

MAXIMIZING VALUE CREATION IN THE NEW ECONOMY THROUGH COLLABORATIVE RELATIONSHIPS AND SOURCING MODELS

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ABSTRACT

The shifts in business environment since the internet era have created new economy that is more complex, more technology-based, and highly competitive as characterized by high customers' demand of value creation. This study researched the potentials for maximizing value creation through collaborative buyer-supplier relationship to adapt better to the new economy. The research was carried out as a case study at an upstream oil and gas company, which applies collaborative relationship process to create value out of its relationship with strategic suppliers. The empirical study followed qualitative as well as quantitative methods. The qualitative research was done through literature review while quantitative part was carried out using primary data collected through a questionnaire, from which five hypotheses have been defined and tested. Path analysis and bootstrapping test were employed to test the role of collaborative relationship in mediating the effect of trust and commitment on value creation. The result suggested the case company to move to the right side of relational models along the sourcing continuum by adopting more output and/or outcome-based economic models. The implementation of collaborative relationship process needs to be reinforced to the extent that it is run in more collaborative manner so as to boost trust and commitment. Challenges on contractual issues, benefit sharing, and resource constraints should be well mitigated to allow better process execution. All in all, to create and capture maximum value, collaborative relationship should be run in a way that stimulate maximum trust and commitment.

Keywords: New economy, value creation, collaborative relationships, relational models, sourcing continuum, oil and gas

1. INTRODUCTION

Business entities need to adapt to the environment they are operating in order to survive. Business focus and the source of success has evolved over the years. Quite recently, the business has changed to a more complex and highly competitive environment that is mainly characterized by customer demand of value creation (Sánchez et al., 2010). So, one of the main spells of today's business development is value creation. Value creation has driven the way companies carry out business and hence have a shifting effect on business models (Zott et al., 2011). Recent shifts in the business environment have created a new economy, in which value creation is one of central elements to keep up with the change. Businesses need to adapt in order to meet the challenges and characteristics of the new economy. This has affected companies' business models and supplier

relationship as a part of the business model. Besides, the new economy demands more flexible, agile and responsive supply chains (Li, 2009). VUCA – volatility, uncertainty, complexity, and ambiguity – has become a cute, trendy way of saying “unpredictable change” (Bennet & Lemoine, 2014). Uncertainty causes lack of confidence to carry out plans (Pujawan, 2017). Volatility and ambiguity also describe the new economy (Bawany, 2016).

Keith et al. (2016) argued that business environment in the new economy is more dynamic and has greater uncertainty than before, which makes the long-established procurement methods and sourcing tools less effective. The literature shows that buyer-supplier relationships evolve from competitive to cooperative relationships (Loppacher et al., 2011). Anderson (1995) argued that value creation could be seen as the purpose of collaborative buyer-supplier relationships. buyer-supplier relationships play a key role in meeting the challenges of the new economy and succeeding in today’s business environment (Loppacher et al., 2011).

The research under this thesis was carried out as a case study at an Indonesia-based upstream oil and gas company as the case company. For the rest of this paper the case company is nicknamed CC. CC is one of the largest upstream oil and gas companies in Indonesia, which is engaged in the exploration and production of Oil and Natural Gas. Globally, CC is one of the world's leading energy companies headquartered in California, USA. CC applies collaborative supplier management process as a vehicle to create and capture value from the relationships with its strategic suppliers. Main research question of this Study is “How to maximize value creation through collaborative relationships and sourcing models to adapt to the new economy?”. The question is answered through the following sub-questions (SQ):

- SQ1: To what extent has CC adopted collaborative sourcing models to adapt to the new economy?
- SQ2: How does collaborative relationship at CC maximize value creation?
- SQ3: What are the biggest challenges in collaborative relationships?

2. LITERATURE REVIEW

New economy is a term that refers to shifts in business environment since the widespread adoption of the Internet. The new economy refers to today’s business environment that is more complex and competitive (Sánchez et al., 2010). The basic idea behind the new economy was that computer and Internet technology had fundamentally altered the ways of doing business. The business areas that the New Economy claims as its base include high-technology equipment and consumer products, e-commerce in all forms, innovative IT-led financial services, high-tech telecommunications, and other information technology’s goods and services. Today’s business environment is centered on four key challenges: volatility, uncertainty, complexity, and ambiguity (Bawany, 2016), as people terms it as VUCA. These changes and challenges have led to old methods and tools not being as effective and suitable as before (Keith et al., 2016).

Sourcing business models connects the contexts of business models and supplier relationship. It highlights sourcing as a business model between the buyer and the supplier (Keith et al., 2016) and therefore, incorporates buyer-supplier relationship into the business model of a company. They are the integration of business models and buyer-supplier relationship, and so it indicates that buyer-supplier relationship should be seen as a part of a company’s business model. On the basis of sourcing continuum described by Williamson (2008), Keith et al. (2016) outlined seven sourcing business models that fall along sourcing continuum, which are grouped into transaction, relational, and investment-based models. Figure 1 illustrates how the seven models relate to each other along the continuum. Two market-based "buy" models were classified as transactional models, and two "make" models were classified as investment models. Keith et al.

(2016) identified three models that were more "hybrid" in nature, which they reference as "relational" models due to the longer-term and more strategic nature of the supplier relationships.

The shifts of the new economy have driven outsourcing and procuring increasingly strategic and the use of transaction-based sourcing models for complex goods and services is not suitable (Vitasek, 2016). For that kinds of sourcing needs neither of the extremities of the sourcing continuum as such are suitable. This means that the new economy demands hybrid sourcing models that fall between the extremities of the sourcing business model. As their name suggests, hybrid business models combine elements from transaction-based and investment-based supplier relationships (Golicic et al., 2003). The models can answer to the challenges that characterize the business environment as well as procurement and sourcing in the new economy. Thus, hybrid models that focus on collaboration and partnership offers more efficient ways of procuring in the increasingly strategic, dynamic, ambiguous, fluctuating, and intricate business environment. Collaborative sourcing models refer to the three relational sourcing business models as the most suitable sourcing models for collaborative relationships (Keith et al., 2016). This study focused on examining collaborative relationships as applied by CC, hence the research will mainly refer to these three relational sourcing models.

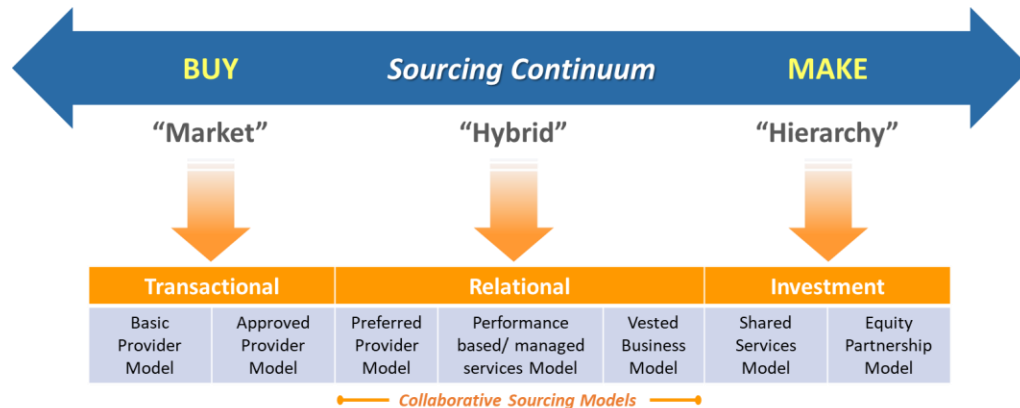


Figure 1. Seven business models along sourcing continuum (Adapted from Keith et al., 2016)

Nowadays, many companies have strived to accomplish the benefits that an investment-based model offers, but without capital investments, by employing outcome-based approach such as vested business model. The arrangement allows companies to remain a separate entity and together achieve success. The vested business model sets up an integrated and mutually beneficial working scheme through which mutual advantage and success are gained (Vitasek et al., 2013).

Collaborative relationship refers to a closer partnership with supplier in attempt to create more value through the relationship. O'Brien (2014) use term "strategic collaborative relationships" and defines it as an approach to establish and improve relationships at a strategic level with the critical few suppliers who can add the most value to the organization. A strategic collaborative relationship is the ultimate level of relationship and one appropriate only for the critical few suppliers who are of strategic importance to the buyer and who hold the potential to significantly benefit buyer's business, and most likely theirs in the process or with whom there is a critical imperative to maintain a close relationship (O'Brien, 2014). Hence, close collaborations cannot be kept with the whole supplier base, and for some purchases a transactional rather than a collaborative approach may be more fit, suggesting that companies must find their own optimal mix of suppliers (Chen et al., 2017). Hence, closer collaborations are typically established with strategic suppliers. Collaborative relationships with critical suppliers must be understood as an avenue to maximize

value creation in the supply chain. Dimensions such as trust and commitment are presented to play an important role in collaborative relationships, where contractual governance alone is not enough in such relationships. Other attributes such as coordination, collaboration, information sharing, communication, flexibility, and dependence, are also widely considered to be central to meaningful relationships (David, 2012).

Value creation is the primary aim of any business entity today. Value creation has been argued to alter the way companies do business and hence have a changing effect on business models (Hughes, 2013). Although the intangible factors that drive value creation differ by business sector, some of the common categories of intangible assets include innovation, technology, intellectual property, alliances, management capabilities, employee relations, customer relations, community relations, and brand value. Value-creation in buyer-supplier relationship is the process in which the capabilities of the buyer and supplier are synergized to promote the competitive advantage of one or both parties. The parties must set goals and develop their activities to reach these goals on the long-term (Hammervoll & Toften, 2010). In a strategic or collaborative buyer-supplier relationship, value is primarily created through structured interactions and actions that are not necessarily defined with formal contracts.

3. METHODOLOGY

3.1 Research Framework

The research under this thesis was conducted as both qualitative and quantitative study, and it included theoretical and empirical part. Unit analysis for this research is CC's collaborative relationship process, namely ASR (advanced supplier relationship) for strategic suppliers, and SQM (supplier quality management) for core suppliers. It is a dyadic relationship between CC and selective suppliers for strategic and core segments.

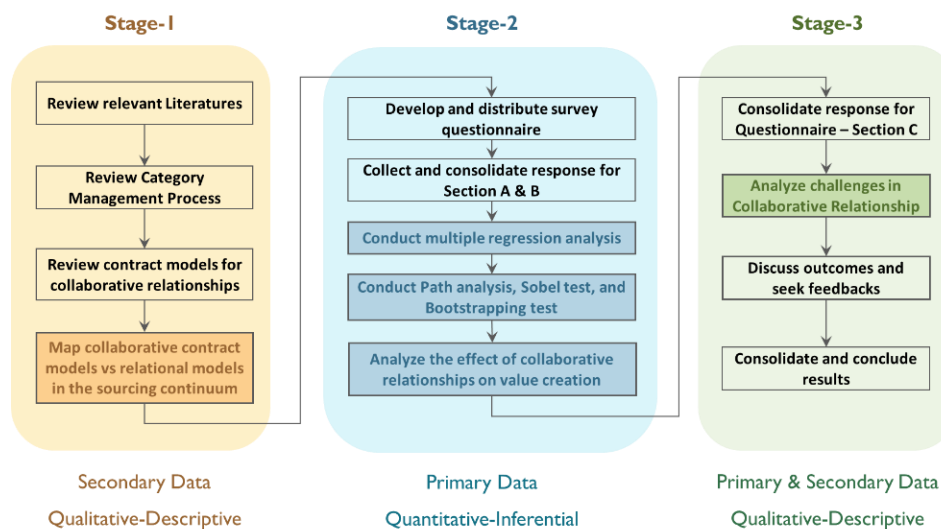


Figure 2. Research Methodology

The research was conducted in three stages to accomplish the sub- and, eventually, main objectives of this thesis. Steps of the research design is presented in Figure 2. Detail of each stage is explained in the following sub-sections. The outcome from each stage will answer each sub-question, thus fulfilling the respective research objective. The empirical data for this research was sourced from both primary and secondary data. Primary data was collected from discussions

(formal and informal), survey, and observations, while secondary data was gathered from literature study against academic literatures and CC's internal documents. A series of discussions was done with various sources at CC organization including executives, managers, and professionals who are/were involved in the execution of collaborative relationship.

3.2 Stage-1 Mapping of Collaborative Contract Models

The research was commenced with the study of relevant literatures followed by reviewing category management process at CC. Further review was carried out to examine collaborative relationships practice in CC and to collect contract data for the collaborative relationships. To fulfill the 1st research objective, the collaborative contracts were mapped against Eleven contractual elements of relational/hybrid models along sourcing continuum (Keith et al., 2016) to measure the extent to which CC has adopted collaborative sourcing models to adapt to the new economy. This stage served as a baseline to see how far CC has leveraged its sourcing business models for core and strategic suppliers to create optimum value through collaborative relationships. The outcome from this stage was used as reference for answering Sub-Question #1 (SQ1). The mapping referred to attributes for relational sourcing models outlined by Keith et al. (2016). A total of 16 contracts were assessed, consisting of 3 contracts under ASR process and 13 contracts under SQM process. The results are presented in tables and charts.

3.3 Stage-2 Test Mediating Effect of Collaborative Relationships

3.3.1 Conceptual Framework and Hypothesis Development

The study under Stage-2 examined the relationship between trust, commitment, collaborative relationship, and value creation. Trust and commitment were investigated as antecedents refer to the literature study that revealed the two as key determinants for value creation in buyer-supplier relationship (Sanchez et al., 2010; Chen et al., 2017; Walter & Ritter, 2003). Besides, Trust and commitment are regarded as key factors for the success of a relationship in the long term (Dwyer et al., 1987; Morgan & Hunt, 1994; Wilson, 1995). A series of discussions with CC Category Management team revealed that collaborative relationship process at CC (ASR-SQM) is intended to boost trust and commitment so that value creation is maximized to its full potential. So, to answer Sub-Question #2 (SQ2), this stage tested how CC maximize value creation through collaborative relationship. Hypotheses underlying the research of this stage are described herewith, which were constructed based on the result of literature review.

Trust is defined as “a willingness to rely on an exchange partner in whom one has confidence” (Moorman et al., 1992). It is the gateway to a successful relationship (Wilson & Jantrania, 1994). Empirical findings reveal that partners trust each other in successful relationships (Morgan & Hunt, 1994). Chen et al. (2017) insisted that trust is key to any successful supplier relationship management. So, trust promotes relationship value creation (Walter and Ritter, 2003). Accordingly, H1 was proposed.

H1: Trust in buyer-supplier relationship has positive and significant effect on Value Creation

Dwyer et al. (1987) defines commitment as an implicit or explicit vow of relational continuity between exchange parties. Commitment is also regarded by researchers as one of the main sources of value creation through a relationship. Hence, it is reasonable to think that if there is commitment, greater value can be created (Ryssel et al., 2004). Commitment represents a desire to maintain a valued relationship with an exchange partner (Hennig-Thurau et al., 2002). Thus, as commitment between two firms expands, the ties of the relationship are likely to enhance the perceptions of value between the partners (Chen et al., 2017). Accordingly, H2 was proposed.

H2: Commitment in buyer-supplier relationship has positive and significant effect on value creation

Historically, firms relied on arm's-length type of supplier management, characterized by minimal commitment or dependence and the exploitation of bargaining power. Entering the new economy, some researchers have argued that buyers and suppliers are motivated by the potential value of relationships to engage and to maintain coordinated interactions (Walter & Ritter, 2003) and firms started to favor relational exchanges over arm's-length interactions when those exchanges help create more business value (Ghosh & John, 1999). Hence, collaborative relationship aims to create and appropriate superior value in business markets (Anderson, 1995; Carson et al., 1999; Wagner et al., 2010). Accordingly, H3 was proposed.

H3: Collaborative relationship has positive and significant effect on value creation

Trust and commitment are regarded as key factors for the success of a relationship in the long term (Dwyer et al., 1987; Morgan & Hunt, 1994; Wilson, 1995). Trust is a key element for creating and developing buyer–supplier relationships over the long term (Lusch, 2003), while commitment has been also identified as a critical driver for successful interorganizational relationships (Dyer & Singh, 1998). Hybrid arrangements such as long-term buyer-supplier relationships are created with an expectation of synergy, i.e., an expectation that the hybrid will create value in a way that each of the partners alone could not (Borys & Jemison, 1989). As firms have started to alter focus towards growth and value creation rather than sole cost reduction, sourcing strategies have shifted towards tighter collaborations with fewer suppliers so as to pull external capabilities in order to gain competitive advantages (Anderson & Katz, 1998). Interorganizational relationships are found to be of utmost importance in the process of value creation because many potential values cannot be realized in arm’s length relationships and purely transactional exchange processes (Biong et al., 1996; Ravald & Gronroos, 1996)). Value creation entails the total net value created in a collaborative effort among exchange partners (Wagner et al., 2010). Accordingly, H4 and H5 were proposed.

H4: Collaborative relationship mediates the effect of trust on value creation

H5: Collaborative relationship mediates the effect of commitment on value creation

The model for Stage-2 examines the relationship between trust, commitment, collaborative relationship, and value creation. Conceptual model for the relationship described above is shown in Figure 3. The outcome from this stage become the basis for answering Sub-Question #2 (SQ3).

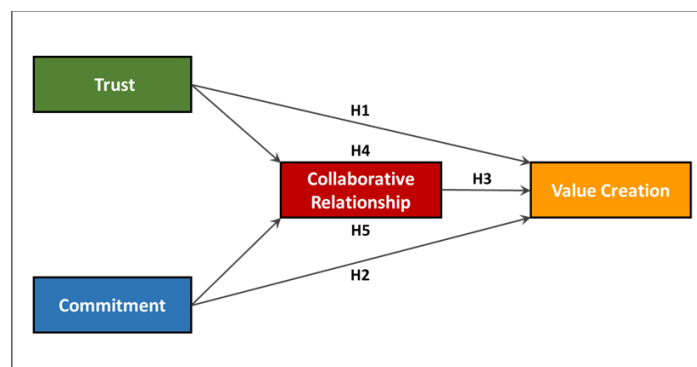


Figure 3. Stage-2 Conceptual Framework

3.3.2 Data Collection and Processing

A questionnaire was distributed to 65 respondents from relevant CC’s Departments and suppliers, who are/were involved in collaborative relationships. This survey involved representatives from 17 Companies, consisting of CC, 3 strategic suppliers, and 13 core suppliers. The data was collected using a structured questionnaire which was administered through Google

Figure 4 shows distribution of sourcing models currently adopted by CC in total and each collaborative relationship process. Overall, current collaborative relationship is mainly managed through Preferred-provider sourcing model, which is part of relational model of the sourcing continuum.

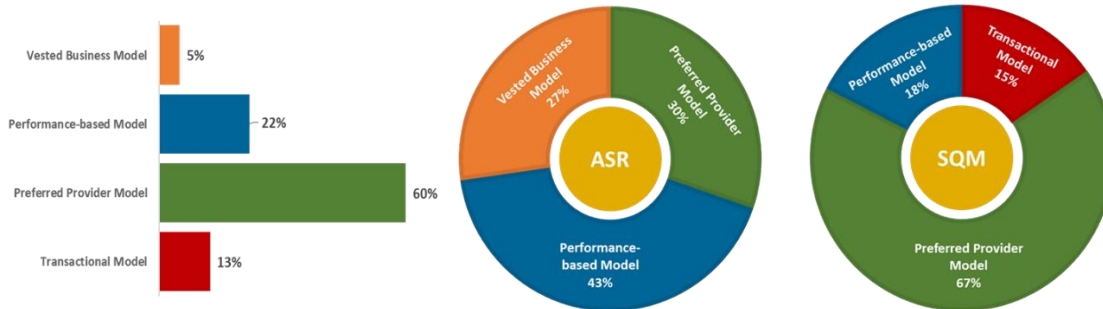


Figure 4. Distribution of Sourcing Models Adoption at CC

As suggested by Williamson (2008), organizations should consider more flexible/less rigid relational contracts for strategic supplier relationships. Collaborative sourcing models refer to the three relational models in the sourcing continuum – Preferred provider model, Performance-based model, and Vested business model – as the most suitable sourcing models for collaborative relationships (Keith et al., 2016). In line with Williamson’s view, this study revealed that CC has been applying hybrid/relational sourcing models for its relationships with strategic and core suppliers. However, the primary model being adopted is preferred provider model which is in the early stage of relational model. Moving forward, CC needs to consider applying more advanced relational models – particularly output and/or outcome-based model – to get maximum benefit out of its collaborative relationship, thus maximizing value creation.

4.2 Mediating effect of collaborative relationship

Primary data was collected from respondents using a closed-ended questionnaire. Online questionnaire was developed using Google Forms application. The requests for participation along with Google Forms link were distributed through E-Mail and WhatsApp message to 65 respondents who involved in collaborative relationship process at CC. Respondents were requested to indicate the extent to which they agree with each statement about Partner Company concerning collaborative relationship process (ASR, SQM, or similar). At the end of survey period 53 questionnaires were returned from the 65 total respondents, which made 82% return rate for the survey. After consolidating and checking the returned questionnaire, all 53 questionnaires were considered complete. Data was then compiled, sorted, classified, and processed using Statistical Package for Social Scientists (SPSS) application. A cross tabulation and correlation analyses were performed to present the background information against the study variables and establish the strength of the relationship between variables, respectively.

Validity and reliability tests, which were performed prior to testing the mediating role of collaborative relationship, confirmed that all attributes and constructs were valid and reliable. Meanwhile, the outcomes from normality, multicollinearity, heteroscedastic, and autocorrelation tests supported the suitability of two regression models used for the analysis. Path analysis was then employed to determine direct and indirect influence of trust and commitment on value creation. The influence was indicated from the coefficient value and significance value. Figure 5 shows path diagram with both unstandardized and standardized coefficient for each path.

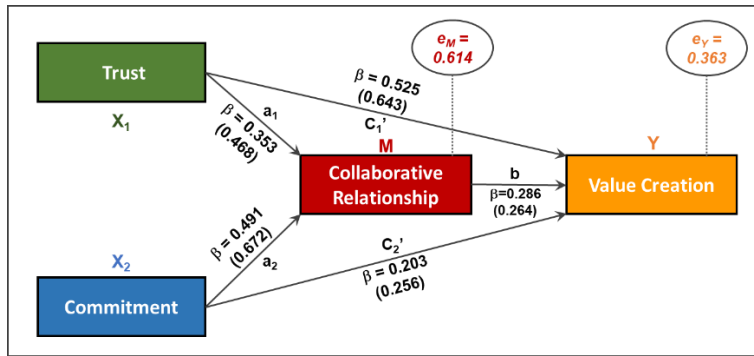


Figure 5. Path Diagram

Table 2 shows the details for each path of the model and the result of path analysis. To reconfirm the mediating effect of collaborative relationship, Sobel and Bootstrapping tests were then carried out. Sobel test criteria of z-value > 1.96 and p-value $< \alpha = 0.05$ was used to determine the significance of a mediation effect. Bootstrapping test was carried out using PROCESS v3.5 for SPSS developed by Hayes (2017).

Table 2. Path Analysis

No.	Variable	Direct Influence	Sig	Indirect Influence	Total Influence
1	Trust → Value Creation	0.525	0.000*	-	-
2	Commitment → Value Creation	0.491	0.030*	-	-
3	Trust → Collaborative Relationship	0.353	0.001*	-	-
4	Commitment → Collaborative Relationship	0.491	0.013*	-	-
5	Collaborative Relationship → Value Creation	0.286	0.001*	-	-
6	Trust → Collaborative Relationship → Value Creation	0.525	-	$0.353 \times 0.286 = 0.101$	$0.525 + 0.101 = 0.626$
7	Commitment → Collaborative Relationship → Value Creation	0.203	-	$0.491 \times 0.286 = 0.140$	$0.203 + 0.140 = 0.343$

Table 2 line 1, 2, and 5 indicate trust, commitment, and collaborative relationship have a positive and significant effect on value creation, with significance value less than 0.05. Therefore, Hypothesis H1, H2, and H3 were supported.

Table 3. Sobel Test Result

Independent Variable	Input	Version	Test Statistic (z-value)	P-value
Trust	$a_1 = 0.468$	Sobel Test	2.057	0.040
	$b = 0.264$	Aroian Test	2.003	0.045
	$S_{a1} = 0.182$ $S_{b1} = 0.077$	Goodman	2.116	0.034
Commitment	$a_2 = 0.468$	Sobel Test	2.481	0.013
	$b = 0.264$	Aroian Test	2.432	0.015
	$S_{a2} = 0.182$ $S_{b2} = 0.182$	Goodman	2.533	0.011

Table 2 line #6 shows trust has positive influence on value creation both directly and indirectly through collaborative relationship, which indicates the presence of mediation effect for total value of 0.626. Sobel test for trust has come up with statistical value (z-value) > 1.96 and p-value < 0.05 for all three formula versions, confirming that collaborative relationship mediates the

influence of trust on value creation (Table 3). Furthermore, bootstrapping test has resulted in a significant indirect effect of trust on value creation through collaborative relationship as indicated by ab value of 0.3347 and LLCI-ULCI range (0.1434, 0.5867) that do not intersect zero (Table 4). The series of tests confirmed collaborative relationship as an intervening variable that mediates the effect of trust on value creation. Therefore, Hypothesis H4 was supported.

Table 4. Bootstrapping Test Result

Antecedent	M (Collaborative Relationship)			Y (Value Creation)				
	Coeff.	SE	p	Coeff.	SE	p		
X ₁ (Trust)	<i>i</i> _{M1}	-0.3757	2.5408	0.8830	<i>i</i> _{v1}	-1.7743	1.3023	0.1792
	<i>a</i> ₁	0.9783	0.1254	0.0000	<i>c</i> ₁ '	0.7618	0.0952	0.0000
	-	-	-	-	<i>c</i> ₁	1.0965	0.0767	0.0000
M (Collaborative Relationship)	-	-	-	<i>b</i> ₁	0.3421	0.0718	0.0000	
$a_1 b_1 = 0.3347$; BootLLCI – BootULCI = 0.1434 – 0.5867 → Not include/intercept Zero								
X ₂ (Commitment)	<i>i</i> _{M2}	2.2424	2.5365	0.3808	<i>i</i> _{v2}	-0.5108	1.7410	0.7704
	<i>a</i> ₂	1.0505	0.1228	0.0000	<i>c</i> ₂ '	0.6071	0.1305	0.0000
	-	-	-	-	<i>c</i> ₂	1.0539	0.0979	0.0000
M (Collaborative Relationship)	-	-	-	<i>b</i> ₂	0.4254	0.0954	0.0000	
$a_2 b_2 = 0.4469$; BootLLCI – BootULCI = 0.1358 – 0.8280 → Not include/intercept Zero								

Table 2 line #7 shows commitment has positive influence on value creation both directly and indirectly through collaborative relationship, which indicates the presence of mediation effect for total value of 0.343. Sobel test for commitment has come up with statistical value (z-value) > 1.96 and p-value < 0.05 for all three formula versions, confirming that collaborative relationship mediates the influence of commitment on value creation (Table 3). Bootstrapping test has resulted in a significant indirect effect of trust on value creation through collaborative relationship as indicated by ab value of 0.4469 and LLCI-ULCI range (0.1358, 0.8280) that do not intersect zero (Table 4). The series of tests confirmed collaborative relationship as an intervening variable that mediates the effect of commitment on value creation. Therefore, Hypothesis H5 was supported.

That finding is in line with Morgan and Hunt (1994) who argued that when trust and commitment are present in a relationship, they will produce outcomes that promote value creation. Trust increases relationship value creation (Walter and Ritter, 2003). According to Friman et al. (2002), commitment implies that a successful relationship will bring future business value. The finding also recognizes the mediating role of collaborative relationship process at CC in facilitating the relationship with strategic and core suppliers in order to create value. The finding is supported by Wagner et al. (2010) who argued that value creation is the reason for collaborative buyer-supplier relationships. Trust and commitment have been identified as an important antecedent for successful inter-organizational relationships (Dwyer et al., 1987; Gundlach et al., 1993; Morgan & Hunt, 1994). According to Wathne (2001), collaborative efforts should result in greater trust and commitment, thus leading to improvement in relationship continuity. For the collaborative relationship to be successful CC needs to take trust and commitment to the next level by making sure ASR-SQM process is managed in a fully collaborative manner. Hence, to create and capture maximum value, collaborative relationship should be managed in a way that stimulate maximum trust and commitment. So, to answer SQ2, the collaborative relationship at CC has taken trust and commitment to a higher level, thus promoting more value creation. Strengthening the implementation of collaborative relationship process (ASR and SQM) would further maximize

value creation, which means obtaining greater benefits at lower costs. With majority of CC spend being absorbed by its strategic suppliers, i.e., less than 3% of all CC suppliers, stronger collaborative relationship means greater value creation for the Company.

4.3 The biggest challenges in collaborative relationship

Data for this stage was gathered as the last section of the questionnaire for Stage-2. Respondents were requested to rank 5 challenges based on their best knowledge and experience. The challenge items were determined based on a series of interviews with CC Category Management leads following the review against internal documents/reports. Based on the assessment, the following are the list of the challenge items to be ranked by the respondent:

1. *Contractual restrictions*: challenges related to regulations, contract provisions, approval, etc.
2. *Resource constraints*: challenges related to competency, organization capability, competing priority, information sharing issue, etc.
3. *Unequal benefits*: challenges related to “one party gets more than the other” issue, lack of financial benefit, etc.
4. *Lack of support*: challenges related to supports from stakeholders (management, functional teams, procurement, authorities, etc.)
5. *Ineffective governance*: challenges related to issues such as process(es) that is not fit for purpose, time consuming, transactional-based model, etc.

In total 53 completed questionnaires were returned out of the 65 total respondents, or 82% return rate for this survey. Area diagram in Figure 6 shows the perceived order of the challenges captured from the questionnaire. The challenges, except contractual restriction, are in line with study finding by Haque et al. (2004) who researched collaboration practice in the UK upstream oil and gas industry. It is critical that company identifies challenges in collaborative relationships, because failing to recognize, mitigate, and respond to challenges in the relationships can damage relationships and cause unsuccessful collaborative efforts (Braganza, 2016). This study adds to the literature by highlighting the challenges and area of improvement in collaborative relationships.

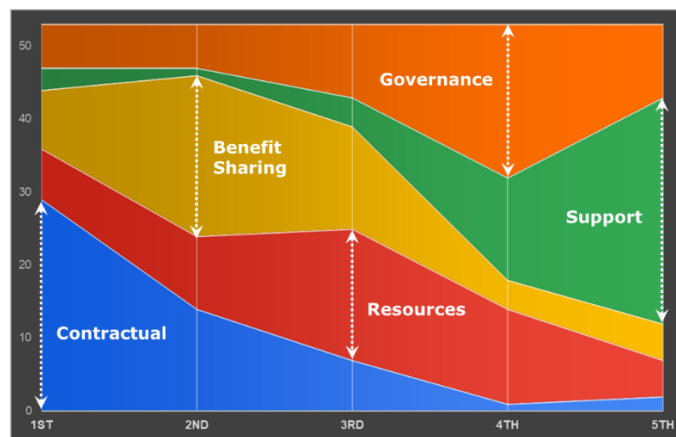


Figure 6. Perceived order of challenges in Collaborative Relationships

The following is the perceived ranking of the major challenges resulted from the assessment. Although discussed separately, these challenges often overlap in practice and have mixed consequences when they are not addressed.

1. *Contractual*: Contractual restriction is considered by most respondents as the most challenging factor for the successful execution of the collaborative relationships. This is not a big surprise

considering current sourcing process for upstream oil and gas in Indonesia is heavily regulated through a Government guideline called “Pedoman Tata Kerja” PTK-007. Practically the procurement of all goods and services are required to go through open bidding process with identical terms & conditions for all bidders, and the lowest bidder be appointed as the winner.

2. *Benefit sharing*: This is something to do with “what’s in it for me” type of issue, which reflects unequal sharing of benefits among the parties. In this case, buyer is considered gaining more benefits from the relationship. Major part of this issue is driven by contractual restrictions that limit CC’s flexibility to set-up a contract model that “collaboration-ready” through open bidding process.
3. *Resources*: The fact that most respondents place this challenge on the 3rd order indicates some concerns around the availability and capability of resources to support the collaborative process. Information sharing is one of key elements for the successful collaboration, so all parties need to ensure smooth information exchange within the boundary of information protection policy. Information sharing can create a cohesive supply chain and allow companies to synchronize their activities with supply chain partners (Baihaqi & Sohal, 2013).
4. *Governance*: As a Corporate-wide standard process, the flow-process of collaborative relationship at CC does not seem to be an issue. The real issue indicated here is how the good governance of collaboration on paper is executed rather adversarial, transactional-based, and highly administrative in practice.
5. *Support*: Most respondents placed support as the least challenging factor, which indicates that this challenge is not much of an issue compared to the other challenges. Nevertheless, support remains one of the challenges for the successful collaborative relationship. Support and commitment from all stakeholders including Government, all management levels, supply management team, contract owner, supporting functions, and other are critical to ensure smooth execution of the collaborative process.

So, *Contractual*, *Benefit Sharing*, and *Resources* are considered as the current biggest challenges in collaborative relationships based on the survey against the five challenges. While the other two factors (*Governance* and *Support*) are also considered challenging, feedbacks from the survey suggested that those factors are relatively manageable and less critical.

5. CONCLUSION AND IMPLICATION

5.1 Conclusion

In the light of analysis and interpretation of data, the study reveals that CC – in adapting to the new economy – has adopted collaborative sourcing models to the extent that it mainly applies preferred provider model in the early stage of relational sourcing models. Applying more advanced relational sourcing models will help reaping more benefits. Thus, maximizing value creation for all involved parties.

All hypotheses under this study were supported. Trust and commitment in buyer-supplier relationship has a positive and significant effect on value creation, while collaborative relationship has a positive and significant effect on value creation. A series of tests using path analysis, Sobel test, and Bootstrapping test confirmed collaborative relationship as an intervening variable that mediates the effect of trust and commitment on value creation. The positive and significant influence of all paths in the study framework indicate strong linkage of trust, commitment, collaborative relationship, and value creation.

Routine contractual relationship will emerge trust and commitment to drive value creation to some extent. Furthermore, collaborative relationship with strategic suppliers takes trust and commitment to the next level level which ultimately would maximize value creation for all parties.

Hence, to create and capture maximum value, collaborative relationship should be managed in a way that stimulate maximum trust and commitment.

The study reveals that collaborative relationship process at CC (i.e., ASR and SQM) has helped promoting trust and commitment, thus enabling better value creation. Strengthening and improving the implementation of ASR and SQM process further will help maximizing value creation, which means obtaining greater benefits at lower cost.

Contractual issues, lack of benefit sharing, and resource constraints are currently considered as the biggest challenges to successful collaborative relationships. Those challenges should be managed and minimized as much as possible so as to allow better execution of the collaborative relationship.

5.2 Theoretical and Managerial Implications

This study contributes to the theoretical discussion of current practice of collaborative relationship in the new economy, as its aim was to explore the connection of trust, commitment, collaborative relationship, and value creation in the new economy. The connection was revealed in this study. Moreover, this study adds to the characterization of collaborative relationship and sourcing business models in the new economy by discussing challenges and characteristics that are relevant for it.

While this study has made contributions to the relatively new area of collaborative relationships, the outcomes are case specific which is limited to respondent's perception in some part that might be influenced by specific relationship and industry context. Hence, more research on the subject is necessary as more gaps remain to be closed, which would implicate theory as well as future study. Finally, while this study has taken a static view of buyer-supplier relationships, the reality is more dynamic than illustrated in the conceptual model so future research in the subject of collaborative relationships may adopt a more dynamic perspective.

The study findings provide avenues for the management of CC and other Upstream Oil and Gas Companies to look at current process of collaborative relationships and make necessary actions to strengthen the process. In response to the main research question, referring to the outcomes from the three research stages, here are steps needed to maximize value creation through collaborative relationship to adapt to the new economy:

- Move towards the right side of the sourcing continuum by adopting more advanced relational models, look for opportunity to apply Vested sourcing model to accomplish transformational and/or innovation objectives.
- Boost trust and commitment by reinforcing the implementation of collaborative relationship process to the extent that it is run in more collaborative manner than adversarial, thereby increase the likelihood of reaping the benefits of a truly more collaborative relationship.
- Mitigate challenges on contractual issues, benefit sharing, and resource constraints to allow better process execution.

Another direction is to align academic research with business practice. Variables such as trust and commitment have been regarded as key determinants in academic relationship models, but they rarely appear in business practice. Procurement managers regularly monitor business performance based on value obtained in collaborative relationships, however, relational mediators such as trust and commitment do not appear on the managers' scorecards. To bridge the gap between managerial metrics and academic variables, a better insight is needed to understand how behavior elements of relationship drive the creation of value in collaborative relationships.

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