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The influence of organisational agility and stakeholder management on the success of projects: an empirical study from the oil and gas sectors

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Abstract: The 21st century business environment faces turbulent changes and uncertainties that affect all aspects of organisations. A successful organisation should be agile, and the people in charge should consider the external stakeholders' interests in order to adapt to various situations. This study aimed to determine how organisational agility and stakeholder management affect the success of projects in the upstream oil and gas sectors. A quantitative research method was employed for data analysis. The results confirmed that both organisational agility and stakeholder management have direct and significant effects on the success of projects. The study identified the essential role of strategic management literacy in mediating the relationship of organisational agility, stakeholder management, and project success, and it provided insight for managers in organisations regarding how to foster the likelihood of the success of projects.

Keywords: organisational agility; stakeholder management; project success; upstream oil and gas.

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1 Introduction

Contemporary business environments are experiencing turbulence and uncertainty that affect all aspects of organisations and cause some industries to fail (Jawad and Ledwith, 2021). These circumstances continually cause uncertainty in the oil and gas industry, such as oil price shocks, global economic and geopolitical changes, dynamic social factors, shifting market demand, and complex production processes (Destek and Sarkodie, 2020; Jawad and Ledwith, 2021).

In general, the oil and gas industry can be divided into two sectors, i.e., the upstream sector and the downstream sector. The dominant activities in the upstream sector are exploration (i.e., prospecting for undiscovered petroleum or seeking oil and gas reserves using seismology, surveys, geological and geophysics studies, and exploratory drilling) and exploitation (i.e., developing production through the development of wells, building production facilities, and field abandonment) (Weijermars and Al-Shehri, 2022) that occur prior to shipping products to the refinery, whereas the main processes in the downstream sector are refining and transportation (Shafiee et al., 2019; Mehdi et al., 2012). The upstream sector is more volatile than the downstream sector in terms of the prices of oil and gas in the trading market. The different types of shocks related to the prices of oil and gas can be attributed to the global demand for these products and their availability (Destek and Sarkodie, 2020). If the global demand for oil decreases and the supply increases, the prices of oil will decrease. Conversely, if the global demand for oil increases and supply decreases, the prices of oil will increase. The instability of these prices will impact the economic value of various projects.

Given this exposure to price dynamics, this study was focused on the upstream oil and gas sector. The upstream sector primarily is project-oriented (Mehdi et al., 2012), i.e., projects essentially are linked to companies' strategies and goals as they generate revenue (Silvius et al., 2012). However, conducting projects in the upstream oil and gas sector

requires increased attention due to high capital, investment, risk, social and environmental issues, and safety and corporate social responsibility (Le Menestrel et al., 2002).

Projects also need to cope with organisational agility (OA), i.e., the capacity of an organisation to redirect its resources efficiently to create value and to protect higher-yield activities as warranted by internal and external circumstances. Such capabilities also rely on the responsiveness, competency, flexibility, and speed of people and organisations (Harsch and Festing, 2020; Teece et al., 2016; Walter, 2021). This aligns with internal organisational factors, i.e., "the abilities of organisations (in this case, the abilities of projects) to implement the choices made by leaders and the flexibility to create environments in which leaders can formulate and implement their decisions" (Sumadilaga et al., 2017). The previous study of agility was implemented in the pharmaceutical industry (Algorri et al., 2022), in information technology (Panda, 2022), in the telecommunication industry (Manurung and Kurniawan, 2022), and in the supply chain for the oil and gas industry (Shqairat and Sundarakani, 2018). However, there have been limited studies that measured the effect of OA in a company's project context, especially in the upstream oil and gas sectors. Thus, in this study examines the effect of OA on this project environment.

Given the unpredictability of projects, we should not ignore the external environment, such as regulatory agencies, buyers, contractors, suppliers, and other project-specific agents (Freeman, 2020; He and Chittoor, 2022). According to McGrath and Whitty (2017), these are the primary contributing stakeholders because their participation sustains the activities of projects and contributes to their success (Lehtinen and Aaltonen, 2020; Wood et al., 2021). The existence of stakeholders aligns with the task environment that actively influences the organisation (Xia et al., 2018). Since projects are conducted by organisations, their activities also are very important to project success (PS). Thus, this study examines the effect of stakeholder management (SM) on the upstream oil and gas PS.

This study focused on the upstream oil and gas sector in Indonesia, which is one of the countries in Asia. The oil and gas industries are part of the important business, and they generate significant income for Indonesia. There are many national and multinational companies that do business, especially in the upstream oil and gas sectors, and there are many professionals who are actively involved in the related research.

To address the research gap, the study aimed to investigate the effect of OA and SM on PS in the upstream oil and gas sectors by answering the following research questions (RQs):

RQ1 Is there any direct and significant relationship between OA and SM?

RQ2 What is the effect of OA on PS?

RQ3 What is the effect of SM on PS?

By analysing these findings, we also can determine the relationship among the constructs and their significant contributions.

The expected contributions of this study are

1 that it enriches the strategic management literature from the perspectives of OA and SM in the context of projects that have been missed by scholars

2 it offers insight or guidance for managers in organisations and provides an alternative model to accomplish the likelihood of the PS.

Last, studies in the upstream oil and gas sectors are unique in that it has various types of projects, and it deals with conditions that are uncertain, which in turn can propose some suggestions.

2 Literature review and the development of hypotheses

2.1 Literature review

This study implements two main theories, i.e.,

1 dynamic capability (DC), which is rooted in the resourced-based view (RBV)

2 stakeholder theory.

Table 1 summarises the literature review of related studies.

2.1.1 Organisational agility

Our conceptual framework relies on OA, which is rooted in DC theory. This theory acknowledges the importance of capabilities to reconfigure internal resources to face the changing contexts (Bianchi et al., 2022). DC is described as

1 the capacity to sense and shape threats and opportunities

2 the capacity to seize opportunities

3 the capacity to reconfigure business processes (Teece, 2007).

OA is considered as a fundamental challenge that companies need to face in order to respond to the changes in the business environment. It is one of the implementations of the DC framework (Teece et al., 2016).

Organisations survive when their organisational characteristics are adapted sufficiently to their conditions (internal and external changes). Thus, in order for firms to survive in a dynamic environment, their leaders should be agile because the changing environment makes it necessary for them to be able to respond to changes quickly and effectively in order to deal with turbulent and uncertain conditions (Shams et al., 2021; Walter, 2021).

The essential capabilities for OA are

a responsiveness, which is a company's ability to detect, analyse, and understand political, social, and economic changes

b competency, i.e., the ability to understand and predict project lifecycle trends

c flexibility, i.e., the ability to respond to customers' heterogeneous demands

d speed, the quickness with which it analyses information about changes in the environment and incorporates them into its system (Akkaya and Tabak, 2020; Sharifi and Zhang, 2001).

2.1.2 Stakeholder theory

Stakeholder theory is a managerial approach that promotes structures and practices. This theory was derived from the idea of needing to deal with stakeholders because they have a different understanding of what business factors are important. Freeman (1984, 2020) introduced the concept of the stakeholder, which refers to individuals or groups that may be affected by organisational objectives and thus may affect their accomplishment. Stakeholders also are considered vital for the survival of an organisation. Such individuals or groups have their respective interests, which may conflict with one another and/or with the interests of the organisation. Therefore, the managing stakeholders should focus on the interests of those who have a stake in an organisation and on the way in which they exercise their interests in a firm's processes or products to increase intrinsic value (Hans and Mnkandla, 2019; Pusparini et al., 2018).

Failure to address the needs of stakeholders can have a detrimental effect on resulting activities (Di Maddaloni and Davis, 2017; Rajablu et al., 2017). As such, it is vitally important to interact effectively and to manage stakeholders' expectations and perceptions. SM is defined as a process of identifying people, groups, or organisations that influence project execution by analysing stakeholder needs and developing strategy (Aragonés-Beltrán et al., 2017; Project Management Institute, 2017). According to de Oliveira and Rabechini (2019), there are two types of constructs in SM, i.e.,

1 prescriptive, which refers to identifying and mapping stakeholders
2 relational, which focuses on stakeholder involvement and engagement to build and maintain relationships throughout the lifecycles of projects.

2.1.3 Project success

A project is part of a sustainable organisation, and it also has a unique characteristic. A project exists because of internal and external customers; therefore, PS should include meeting all of the customers' requirements and the customers' use of the project's services. PS is related to the goals and benefits that are provided in that project for the organisation as a whole through dealing with the effectiveness, objectives, and benefits provided by that project. Clearly, PS is tied to effective communication and managing relationships with the various stakeholders of a project (Ika and Pinto, 2022).

Determining the specifics of PS is different, and it depends on the research topic. Traditionally, the measurement of a project is based on the iron triangle model, i.e., budget, schedule, and scope, which also are known as unidimensional factors. However, PS also is multi-dimensional, and it often lacks a full consensus for its definition because it relies on stakeholders. One multi-dimensional approach was given by Shenhar and Dvir (2007). This approach has five independent dimensions, i.e.,

1 project efficiency (schedule, budget, and scope)
2 impact on customers (meet customers' needs)
3 impact on the team (overall loyalty to the organisation, project team satisfaction)
4 business and direct success (contribution to the final result of the organisation)
5 preparation for the future (creates new opportunities for the organisation).

Table 1 OA and stakeholder management studies

Author	*Field*	*Contribution*
Akkaya and Tabak (2020)	Organisational agility	Empirical
Shams et al. (2021)	Organisational agility	Conceptual
Walter (2021)	Organisational agility	Empirical
Freeman (1984, 2020)	Stakeholder	Conceptual
Pusparini et al. (2018)	Stakeholder management	Empirical
de Oliviera and Rabechini (2019)	Stakeholder management	Empirical

2.2 Development of hypotheses

Organisations survive when their organisational characteristics are sufficiently adapted to their conditions. Thus, to survive in a dynamic environment, firms should have at least a minimal level of agility. The presence of OA reflects an ability to survive in a dynamic environment (Shams et al., 2021; Walter, 2021).

Turbulent times and uncertainty in the business environment have been recognised as the cause of most industrial failures (Small and Downey, 1996). Surviving and prospering are possible in turbulent situations if organisations have the essential capabilities to recognise and understand their changing environments and respond in a proper way to unexpected changes. The ability to respond appropriately to changes can only be achieved by changing the way one looks at the business as well as the relationships with the external stakeholders, i.e., customers, suppliers, communities, regulatory agencies, and contractors. OA is needed to manage each of the latter. Therefore, the company needs to generate options for anticipating uncertainties that may be caused by stakeholder. Accordingly, we developed the following hypothesis.

H1 OA has a positive and significant effect on SM.

Agility is one of the critical factors for the organisation to achieve success by understanding and managing environmental uncertainty. OA enables an organisation to sense and seize business opportunities and to perform effective and efficient responses to operational changes to ensure appropriate organisational performances. OA allows a firm to easily and promptly anticipate or respond to the changes in the market (Sambamurthy et al., 2003).

OA is considered a predominant factor and an enabler in achieving an organisation's success and survival in a volatile and dynamic environment (Manurung and Kurniawan, 2022; Nejatian et al., 2018). In a dynamic business environment, the ability to respond to changes rapidly and appropriately, to be flexible and adaptable to changes, and to manage uncertainty are essential to the organisation's performance, especially in PS (Feizabadi et al., 2019). Accordingly, we developed the following hypothesis.

H2 OA has a positive and significant effect on PS.

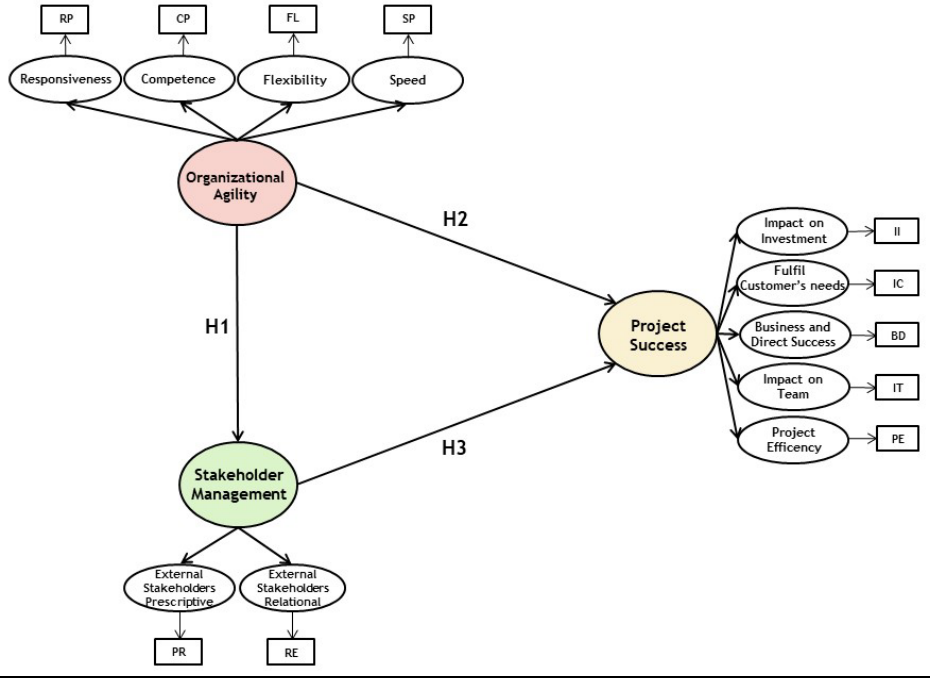
SM is one of the factors that increase the success rates of projects (Project Management Institute, 2017). To achieve the PS, the requirements of each stakeholder in the project have to be analysed properly. The existence of different perceptions, requirements, and levels of interaction with the project requires us to focus on the influences of the stakeholders on the projects, which are the major cause of uncertainty in a project

environment (Ward and Chapman, 2008). Understanding in SM is a critical factor in the success of a project (Yang et al., 2009). Consequently, the following hypothesis was developed:

H3 SM has a positive and significant effect on PS.

Figure 1 depicts the hypotheses as a model.

Figure 1 Research model (see online version for colours)



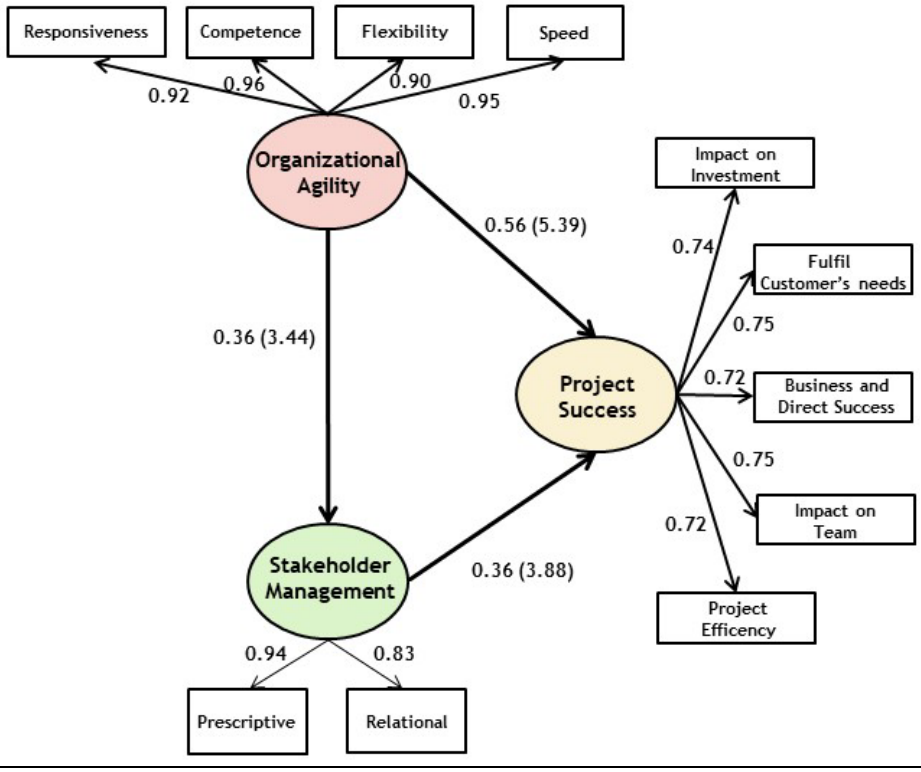
Symbol	*Description*
	Indicator/dimension/observed variable
	Latent variable/construct
	Directional effect, correlation between variables, path

3 Methodology

3.1 Research design

A quantitative approach was implemented in this study to evaluate the construction of the framework of a proposed research model by measuring the variables from the data collected via questionnaires administered on upstream oil and gas projects in Indonesia. We used the LISREL software to apply covariance-based structural equation modelling (CB-SEM) to confirm the theory and the hypothesis.

Figure 2 Final model with standardised path coefficients and t-value (see online version for colours)



Symbol	*Meaning*	*Conclusion*
⟶	Significant correlation	Hypothesis is supported

3.2 Unit analysis and the collection of data

The unit analysis of this study was projects. All projects were conducted in Indonesia and operated by both national (58 projects) and multi-national companies (50 projects). Some of the projects were located offshore (46 projects), and some were located onshore (62 projects). We collected data by distributing online survey questionnaires using Google Form. We selected the respondents through purposive sampling, targeting those who had detailed knowledge of the projects and occupied key positions of responsibility. Each PM was dedicated to a specific project. Of the 130 questionnaires that were distributed, we received 108 complete and valid responses (83%). We asked the respondents to rate their responses to each item on the questionnaire using a six-point Likert scale, with 1 indicating 'strongly disagree' and 6 indicating 'strongly agree'.

Before conducting the survey, we assessed the face validity by three expert project managers (PMs) and conducted a pre-test survey with 21 respondents (PMs and practitioners). We asked these individuals to evaluate the preliminary version of the questionnaire. Figure 1 shows that the latent variables and dimensions were compiled into a total of 102 items detailed as follows: 63 items on OA, 12 items on SM, and 27 items on PS.

3.3 Data analysis

We conducted descriptive analysis using IBM SPSS software to give 1) a general description of the respondents' answers to the questions on the questionnaires and 2) the characteristics of the data.

We used the 'two-stage approach' CB-SEM to estimate the model using Lisrel 10 (Anderson and Gerbing, 1988). In the first stage, we evaluated the validity and reliability of the measurement model. Figure 1 shows that the model had three first-order measurements or confirmatory factors, i.e., OA, SM, and PS, and it also had 11 second-order measurements and 102 indicators. We examined the indicators using the standardised factor loading (SFL) of each indicator. We examined validity and reliability using variance extracted (VE) and construct reliability (CR), respectively. If VE was greater than or equal to 0.50 and CR was greater than or equal to 0.70, the purported variable or dimension was assumed to be valid and reliable (Hair et al., 2010).

The second stage of SEM evaluated the structural model, which entailed the fit of the overall model using goodness-of-fit indices, i.e., p-value, root mean square error of approximation (RMSEA), non-normed fit index (NNFI), confirmatory fit index (CFI), incremental fit index (IFI), goodness-of-fit index (GFI), and SEM path coefficients. To improve the model's fit and to yield a stable estimation of parameters for a small sample, Bentler and Chou (1987) suggested that the minimum sample size for SEM should be five times the number of indicators in the model. The model tested in this study had 102 indicators, so the sample of 108 respondents was below the required maximum sample size. Therefore, we used parcelling (Rhemtulla et al., 2020; Rhemtulla, 2016) and latent variable scoring (Jöreskog et al., 2006), in which we transformed the second-order confirmatory analysis model into a first-order model, reducing the number of indicators to 11. With this reduced number of indicators, the sample size of this study (108) exceeded the minimum sample size for SEM ($11 \times 5 = 55$).

In addition, SEM provides a standard error, which is a critical ratio with a corresponding p-value, to assess whether an estimated parameter differs significantly from zero. The t-value was used to determine the significance of each relationship (path) in the structural model. If the t-value was greater (less) than to 1.96, the relationship was positively (negatively) significant.

4 Results

4.1 Respondents' profiles

Table 2 presents a summary of the respondents who participated in this study.

Descriptive analysis is included to give a general description of the respondents' answers to the questions on the questionnaires. Table 3 presents the descriptive statistics.

The study conducted reliability and validity tests using confirmatory analysis (CFA). Table 4 presents the results of these tests. All of the values of the variables, i.e., SFL, were greater than 0.50, the values of VE were greater than or equal to 0.50, and the values of CR were greater than 0.70. Based on these results, we verified the validity and reliability of the model.

Table 2 Sample characteristics (N = 108)

Category	*Composition*	*Frequency (n)*	*Percentage (%)*
Gender	Male	102	94
	Female	6	6
Age	24–29 years	2	2
	30–34 years	8	7
	35–39 years	18	17
	40–45 years	31	29
	46–50 years	30	28
	>50 years	19	17
Education level	Bachelor	72	67
	Master	36	33
Years of experience	<5 years	19	17
	5–10 years	32	30
	10–15 years	31	29
	15–20 years	18	17
	>20 years-8	8	7

Table 3 Descriptive analysis of variables (N = 108)

Variables	*Mean*	*Standard deviation*
OA	4.81	0.94
RP	4.93	0.86
CP	4.81	0.91
FL	4.58	1.13
SP	4.76	0.94
SM	4.90	0.98
PR	4.94	0.95
RE	4.86	1.01
PS	5.14	0.71
PE	4.91	0.86
BD	5.33	0.62
IT	5.06	0.66
IC	5.00	0.72
II	5.30	0.65

Notes: Based on a six-point Likert scale.
OA: organisational agility; RP: responsiveness; CP: competency; FL: flexibility; SP: speed; SM: stakeholder management; PR: prescriptive; RE: relational; PS: project success; PE: project efficiency; BD: business and direct success; IT: impact on team; IC: impact on customer; II: impact on investment.

Table 4 Validity and reliability (N = 108)

Construct		*Dimension*		*SFL*	*CR*	*VE*	*Source*
1	OA	1	RP	0.92	0.96	0.87	Sharifi and Zhang (2001)
		2	CP	0.96			
		3	FL	0.90			
		4	SP	0.95			
2	SM	5	PR	0.94	0.88	0.79	de Oliveira and Rabechini (2019)
		6	RE	0.83			
3	PS	7	PE	0.72	0.86	0.54	Martens et al. (2018)
		8	IT	0.75			
		9	BD	0.72			
		10	IC	0.75			
		11	II	0.74			

Notes: SFL: standardised factor loading, CR: construct reliability, and VE: variance extracted.

The fit of the research model was evaluated using GFI parameters. Table 5 presents the results of the analysis of the overall fit of the model. Among those indices, the value of GFI (0.90) meets the requirement of the recommended limit of 0.90. Thus, we concluded that there was a good fit between the measurement model and the data. This fit provides strong evidence that the structural model is acceptable. The result shows a p-value of 0.99, which is above the required minimum standard of 0.05 (see Table 5). Thus, the model is considered to have good fit and is acceptable.

Table 5 Overall model fit

No.	*Goodness-of-fit indices*	*Recommended value*	*Test result*
1	p-value	≥0.05	0.99
2	RMSEA	≤0.08	0.00
3	NNFI	≥0.90	1.04
4	CFI	≥0.90	1.00
5	IFI	≥0.90	1.03
6	RFI	≥0.90	1.00
7	GFI	≥ 0.90	0.90

Notes: RMSEA: root mean square error of approximation, NNFI: non-normed fit index, CFI: confirmatory fit index, IFI: incremental fit index, RFI: relative fit index, and GFI: goodness-of-fit index.

Finally, in the study, a test was conducted of the t-value and the corresponding structural coefficient for each path to determine the significance of each relationship (path) in the structural research model. Table 6 provides the t-value and corresponding structural coefficient for each path (see Figure 2). All three of the hypotheses were supported.

Table 6 Final structure of the model for significant levels (N = 108)

No.	*Hypotheses*	*t-value*	*Structural coefficient*	*Conclusion*
1	OA → SM	3.44	0.36	H1 is supported
	H1 (+) organisational agility has a positive and significant influence on stakeholder management			
2	OA → PS	5.39	0.56	H2 is supported
	H2 (+) organisational agility has a positive and significant influence on project success			
3	SM → PS	3.88	0.36	H3 is supported
	H3 (+) stakeholder management has a positive but insignificant influence on project success			

Notes: OA: organisational agility, SM: stakeholder management, PS: project success, H1: Hypothesis-1, H2: Hypothesis-2, and H3: Hypothesis-3.

5 Discussion

Based on the empirical findings, H1 was supported (t-value = 3.44), implying that OA had a positive and significant effect on SM. An organisation's capability to operate in turbulent and uncertain conditions will lead managers to influence SM. This finding is in agreement with previous studies of concepts that found that OA meets the strategy to respond to stakeholder's power and interest (Teece et al., 2016; Sharifi and Zhang, 2001).

Based on the result, H2 was supported (t-value = 5.39), implying that OA had a positive and significant effect on PS. This finding is in line with studies that have found that OA has significant influence on a PS (Manurung and Kurniawan, 2022).

As shown in Fig. 2, this result shows that the t-value between SM and PS is 4.91 (greater than 1.96). This means that H3 (SM's influence toward the PS) is supported, so SM positively and significantly affects PS. Support for H3 indicates that the success of a project is achieved if the PM and project teams have considered the important influence of the stakeholders and implemented the right process to handle their interests properly. This finding is in line with the study of Yang et al. (2009) in which it was found that external stakeholders are an influential factor that does affect a project's success.

5.1 Theoretical implications

The findings of this study make several contributions to the literature. First, we extend the research in the OA, SM, and PS using empirical evidence. The results that were obtained underline the importance of OA (Harsch and Festing, 2020; Walter, 2021) and SM (Lehtinen and Aaltonen, 2020; Wood et al., 2021) in generating success for projects in uncertain environments. Second, this study is one of the first attempts to explore the attribute-related requirement and construct a framework of the project environment, especially in upstream oil and gas sources as part of an organisational unit.

5.2 Managerial implication

In this study, it was found that OA has a positive and significant effect on PS. OA's essential capability is to operate in turbulent and uncertain conditions (Shams et al., 2021; Theodore et al., 2022); therefore, when this capability increases, the members of the project management team will put forth their best efforts to organise and conduct projects. This finding implies that the company that owns the project should continuously develop its capability to adapt to volatilities and uncertainties, specifically its abilities to understand and predict project lifecycle trends, provide high standards, analyse information, formulate strategy, quickly analyse the information received about changes in the environment and incorporate them into its system and react quickly to sudden problems, deliver products/services on time and maintain effective communication and information dissemination within the project (Sharifi and Zhang, 2001).

We also found that SM has a positive and significant effect on PS. This finding implies that the PM and teams should be close with their stakeholders by identifying and mapping their influence, power, and interest. In-depth information on that, along with an analysis of the stakeholders, will allow project management teams to choose the options of proper strategies in handling their stakeholder, such as collaboration, monitoring, defending, or engagement (Kujala et al., 2022) in actions during the execution of projects, and it will contribute to the success of projects.

5.3 Limitation and future research

Despite the promising result above, this study has several limitations, so directions are provided for additional research. First, we highlighted the importance of OA and SM in determining PS in the context of a complex and dynamic environment (upstream oil and gas projects). Future research can apply a similar model for projects conducted in a more stable or regulated environment. Second, this research framed our model in such a way that OA and SM preceded PS. For instance, PS could be related reciprocally over time. In other words, OA and SM could be exercised based on previous PS. Although we find that relationships among the variables are plausible theoretically, we cannot verify this empirically using cross-sectional data. For this reason, we encourage future longitudinal examination of our model.

6 Conclusions

For more than a decade, scholars and practitioners have explored strategies and been interested in the influence of the internal and external environments on project performance. To gain a deeper understanding of the influence of OA and SM on PS, this study set out to develop a model and use it to investigate the relationship between the constructs.

This study has answered the objective of the RQ as follows:

1 That OA had a positive and significant effect on SM. An organisation's capability to operate in turbulent and uncertain conditions will lead managers to influence SM.

2 OA had a positive and significant effect on PS. When the OA's capability increases, the members of the project management team will put forth their best efforts to organise and conduct projects, thereby affecting the success of the project.

3 SM positively and significantly affects PS. The success of a project is achieved if the PM and project teams have considered the important influence of the stakeholders and implemented the right process to handle their interests properly.

References

Akkaya, B. and Tabak, A. (2020) 'The Link between organizational agility and leadership: a research in science parks', *Academy of Strategic Management Journal*, Vol. 19, No. 1, pp.1–17.

Algorri, M., Abernathy, M.J., Cauchon, N.S., Christian, T.R., Lamm, C.F. and Moore, C.M. (2022) 'Re-envisioning pharmaceutical manufacturing: increasing agility for global patient access', *Journal of Pharmaceutical Sciences*, Vol. 111, No. 3, pp.593–607.

Anderson, J.C. and Gerbing, D.W. (1988) 'Structural equation modeling in practice: a review and recommended two-step approach', *Psychological Bulletin*, Vol. 103, No. 3, pp.411–423, https://doi.org/10.1037/0033-2909.103.3.411.

Aragonés-Beltrán, P., García-Melón, M. and Montesinos-Valera, J. (2017) 'How to assess stakeholders' influence in project management? A proposal based on the analytic network process', *International Journal of Project Management*, Vol. 35, No. 3, pp.451–462, https://doi.org/10.1016/j.ijproman.2017.01.001.

Bentler, P.M. and Chou, C.P. (1987) 'Practical issues in structural modeling', *Sociological Methods and Research*, Vol. 16, No. 1, pp.78–117, https://doi.org/10.1177/0049124187016001004.

Bianchi, G., Testa, F., Tessitore, S. and Iraldo, F. (2022) 'How to embed environmental sustainability: the role of dynamic capabilities and managerial approaches in a life cycle management perspective', *Business Strategy and the Environment*, Vol. 31, No. 1, pp.312–325 https://doi.org/10.1002/bse.2889.

Destek, M.A. and Sarkodie, S.A. (2020) 'Are fluctuations in coal, oil and natural gas consumption permanent or transitory? Evidence from OECD countries', *Heliyon*, Vol. 6, No. 2, p.e03391, https://doi.org/10.1016/j.heliyon.2020.e03391.

de Oliveira, G.F. and Rabechini, R. (2019) 'Stakeholder management influence on trust in a project: a quantitative study', *International Journal of Project Management*, Vol. 37, No. 1, pp.131–144. https://doi.org/10.1016/j.ijproman.2018.11.001.

Di Maddaloni, F. and Davis, K. (2017) 'The Influence of local community stakeholders in megaprojects: rethinking their inclusiveness to improve project performance', *International Journal of Project Management*, Vol. 35, No. 8, pp.1537–1556, https://doi.org/10.1016/j.ijproman.2017.08.011.

Feizabadi, J., Maloni, M. and Gligor, D. (2019) 'Benchmarking the triple-A supply chain: orchestrating agility, adaptability, and alignment', *Benchmarking: An International Journal*, Vol. 26, No. 1, pp.271–295.

Freeman, R.E. (1984) *Strategic Management: A Stakeholder Approach*, Ballinger, Boston, MA.

Freeman, R.E. (2020) *About the Stakeholder Theory* [online] http://stakeholdertheory.org/about/.

Hair, J.F., Black, W.C., Babon, B.J. and Anderson, R.E. (2010) *Multivariate Data Analysis*, 7th ed., Pearson, New York.

Hans, R.T. and Mnkandla E. (2019) 'A framework for improving the recognition of project teams as key stakeholders in information and communication technology projects', *International Journal of Project Organisation and Management*, Vol. 11, No. 3, pp.199–226.

Harsch, K. and Festing, M. (2020) 'Dynamic talent management capabilities and organizational agility – a qualitative exploration', *Human Resource Management*, Vol. 59, No. 1, pp.43–61, https://doi.org/10.1002/hrm.21972.

He, Y. and Chittoor, R. (2022) 'When does it (not) pay to be good? Interplay between stakeholder and competitive strategies', *Journal of Management*, pp.1–33, https://doi.org/10.1177/01492063221106433.

Ika, L.A. and Pinto, J.K. (2022) 'The 're-meaning' of project success: updating and recalibrating for a modern project management', *International Journal of Project Management*, Vol. 40, No. 7, pp.835–848.

Jawad, S. and Ledwith, A. (2021) 'A measurement model of project control systems success for engineering and construction projects case study: contractor companies in Saudi's petroleum and chemical industry', *Engineering, Construction and Architectural Management*, Vol. 29, No. 3, pp.1218–1240, https://doi.org/10.1108/ECAM-11-2020-0924.

Jöreskog, K.G., Sörbom, D. and Wallentin, F.Y. (2006) *Latent Variable Scores and Observational Residuals* [online] https://www.researchgate.net/profile/Fan_Wallentin/publication/254378812_Latent_Variable_Scores_and_Observational_Residuals/links/567270eb08aecc73dc0c6233.pdf (accessed 7 June).

Kujala, J., Sachs, S., Leinonen, H., Heikkinen, A. and Laude, D. (2022) 'Stakeholder engagement: past, present, and future', *Business & Society*, Vol. 61, No. 5, pp.1136–1196.

Le Menestrel, M., Le Menestrel, M. and De Bettignies, H.C. (2002) 'Processes and consequences in business ethical dilemmas: the oil industry and climate change', *Journal of Business Ethics*, Vol. 41, No. 3, pp.251–266, https://doi.org/10.1023/A:1021237629938.

Lehtinen, J. and Aaltonen, K. (2020) 'Organizing external stakeholder engagement in inter-organizational projects: opening the black box', *International Journal of Project Management*, Vol. 38, No. 2, pp.85–98, https://doi.org/10.1016/j.ijproman.2019.12.001.

Manurung, A.H. and Kurniawan, R. (2021) 'Organizational agility: do agile project management and networking capability require market orientation?', *International Journal of Managing Projects in Business*, Vol. 15, No. 1, pp.1–35, https://doi.org/10.1108/IJMPB-10-2020-0310.

Martens, C.D.P., Machado, F.J., Martens, M.L., Silva, F.Q.P.d.O.e. and Freitas, H.M.R.d. (2018) 'Linking entrepreneurial orientation to project success', *International Journal of Project Management*, Vol. 36, No. 2, pp.255–266, https://doi.org/10.1016/j.ijproman.2017.10.005.

McGrath, S.K. and Whitty, S.J. (2017) 'Stakeholder defined', *International Journal of Managing Projects in Business*, Vol. 10, No. 4, pp.721–748, https://doi.org/10.1108/IJMPB-12-2016-0097.

Mehdi, S., Arasti, M.R. and Kotobzadeh, R. (2012) 'Identifying key success factors in upstream sector of oil and gas industry in Iran', *African Journal of Business Management*, Vol. 6, No. 20, pp.6156–6165, https://doi.org/10.5897/AJBM11.1618.

Nejatian, M., Zarei, M.H., Nejati, M. and Zanjirchi, S.M. (2018) 'A hybrid approach to achieve organizational agility: an empirical study of a food company', *Benchmarking: An International Journal*, Vol. 25, No. 1, pp.201–234.

Panda, S. (2022) 'Strategic IT-business alignment capability and organizational performance: roles of organizational agility and environmental factors', *Journal of Asia Business Studies*, Vol. 16, No. 1, pp.25–52.

Project Management Institute (2017) *A Guide to the Project Management Body of Knowledge*, 6th ed., Project Management Institute.

Pusparini, E.S., Rachmawati, R., Sudhartio, L. and Soetjipto, B.W. (2018) 'Stakeholder pressure and its effect on environmental proactiveness and firm performance: the mediating role of dynamic managerial capabilities', *Pertanika Journal of Social Science and Humanities*, Vol. 26, No. S, pp.197–212.

Rajablu, M., Hamdi, S., Marthandan, G. and Yusoff, W.F.W. (2017) 'Managing for stakeholder metrics-integrated model to lead ethics and success', *International Journal of Project Organisation and Management*, Vol. 9, No. 1, pp.31–56, https://doi.org/10.1504/IJPOM.2017.083124.

Rhemtulla, M. (2016) 'Population performance of SEM parceling strategies under measurement and structural model misspecification', *Psychological Methods*, Vol. 21, No. 3, pp.348–368, https://doi.org/10.1037/met0000072.

Rhemtulla, M., van Bork, R. and Borsboom, D. (2020) 'Worse than measurement error: consequences of inappropriate latent variable measurement models', *Psychological Methods*, Vol. 25, No. 1, pp.30–45, https://doi.org/10.1037/met0000220.

Sambamurthy, V., Bharadwaj, A. and Grover, V. (2003) 'Shaping agility through digital options: reconceptualizing the role of information technology in contemporary firms', *MIS Quarterly*, Vol. 27, No. 2, pp.237–263.

Shafiee, M., Animah, I., Alkali, B. and Baglee, D. (2019) 'Decision support methods and applications in the upstream oil and gas sector', *Journal of Petroleum Science and Engineering*, Vol. 173, pp.1173–1186, https://doi.org/10.1016/J.PETROL.2018.10.050.

Shams, R., Vrontis, D., Belyaeva, Z., Ferraris, A. and Czinkota, M.R. (2021) 'Strategic agility in international business: a conceptual framework for 'agile' multinationals', *Journal of International Management*, Vol. 27, No. 1, p.100737, https://doi.org/10.1016/j.intman.2020.100737.

Sharifi, H. and Zhang, Z. (2001) 'Agile manufacturing in practice – application of a methodology', *International Journal of Operations and Production Management*, Vol. 21, Nos. 5/6, pp.772–794, https://doi.org/10.1108/01443570110390462.

Shenhar, A.J. and Dvir, D. (2007) *Reinventing Project Management: The Diamond Approach to Successful Growth & Innovation*, Harvard Business Review Press, Boston, MA.

Shqairat, A. and Sundarakani, B. (2018) 'An empirical study of oil and gas value chain agility in the UAE', *Benchmarking: An International Journal*, Vol. 25, No. 9, pp.3541–3569.

Silvius, G., Schipper, R., Planko, J. and van den Brink, J. (2012) *Sustainability in Project Management*, Gower Publishing, Ltd.

Small, A.W. and Downey, E.A. (1996) 'Orchestrating multiple changes: a framework for managing concurrent changes of varied type and scope', *IEEE International Engineering Management Conference*, pp.627–634, https://doi.org/10.1109/iemc.1996.547891.

Sumadilaga, D.H., Soetjipto, B.W., Wahyuni, S. and Wijanto, S.H. (2017) 'The influences of perceived managerial discretion and risk-taking behavior on government organizational performance', *International Journal of Public Administration*, Vol. 40, No. 13, pp.1075–1084, https://doi.org/10.1080/01900692.2016.1242613.

Teece, D., Peteraf, M. and Leih, S. (2016) 'Dynamic capabilities and organizational agility: risk, uncertainty, and strategy in the innovation economy', *California Management Review*, Vol. 58, No. 4, pp.13–35, https://doi.org/10.1525/cmr.2016.58.4.13.

Teece, D.J. (2007) 'Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance', *Strategic Management Journal*, Vol. 28, No. 13, pp.1319–1350, https://doi.org/10.1002/smj.640.

Theodore, W., Kasali, R., Balqiah, T.E. and Sudhartio, L. (2022) 'The effects of task environment and organizational agility on perceived managerial discretion and strategy implementation in a pharmaceutical company+', *International Journal of Pharmaceutical and Healthcare Marketing*, Vol. 16, No. 2, pp.204–221, https://doi.org/10.1108/IJPHM-11-2021-0116.

Walter, A-T. (2021) 'Organizational agility: ill-defined and somewhat confusing? A systematic literature review and conceptualization', *Management Review Quarterly*, Vol. 71, No. 2, pp.343–391, https://doi.org/10.1007/s11301-020-00186-6.

Ward, S. and Chapman, C. (2008) 'Stakeholders and uncertainty management in projects', *Construction Management and Economics*, Vol. 26, No. 6, pp.563–577.

Weijermars, R. and Al-Shehri (2022) 'Regulation of oil and gas reserves reporting in Saudi Arabia: review and recommendations', *Journal of Petroleum Science and Engineering*, Vol. 210, p.109806, https://doi.org/10.1016/j.petrol.2021.109806.

Wood, D.J., Mitchell, R.K., Agle, B.R. and Bryan, L.M. (2021) 'Stakeholder identification and salience after 20 years: progress, problems, and prospects', *Business and Society*, Vol. 60, No. 1, pp.196–245, https://doi.org/10.1177/0007650318816522.

Xia, N., Zou, P.X.W., Griffin, M.A., Wang, X. and Zhong, R. (2018) 'Towards integrating construction risk management and stakeholder management: a systematic literature review and future research agendas', *International Journal of Project Management*, Vol. 36, No. 5, pp.701–715, https://doi.org/10.1016/j.ijproman.2018.03.006.

Yang, J., Shen, G.Q., Ho, M., Drew, D.S. and Chan, A.P.C. (2009) 'Exploring critical success factors for stakeholder management in construction projects', *Journal of Civil Engineering and Management*, Vol. 15, No. 4, pp.337–348, https://doi.org/10.3846/1392-3730.2009.15.337-348.

Appendix

Instruction

Please answer all questions.								
Please click to select the one (1) of the six (6) answers that describes you most closely.								
1	*2*	*3*	*4*	*5*			*6*	
Strongly disagree	*Disagree*	*Slightly*	*Slightly agree*	*Agree*			*Strongly disagree agree*	
1 Perceived organisational agility								
								References
Responsiveness								
The company has the ability to detect, analyse, and understand a competitor's activity and position.				1	2	3	4	5	6	Sharifi and Zhang (2001)
The company has the ability to detect, analyse, and understand a customer's demand and need.				1	2	3	4	5	6	
The company has the ability to detect, analyse, and understand the changes in technology.				1	2	3	4	5	6	
The company has the ability to detect, analyse, and understand the changes in political/social/economic factors.				1	2	3	4	5	6	
The company has the ability to detect, analyse, and understand changes in the suppliers' activities and positions.				1	2	3	4	5	6	
Top level management has concern and commitment in analysing the information and data received concerning changes in its system.				1	2	3	4	5	6	
The company's strategic planning considers analysing the information and data received concerning changes in its system.				1	2	3	4	5	6	

Instruction (continued)

Please answer all questions.								
Please click to select the one (1) of the six (6) answers that describes you most closely.								
1	*2*	*3*	*4*	*5*			*6*	
Strongly disagree	*Disagree*	*Slightly*	*Slightly agree*	*Agree*			*Strongly disagree agree*	
1 Perceived organisational agility								
								References
Responsiveness								
The company efficiently analyses the information and data received by its systems in conducting strategic, technical, and financial analyses of the information concerning the company's competitive advantage.				1	2	3	4	5	6	Sharifi and Zhang (2001)
The company is efficient in analysing the information and data received into its systems via interorganisational transfers of the information and outputs that resulted.				1	2	3	4	5	6	
The company has the ability to exactly understand the buyers' needs.				1	2	3	4	5	6	
Compared with other oil and gas companies, the company is strong and responsive with respect to on time delivery.				1	2	3	4	5	6	
The company has the ability to keep up the changes in the production life cycle in order to gain revenue.				1	2	3	4	5	6	
The company has the ability to understand and predict the trends associated with the life cycles of projects.				1	2	3	4	5	6	
The company has the ability to understand new environmental pressures and regulations, and it copes with the changes by adjusting its system as a part of its planning activities.				1	2	3	4	5	6	
The company has the ability to understand new environmental pressures and regulations, and it copes with the changes by adjusting its system and design activities.				1	2	3	4	5	6	
The company has the ability to understand the new environmental pressure and regulations, and it copes with them by adjusting its system in controlling activities.				1	2	3	4	5	6	
The company has the ability to understand and copes with the changes of design.				1	2	3	4	5	6	
The company has the ability to cope with and/or take advantage of an economic recession.				1	2	3	4	5	6	
The company has the ability to stand or take advantage of international political/economic changes.				1	2	3	4	5	6	
The company has the strength and responsiveness in investment and development comparable to these features among other, competing oil and gas companies.				1	2	3	4	5	6	

Instruction (continued)

Please answer all questions.								
Please click to select the one (1) of the six (6) answers that describes you most closely.								
1	*2*	*3*	*4*	*5*			*6*	
Strongly disagree	*Disagree*	*Slightly*	*Slightly agree*	*Agree*			*Strongly disagree agree*	
1 Perceived organisational agility								
								References
Competence								
The company has the ability to cope with and/or take advantage of high inflation rates.				1	2	3	4	5	6	Sharifi and Zhang (2001)
The company has the ability to cope with or take advantage of economic growth.				1	2	3	4	5	6	
The company has the ability to maintain its position in the local market.				1	2	3	4	5	6	
The company has the ability to maintain its position in the global market.				1	2	3	4	5	6	
The company has the strength and responsiveness in cost effectiveness that are relative in comparison with its competition among the other oil and gas companies.				1	2	3	4	5	6	
The company has strength and responsiveness in customer satisfaction that compares favourably with the oil and gas companies with which it competes.				1	2	3	4	5	6	
The company has strength and responsiveness in quality, that compares favourably with other oil and gas companies.				1	2	3	4	5	6	
The company has strength and responsiveness in unpredictable incidents when compared with its other oil and gas companies.				1	2	3	4	5	6	
The company has strength and responsiveness in the introduction of new products in comparison with other oil and gas companies.				1	2	3	4	5	6	
Strategy basis for the company is providing products on time.				1	2	3	4	5	6	
The company has the ability to provide high quality products as standard procedure.				1	2	3	4	5	6	
The company has the ability to totally satisfy its customers.				1	2	3	4	5	6	
The company is strategically located for its possessing technology considering the highest available level.				1	2	3	4	5	6	
The company implements new technology in conducting its business.				1	2	3	4	5	6	
The company has the ability to deal with trade unions and the government support they receive.				1	2	3	4	5	6	
The company has the ability to take advantage of new opportunities provided by government support for research and/or investments and/or privatisation.				1	2	3	4	5	6	

Instruction (continued)

Please answer all questions.								
Please click to select the one (1) of the six (6) answers that describes you most closely.								
1	*2*	*3*	*4*	*5*			*6*	
Strongly disagree	*Disagree*	*Slightly*	*Slightly agree*	*Agree*			*Strongly disagree agree*	
1 Perceived organisational agility								
								References
Competence								
The company has the ability to manage suppliers.				1	2	3	4	5	6	
The company has the ability to construct a strong relationship with suppliers and to work with them as partners.				1	2	3	4	5	6	
The company has the ability to substitute new suppliers for non-conforming suppliers thereby recovering from the problems that occurred.				1	2	3	4	5	6	
Capability of the people in the company to cope with sudden changes.				1	2	3	4	5	6	
Ability of the company to reorganise when there is a need to do so.				1	2	3	4	5	6	
Flexibility								
The company has the ability to understand the new environmental pressure and regulations, to cope with changes in them, and to adjust its system in fabrication activities.				1	2	3	4	5	6	
The company has the strength and responsiveness required to deal with unpredicted adverse incidents, relative in comparison with other oil and gas companies.				1	2	3	4	5	6	
The company has the ability to respond to the heterogeneous needs and desires of customers.				1	2	3	4	5	6	
The company has the speed and response required to react quickly when changes are required by the customer.				1	2	3	4	5	6	
In the past three years, the company has succeeded in keeping customers satisfied with cost, quality, delivery time, and flexibility.				1	2	3	4	5	6	
The company has the ability to implement a reorganisation when it is necessary.				1	2	3	4	5	6	
The company has the ability to differentiate its product from the products of other companies.				1	2	3	4	5	6	
Speed (quickness)								
The company has the ability to deal with the new environmental pressure and regulations, to cope with changes in them, and to adjusting its system in waste management.				1	2	3	4	5	6	Sharifi and Zhang (2001)
The company has the ability to deal with the new environmental pressure and regulations, to cope with changes in them, and to adjusting its system in planning activities as deemed appropriate.				1	2	3	4	5	6	

Instruction (continued)

Please answer all questions.								
Please click to select the one (1) of the six (6) answers that describes you most closely.								
1	*2*	*3*	*4*	*5*			*6*	
Strongly disagree	*Disagree*	*Slightly*	*Slightly agree*	*Agree*			*Strongly disagree agree*	
1 Perceived organisational agility								
								References
Speed (quickness)								
The company has the ability to withstand the new environmental pressure and regulations, to cope with changes in them, and to adjust its system in fabrication activities.				1	2	3	4	5	6	
The company has the ability to withstand the new environmental pressure and regulations, cope with changes in them, and adjust its system of waste management.				1	2	3	4	5	6	
The company has the strength and responsiveness to provide on-time delivery, relative in comparison with the other oil and gas companies with whom it must compete.				1	2	3	4	5	6	
In the past three years, the number of new projects has increased.				1	2	3	4	5	6	
The company has an effective communication and information distribution system.				1	2	3	4	5	6	
The company has the ability establish close cooperation with other companies in the form of joint ventures.				1	2	3	4	5	6	
The company has the ability to establish close cooperation with other companies in the form of a virtual organisation.				1	2	3	4	5	6	
The company has the ability to establish close cooperation with other companies in the form of partnerships.				1	2	3	4	5	6	
In strategic management levels, the company has the ability to solve problems quickly and provide quick responses to sudden problems.				1	2	3	4	5	6	
In the middle management levels, the company has the ability to solve problems quickly.				1	2	3	4	5	6	
In the operational levels, the company has the ability to solve traditional and unexpected problems quickly.				1	2	3	4	5	6	

Instruction (continued)

Please answer all questions.							
Please click to select the one (1) of the six (6) answers that describes you most closely.							
1	*2*	*3*	*4*	*5*			*6*
Strongly disagree	*Disagree*	*Slightly*	*Slightly agree*	*Agree*			*Strongly disagree agree*
2 Stakeholder management							
							References
Stakeholders prescriptive							
I believe that:							
Project stakeholders should be formally identified.	1	2	3	4	5	6	de Oliveira and Rabechini (2019)
I think that those responsible for conducting the project must understand the stakeholder's areas of interest.	1	2	3	4	5	6	
Stakeholders of the project, especially those with high power and influence, should have their needs addressed in actions and activities throughout the life of the project.	1	2	3	4	5	6	
Stakeholders of the project, especially those with high power and influence, should be evaluated, especially their impact on the project.	1	2	3	4	5	6	Author
The project should identify the risk related with stakeholders.	1	2	3	4	5	6	Author
The stakeholders of the project had their objectives open in actions.	1	2	3	4	5	6	de Oliveira and Rabechini (2019)
The stakeholders of the project had their objectives open in activities that could have an impact on the project.	1	2	3	4	5	6	
Stakeholders relationale							
I believe that the project should be inclusive, and changes in the activities are planned to adapt to the identified needs of the stakeholders.	1	2	3	4	5	6	de Oliveira and Rabechini (2019)
I believe that the project should communicate with the stakeholders and engage with them properly and frequently.	1	2	3	4	5	6	
I believe there are actions to engage the stakeholders throughout the life of the project.	1	2	3	4	5	6	
I believe that the project should strengthen its relationships with stakeholders throughout the life of the project.	1	2	3	4	5	6	
I believe that the stakeholders are engaged in the project.	1	2	3	4	5	6	
3 Project success							
							References
Project efficiency							
I have a perception that:							
The project is completed on time or earlier.	1	2	3	4	5	6	Martens et al. (2018)
The project is completed within or below budget.	1	2	3	4	5	6	
The project has only minor changes.	1	2	3	4	5	6	
The project is completed with good productivity.	1	2	3	4	5	6	

Instruction (continued)

Please answer all questions.								
Please click to select the one (1) of the six (6) answers that describes you most closely.								
1	*2*	*3*	*4*	*5*			*6*	
Strongly disagree	*Disagree*	*Slightly*	*Slightly agree*	*Agree*			*Strongly disagree agree*	
3 Project success								
								References
Fulfilment of the customer's needs								
The project improves the customer's performance.				1	2	3	4 5 6	Martens et al. (2018)
The customer is satisfied.				1	2	3	4 5 6	
The project meets the customer's requirements.				1	2	3	4 5 6	
The customer is using the project's output.				1	2	3	4 5 6	
The customer will come back for future work.				1	2	3	4 5 6	
Impact on investment								
The outcome of the project will contribute to future projects.				1	2	3	4 5 6	Martens et al. (2018)
The project will lead to additional oil and gas.				1	2	3	4 5 6	
The project will help to contribute to other industries.				1	2	3	4 5 6	
The project creates new technology for future use.				1	2	3	4 5 6	
The project contributes to new business processes.				1	2	3	4 5 6	
The project develops better managerial capabilities.				1	2	3	4 5 6	
Impact on the team								
The project teams are highly satisfied and motivated.				1	2	3	4 5 6	Martens et al. (2018)
The project teams are highly loyal to the project.				1	2	3	4 5 6	
The project teams have high spirits and are well motivated.				1	2	3	4 5 6	
The project teams enjoy working on their projects.				1	2	3	4 5 6	
The members of the project teams experience personal professional growth.				1	2	3	4 5 6	
The members of the project teams want to continue to work for the company.				1	2	3	4 5 6	
Business and direct success								
The project is an economic business success.				1	2	3	4 5 6	Martens et al. (2018)
The project increases the company's profitability.				1	2	3	4 5 6	
The project has a positive return on investment.				1	2	3	4 5 6	
The project increases the company's value.				1	2	3	4 5 6	
The project contributes to the company's direct performance.				1	2	3	4 5 6	