

# FME HighEFF

## Centre for an Energy Efficient and Competitive Industry for the Future



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#### University-industry collaboration

Aligning organizational goals in university-industry collaborations. The formation stage of research partnerships

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<b>Abstract</b>
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A key mechanism to facilitate university-industry collaborations (UIC) is the establishment of formal research partnerships involving both firms and universities. Differences in the goals between partners constitute barriers that inhibit effective collaborations in research partnerships. There is a clear gap in the literature related to how such differences are aligned when forming new research partnerships between firms and universities. Hence, we ask the following two research questions. First, **“How do firms establish common goals in university-industry research partnerships”**? Second, **“How do research partnerships influence the firms’ internal organizational goals”**?

The research questions are explored through a longitudinal case study of two research partnerships in Norway. One was originally initiated by the university partners, while the other, is a firm-driven research partnership.

Preliminary findings shows that firms’ involvement in the goal formulation process differ depending on the degree of firm involvement in the initiation of the partnership. More data is currently being collected to examine the implementation of these goals over time.

# Aligning organizational goals in university-industry collaboration: The formation of research partnerships

## Abstract

A key mechanism to facilitate university-industry collaborations (UIC) is the establishment of formal research partnerships involving both firms and universities. Differences in the goals between partners constitute barriers that inhibit effective collaborations in research partnerships. There is a clear gap in the literature related to how such differences are aligned when forming new research partnerships between firms and universities. Hence, we ask the following two research questions. First, **“How do firms establish common goals in university-industry research partnerships”**? Second, **“How do research partnerships influence the firms’ internal organizational goals”**?

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## Introduction

Rapid technological change and globalization have forced firms to speed up the innovation process (Burnett and Williams, 2014) and have led to increased collaboration between firms and universities (Steinmo and Rasmussen, 2016, Scandura, 2016). A key mechanism to facilitate university-industry collaborations (UIC) is the establishment of formal research centers or research partnerships involving both firms and universities (Boardman and Gray, 2010, Perkmann and Walsh, 2007). For firms, collaboration with research institutes and universities (henceforth universities), can provide knowledge, technology, and an enhanced image. For universities, collaboration with industry can be used to get additional funding, expose students and faculties to practical problems and create employment opportunities (Santoro and Chakrabarti, 2002). Hence, differences in the goals between firms and universities constitute barriers that inhibit effective collaborations in research partnerships (de Wit-de Vries et al., 2018, Bruneel et al., 2010, Ambos et al., 2008).

The UIC literature often refer to challenges arising from cultural differences between partners, related for instance to organizational goals, time and resource allocation, management style, cognitive differences and different languages (Galán-Muros and Plewa, 2016, Ghauri and Rosendo-Rios, 2016, Harrison and Klein, 2007). There is a clear gap in the literature related to how such differences are aligned when forming new research partnerships between firms and universities.

This paper examines how firms with different organizational goals develop mutual goals in UIC. Goal setting is important to predict organizational behavior, and it is crucial to understand the factors that influences firms' decision-making, to apprehend how the partners enhances successful UIC collaboration (Kotlar et al., 2018). By understanding the firms' decisions and goals, we can get a more comprehensive understanding of *what* the firms want to achieve in research partnership with universities, and which strategies they use to achieve their goals. Hence, this paper contributes to literature on organizational goals and UIC by studying the two research questions. First, **“How do firms establish common goals in university-industry research partnerships”**? Second, **“How do research partnerships influence the firms' internal organizational goals”**?

## Organizational goals in university-industry collaboration

Organizational goals can be broadly defined as desired organizational outcomes, which assesses organizational performance and guides the organizations actions (Kotlar et al., 2018, Mohr, 1973). Hence, organizational goals are important for *what* firms focus on in collaborations with partners, and *how* they collaborate.

University-industry research partnerships develop their own goals, trying to align the interests of both firms and academics. Boardman and Gray (2010) discussed cooperative research centers and distinguished between three distinct characteristics. First, a center must participate in academic research. Second, a center needs an organizational formality. Third, a research center must participate in a cross-sector collaboration and knowledge/technology transfer. Hence, the purpose and goals of cooperative research centers are to produce basic research, while contributing with innovations to strengthen the competitiveness of the firms involved (Styhre and Lind, 2010). Boardman and Gray (2010) also states that various research centers and research partnerships are structured in different ways, and can produce dissimilar results. Therefore, it is important to study how different types of university-industry research partnerships collaborate in the formation stage to develop shared goals, since organizational

goals may determine how firm partners and university partners collaborate, and what they focus on in the collaboration (Kotlar et al., 2018).

Lam (2011) found that traditional researchers' goals with collaboration with industry was to get funding for basic research, in the field of their own interest. In contrast, firms entering into collaboration with universities to develop specific innovations and services for their firms (Bruneel et al., 2010). Studying organizational goals in UIC gives insights into how firms and researchers make mutual goals in the collaboration, and how the firms' organizational goals may be influenced by participating in a UIC.

## Methodology

The research questions are explored through a longitudinal case study of two research partnerships in Norway (Eisenhardt, 1989). To study the goal alignment process, we selected cases with different points of departure. The first case, Alpha, is a research partnership initiated by university partners who invited industry partners to join and co-finance the research activity. Alpha is a part of the Norwegian public program "Center for Environment-friendly Energy Research" and was established to execute research and develop industrial innovation (Research council of Norway, 2018). The partnership started in 2017 and is currently in the formation stage. Alpha consist of 45 partners, including firms, universities and research organizations.

The other case, Beta, is a firm-driven research partnership that is part of the "Arena Cluster" program in Norway, which aims to promote more firm innovation and increased competence in industry. Beta includes university partners and firm partners with the potential for increased innovation and value creation by increasing UIC (Arena Clusters, 2017). Beta started early 2018 and is currently in its formation stage. Hence, Alpha and Beta are good cases to study how the structures of these research partnerships influence how firms and research partners develop shared goals in the formation stage of a research partnership.

Our data is based on interviews of firm representatives and researchers, supplemented with documents and observations to increase the validity of the study (Yin, 2014). For Alpha, we concluded 16 interviews in 2017, and have started a second round of follow-up interviews during summer 2018. For Beta, we are collecting first-time interviews during summer 2018. The interviews were recorded and transcribed and then written as case description for each firm and university representative. Further, we plan to do a cross-case comparison assisted by the data-analysis program NVivo12.

The data provided descriptions of formation stage and the actual collaboration processes between the firm representatives and the university partners, and how the informants

experienced the activities, a context and the other actors (Eriksson and Kovalainen, 2015). Hence, we obtain an in-depth understanding of how participation in research partnerships influence the firms' internal organizational goals.

## Preliminary findings

The two cases differed in their goals. Despite having a shorter time horizon (3 years versus 8 years), the Beta research partnership have more ambitious goals than the Alpha research center. These goals include 10 innovation projects a year, while Alpha aims at 20-25 innovation projects during eight years. This means that the Beta research partnership might have developed stretch goals, to spur innovations and change in the firms (Sitkin et al., 2011). It also shows that firm-driven partnerships may be more ambitious in their innovation related goals compared to university-driven partnerships.

Observing the firms' involvement in the goal formulation process, we find clear differences. In the Alpha center, firm involvement is low, as stated by one firm representative: *"We were not so heavily involved in the application process"*. Still, some of the firm partners were satisfied by the goals established in the partnership: *"[The research center] focuses a lot on the same things that we are working with in the firm [...] It is interesting things we want to be involved in"*. Despite limited firm involvement in the goal formulation process, some of the firms joined anyway, because the themes and goals of the center aligned with the firms' strategies and organizational goals. In the Beta partnership, we observe that the goals were formalized through high firm involvement. Through workshops and individual firm meetings the firms formulated the goals in collaboration with the project leader (representing a science park), and one firm representative told that they defined the goals by discussing problematic areas within the firms, and how they could be achieved in the research partnership. We find that the firm partners in Beta seems satisfied with the goals. However, the firms in the Beta partnership seems less committed to the research partnership and are struggling to find activities that supports both their organizational goals and the goals established in the research partnership.

Most studies on organizational goals have focused on internal goals and internal contexts (Farndale et al., 2014, Suutari et al., 2013, Podsakoff et al., 1997). This paper contributes to the literature on UIC and organizational goals with new knowledge on the formation stage, the goal alignment process of research partnerships, and on how firms' participation in research partnerships influences their internal organizational goals.

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