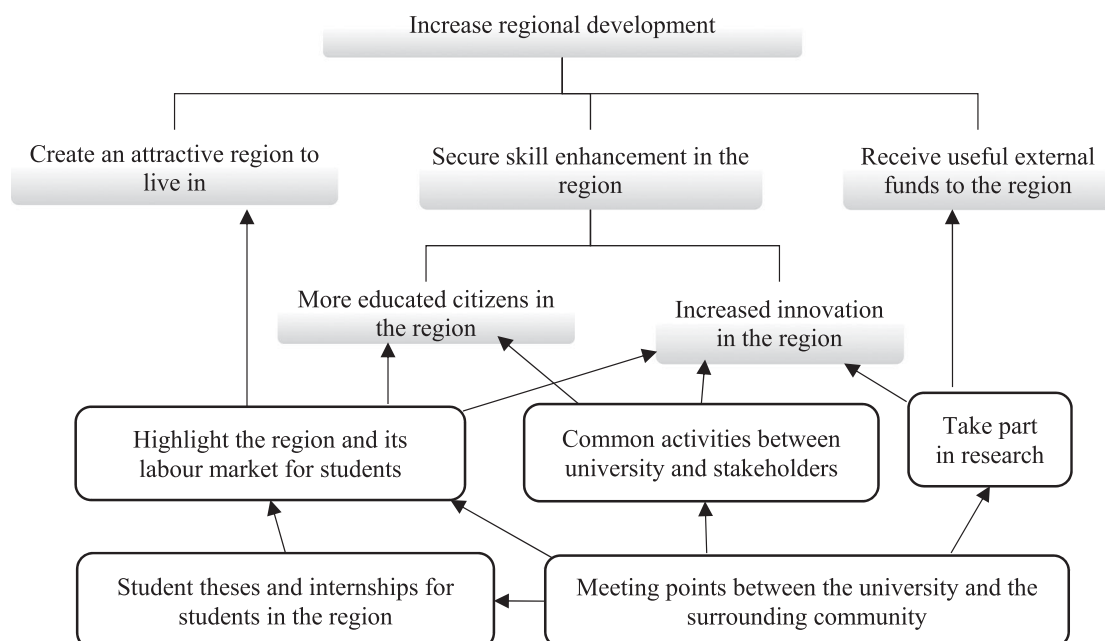
**Figure 4.** Structure of strategic, fundamental and means objectives for respondent A, external stakeholder.
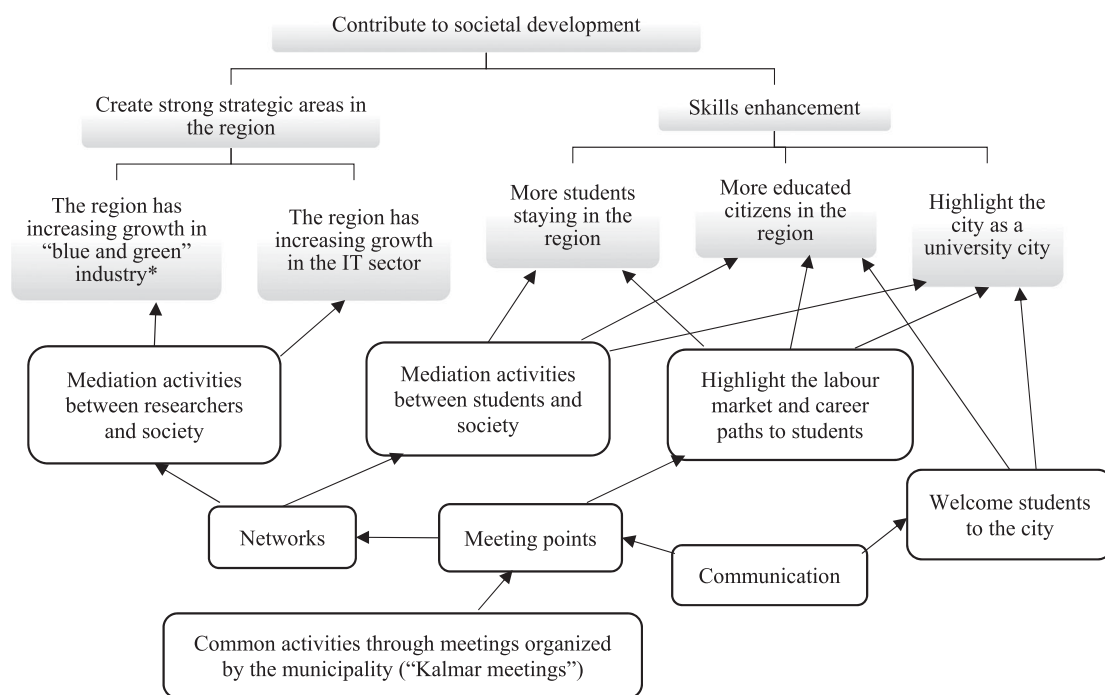
**Figure 5.** Structure of strategic, fundamental and means objectives for respondent B, external stakeholders. *'Blue and green' industry refers to activities in water, forestry, agriculture etc.

was applied to structure the respondents' answers in nine different structures of strategic, fundamental and means objectives. This has not been done earlier, as far as we know. After the interviews and the construction of SSFMOs, the respondents were able to give feedback on their SSFMOs to assure the results were correct. The SSFMOs were combined to one SSFMO for the group of senior advisors as well as for the group of researchers and teachers, and the respondents in these groups gave feedback on the combined structure of their own group. The SSFMOs of external stakeholders were not combined because these stakeholders represent different organisations. A limitation of this study is a low number of interviews performed. In addition, the study was performed around one university in Sweden. However, the results show how SSFMOs can be constructed and which objectives may generally be involved in
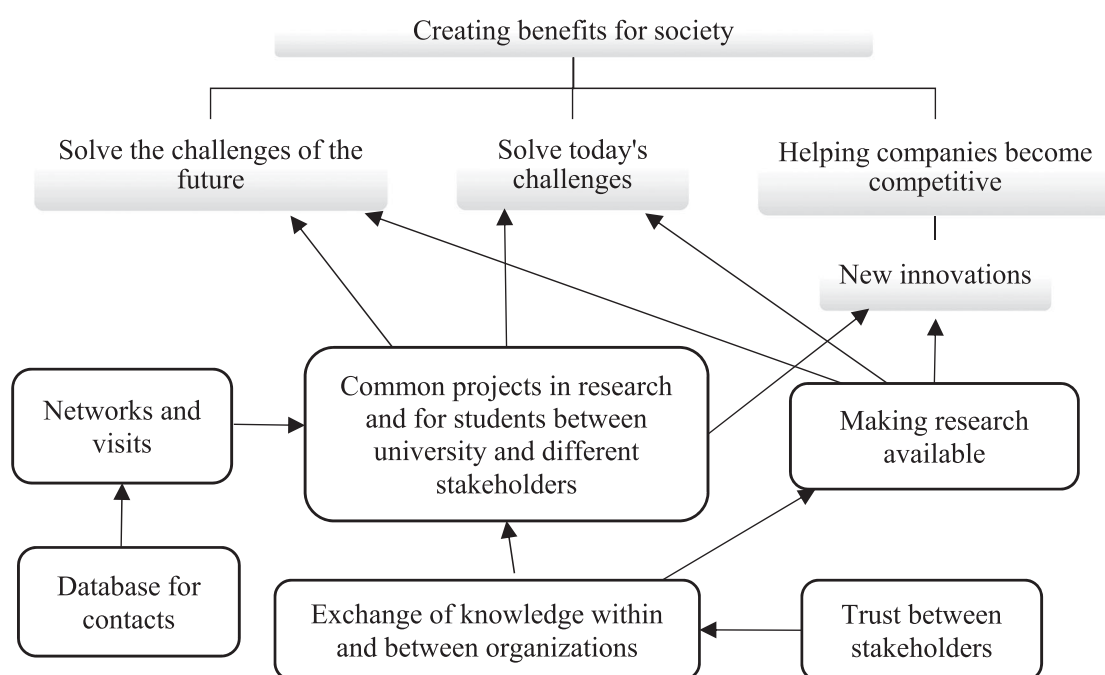


**Figure 6.** Structure of strategic, fundamental and means objectives for respondent C, external stakeholder.

collaboration between an HEI and external stakeholders. This makes the method used and the results found in this study relevant to other contexts, too, in countries where collaboration between universities and surrounding society is promoted. Some of the respondents addressed the benefit of the SSFMO making visible what they had said during the interviews and what they want to achieve with collaboration. They also mentioned that SSFMOs are a pedagogical tool to visualise different stakeholders' views in certain matters and decision problems.

SSFMOs show how the fundamental and means objectives of collaboration support the organisations' strategic objectives. Fundamental objectives in SSFMOs show what stakeholders, representing different organisations or different stakeholder groups at a university, want to achieve with collaboration and whether there are substantial differences between SSFMOs (Figures 2–6). The reason for differences in the SSFMOs is the different values on which the fundamental objectives are based (see Keeney 1992). Means objectives are tools to reach the fundamental objectives. In this study, means objectives mainly represent actual activities performed during a collaboration and they differ less than the fundamental objectives between different stakeholder groups (Figures 2–6). Rybnicek and Königsgruber (2019) point out the importance of clarity of objectives for successful collaboration. One way to increase clarity is to apply value-focused thinking to construct SSFMOs of different stakeholders. Comparisons and discussions of different SSFMOs could help the different stakeholders to understand each other during the collaboration, both in the planning stage and later, in the implementation stage.

For collaboration to take place, it is important that communication between the stakeholders is frequent, to create a shared understanding. According to Plewa et al. (2013), a high quality of communication is an important factor for a successful collaboration, and low quality of communication may block the project establishment and the progress of the collaboration. The importance of communication can be seen in SSFMOs in our study.

All stakeholder groups have mediation activities as a means objective. Mediation includes communication between different stakeholders. In addition, means objectives include networks and meeting points which serve as platforms for communication. Good personal relationships are the basis for enabling links between stakeholders, both at management level and operational level (Rybnicek and Königsgruber 2019). It is important to establish a common understanding in communication that benefits interaction between different partners (Steinmo and Rasmussen 2015). In mutual collaboration, lack of coherent understanding may hinder the anchoring process to manage

partnerships (Perez Vico 2020). Communication is a necessary element for trust and building up relationships which are needed in collaboration between different stakeholders (Frasquet, Calderón, and Cervera 2012), and trust is an explicit means objective in one of the external stakeholders (Figure 6). In addition, communication is a precursor for satisfaction and handling of conflicts (Frasquet, Calderón, and Cervera 2012). Communication also plays a role in knowledge transfer. Knowledge transfer between an HEI and external partners is considered an important driver for innovation and economic growth within the organisations, making commercialisation of new scientific knowledge easier (de Wit-de Vries et al. 2018).

Nelles and Vorley (2010) state that it is beneficial, and even successful, to include the third mission in education and research instead of having it as a separate mission. Developing these three missions together creates possibilities to develop institutions and HEIs. The SSFMOs from the respondents show that collaboration is important for both education and research. The group of researchers and teachers had as a fundamental objective to increase research connection in undergraduate programmes, in order to develop education (Figure 3).

According to Cunningham and Link (2015), it is important to support university-business collaboration in research and development for developing scientific advancement, for economic growth and for societal wellbeing. Furthermore, to support university-business collaboration, universities could use an internal incentive system that rewards individual scientists and research groups for their industrial collaboration. Another way to support collaboration is to provide internal research support that makes the interaction and collaboration easier and maybe more effective. In line with this, one of the respondents working at the university suggested that some kind of incentive would increase the interest in collaboration.

All stakeholder groups in this study took up student works (project work and theses) as important means objectives (Figures 2–6), and the external stakeholders expressed, during the interviews, that working with students is an important first step of collaboration between the partners, and through the students it is possible to increase other areas of collaboration and other ways to fulfil the objectives. This is in line with what de Wit-de Vries et al. (2018) suggest: it is wise to start a collaboration with smaller projects, such as student internships or thesis work, for the purpose of gaining collaboration experience and to get to know the capabilities of the partnership.

Musial (2013) describes, focusing on the situation in Norway, that universities are important in educating the future local labour force as a competence provider in a region. This was clear in the present study, too. The stakeholders from the region and the municipality

expressed the importance of working together with students and researchers at the university, in order to get more students to stay in the region and to increase the development in the neighbouring society. Both senior advisors and external stakeholders have 'contribute to skill enhancement' as a fundamental objective. Researchers and teachers have 'benefit of education to society' as a fundamental objective.

Applying VFT is one way of identifying different objectives and values and constructing SSFMOs from different stakeholders, in a collaboration between an HEI and the surrounding society. Structuring stakeholders' various objectives clarifies what each one wishes to achieve (Keeney 1988). Prior to a project start between an HEI and external stakeholders, SSFMOs can be used as a tool to illustrate the stakeholders' various objectives, i.e. what they want to achieve and how. If each stakeholder has identified their own strategic, fundamental and means objectives before collaboration starts, communication between the stakeholders could be improved and the work in the project can be facilitated. The SSFMOs can be used to compare the objectives and identify similarities and differences that the different stakeholders have as their objectives with the cooperation. SSFMOs can also be used as a communication tool for anchoring the collaboration project in the relevant parts of the organisations involved in collaboration. Feedback from our respondents shows how it is possible to work further with SSFMOs, either by discussing with one stakeholder at a time, as in this work, or with the whole stakeholder group. Further studies should focus on how SSFMOs can be used in practical cases. It would also be interesting to include several respondent groups, for example, people in leading positions, private companies, and students, and to perform a study focusing on collaboration between an HEI and private companies of different sizes. Although the students themselves cannot solve the societal challenges, collaboration projects with the surrounding society give a strong signal value of the importance of the students to the development of the society.

## Notes

1. Preliminary results are presented in a master's thesis by Julin Nyquist (2020).
2. The individual SSFMOs of the group of senior advisors and of the group of researchers and teachers are available upon request for further analysis.

## Acknowledgements

## Disclosure statement

## Notes on contributors

*Kristina Julin Nyquist* studied both at Linnaeus University and University of Gävle, Sweden, and graduated with a master's degree in Decision, Risk and Policy Analysis. She spent her early career in office administration in public organisations in Sweden and has spent the last 13 years working across research services, external relations, strategic agreements and alumni relations in the Swedish higher education sector. She is currently working with business development in the healthcare sector in Sweden.

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