# Organizational climate in large-scale projects in the oil and gas industry: A competing values perspective

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## Abstract

The aim of the present study was to identify central dimensions and develop a model of organizational climate in large-scale project organizations in the oil and gas industry. Interviews with 18 employees (15 men, 3 women) in a project organization in the Norwegian oil and gas industry were content-analyzed on two models: The global instrument, the Organizational Climate Measure (OCM) based on the Competing Values Framework, and the domain-specific instrument, Project People Survey (PPS). The findings indicate that a climate characterized by a strong focus on a) communication and cooperation with actors in the external environment such as vendors, and b) internal cooperation and communication with other projects and with the line organization, is perceived as critical to success in large-scale projects in the oil and gas industry. We propose a new model called the Organizational Climate Measure for Large-Scale Project Organizations in the Oil and Gas Industry (OCMP).
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## 1. Introduction

The trend in project management is to focus on the technical issues of the project, although "soft" issues such as organizational climate and culture are also recognized as crucial (Sharma and Gupta, 2012). Managing organizational climate is of great importance, as getting the most out of the human capital will strongly affect whether a project succeeds or fails. Several studies have shown that the organizational climate within a project organization is related to a wide range of indicators of project success. These relationships have been replicated in several different sectors (Eriksson and Westerberg, 2011; Gray, 2001; Nauman et al., 2010; Rudolph et al., 2008; Sharma and Gupta, 2012; Smith et al., 2009; Yen et al., 2008).

However, there is no clear pattern showing that certain climate dimensions are universally related to project success across sectors. Consequently, to identify and assess the organizational climate dimensions that influence success in project organizations in specific sectors is an important task for both researchers and practitioners. This is of particular relevance for contexts with unique characteristics, such as large-scale projects in the oil and gas industry. Projects in the oil and gas industry are characterized by "enormous investments, massive interfaces, and complex engineering endeavors" (Badiru and Osisanya, 2013, p. 28). The size and complexity of these projects require special attention in the project management process. Also, risk is an inherent part as the projects have substantial impact on the economy, people, and the environment. With the growing world demand for energy, the oil and gas business is increasingly moving into even more demanding environments. Simultaneously, society is adopting a low tolerance for failure, putting enormous pressure on the management of these projects (Badiru and Osisanya, 2013). The Yme project in the Norwegian Sea is a recent example of the risk in the industry. The project is widely seen as a failure, and the oil

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platform has ended up being scrapped. Early investigations have indicated that an inadequate safety climate, lack of trust of top management and involvement in decision-making processes, poor planning, and time pressure affected the project outcome (Malkenes-Hovland, 2013; Petroleum Safety Authority Norway, 2012). The projects can also have fatal impact on the subsequent operations, as was seen in the Alexander Kielland accident where 123 people died. The accident has been attributed to poor design and quality control in the project phase, in addition to inadequate safety training and other factors in the operations (Norwegian Public Report, 1981). To summarize, large-scale projects in the oil and gas industry are of fundamental importance to our society, and the organizational climate seems to be critical for successful project management. The purpose of the present study is to identify the salient climate dimensions within these projects, and to propose a model of organizational climate based on the findings.

## 1.1. Organizational climate

Despite increasing agreement of the importance of organizational climate, there is an on-going debate on how the concept should be conceptualized and measured. A central discussion in organizational climate research has focused on the distinction between global climate and domain-specific climate approaches (Kuenzi and Schminke, 2009; Schneider et al., 2011). Early climate research involved the global climate concept, which has been defined as the shared perceptions regarding the policies, practices, and procedures that an organization expects, supports, and rewards (Schneider and Reichers, 1983). This approach included organizational climate dimensions related to leadership behavior, job attributes, social and interpersonal relationships, and reward systems (Carr et al., 2003; Kuenzi and Schminke, 2009). The global understanding of climate has been criticized by Schneider (2000) for lacking a strong theoretical base. Schneider argued that dimensions of organizational climate will differ depending on the purpose of the investigation, and that the choice of dimensions should be guided by the outcomes of interest, for instance service and safety. This proposition led to the development of domain-specific models of climate such as service climate (Schneider et al., 1998); safety climate (Zohar and Luria, 2005); climate for creativity (Amabile et al., 1996), innovation climate (Anderson and West, 1998), and empowerment climate (Seibert et al., 2004).

Based on this discussion, an important question is whether an investigation of central climate dimensions in project organizations should be guided by a global or a domain-specific approach. In the present study we have combined these approaches and studied a research-based global model, the Organizational Climate Measure (OCM) (Patterson et al., 2005), and a domain-specific model, the Project People Survey (PPS). The global model, the OCM is based on the Competing Values Framework (CVF) developed by Quinn and colleagues (Quinn and Rohrbaugh, 1983), while the domain-specific model (PPS) was developed by a global company in the oil and gas industry and used in their project organizations.

The inclusion of both global and domain-specific models was based on two arguments: First, findings in recent climate research have indicated that global climate provides a foundation for domain-specific climate, while domain-specific climate often is more directly linked to the outcomes of interest (Schneider et al., 2011). Second, recent studies have shown the utility of the global approach Competing Values Framework (CVF) to assess organizational culture in project organizations (Cheung et al., 2011; Giritli et al., 2013; Wiewiora et al., 2013). We argue that in the present study the global model OCM, based on the CVF, could be used as a foundation for developing a model of organizational climate in large-scale project organizations in the oil and gas industry. Moreover, the domain-specific model PPS could identify additional dimensions perceived as important in this context.

In the following we will summarize findings from previous studies of organizational climate and project success, describe the two models of organizational climate in the present study, and introduce the research design.

## 1.2. Organizational climate and project success

Project success has traditionally been defined by the so-called iron triangle involving cost, time, and quality. More recently, scholars have argued that there is a need for a broader range of success criteria related to the information system (e.g. maintainability), benefits for the organization (e.g. organizational learning), and benefits of stakeholders (e.g. personal development, user satisfaction) (Atkinson, 1999). Findings have suggested that there is a relationship between organizational climate and indicators of project success such as employee motivation, job satisfaction, individual performance, effective project management, and overall project performance (Eriksson and Westerberg, 2011; Gray, 2001; Nauman et al., 2010; Rudolph et al., 2008; Sharma and Gupta, 2012; Smith et al., 2009; Yen et al., 2008). These findings have been replicated both in varied samples of project professionals (Gray, 2001), and in specific sectors, including the IT and software industry (Nauman et al., 2010; Sharma and Gupta, 2012; Yen et al., 2008), the construction industry (Eriksson and Westerberg, 2011), the retail sector (Rudolph et al., 2008), and the public sector (Smith et al., 2009). Recent studies have shown that climate dimensions such as cooperation, communication, and trust both within the project and among project stakeholders, are related to project success in different sectors (Eriksson and Westerberg, 2011; Rudolph et al., 2008; Yen et al., 2008). In addition, Sharma and Gupta (2012) found that effective supervision, high standards of work tasks, and role clarity were related to project risk in the software industry; Nauman et al. (2010) found that empowerment climate was related to effective project management among IT professionals; and findings from Smith et al. (2009) showed that ethical climate was negatively associated with project status misreporting in information systems projects.

Taken together, several dimensions of organizational climate are related to project success in different sectors. However, there is no clear pattern showing that certain climate dimensions are important across sectors, although both internal and external cooperation and communication seem to be important in several organizational contexts. One possible explanation could be that studies have used different theoretical foundations or have lacked clear theoretical foundations for their measures of organizational climate. This problem, also discussed in the organizational behavior literature (see Patterson et al., 2005),