Dark side of sharing economy: Examining the unethical practices and its impact on coopetition and firm performance

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Abstract

The business model for the sharing economy is becoming popular in business-to-business marketing literature. Firms can utilize resources of other firms lying idle and reduce cost, optimize resource utilization and achieve greater flexibility. Some organizations also share their resources with rival firms. However, there are concerns about unethical practices by rival firms, which may be due to the misuse of data, human resources, and intellectual property, and so on. Few studies have investigated the unethical practices that may take place in the sharing economy, but there is a growing interest among the practitioners, researchers, and academicians in this area. Therefore, this study examines the unethical practices that could take place in the sharing economy and their impact on B to B cooperation and competition among rival firms and on firm performance. From the literature review and theories, a theoretical model has been developed. The model is later validated using the structural equation modelling technique considering samples from 16 firms involved in sharing resources. The study found that there is a significant negative impact of unethical practices in the sharing economy for B to B coopetition, which in turn negatively impacts firm performance.

Keywords: Sharing economy; Ethics; Intellectual property; Human resource; Coopetition; Firm dis-performance

1. Introduction

Coopetition is considered as a fundamental business-to-business (B to B) marketing strategy (Dahl, 2014; Bouncken et al., 2015; Leite, Pahlber, & Aberg, 2015). Coopetition is comprised of two dimensions: cooperation and competition. Coopetition helps a firm acquire new resources, abilities, and opportunities, which it could not have access to in the context of an individualistic business model where coopetition does not exist (Ritala, Golnam, & Wegmann, 2014; Arslan, 2018; Velu, 2019). Coopetition is defined as "a dynamic and paradoxical relationship, which arises when two companies cooperate in some areas (such as strategic alliances), but simultaneously compete in other areas" (Bengtsson & Kock, 2000, p.411). Coopetition activities are supposed to provide a firm a new process for competing within their competitive business environments (Luo, 2007). Since the process of coopetition is new, scholars are involved in large volumes of research to understand the relationship between coopetition as well as firm performance (Sanou, Le Roy, & Gnyawali, 2016; Felzensztein, Gimmon, & Deans, 2018; Tidstron, Ritala, & Lainema, 2018). Business models that access and reuse products for utilizing the idle capacity is a popular B to B marketing practice, giving rise to the concept of the sharing economy (Eckhardt & Bardhi, 2015; Key, 2017). Sharing is a social exchange, but from the perspective of market-mediated aspects, the essence of sharing without expecting any return is lost (Eckhardt & Bardhi, 2015). Coopetition process comes under the preview of the sharing economy, which develops trust, solidarity, as well as social bonding (Palgan, Mont, & Sulkaoski, 2021).

However, there is a dark side to the sharing economy. Critics opine that the moment financial issues are included, coopetition ceases to share, and interest in gaining grows. It is pertinent to mention here when two firms share resources, coopetition in the B to B context occurs since such sharing includes the sense of cooperation and competition between these two firms

(Kumar et al., 2018). Due to the nature of sharing economy, the possibility of rival firms involved in coopetition adopting unethical practices cannot be overruled (Eckhardt & Bardhi, 2015). Such unethical practices may include misusing human resources, data, or intellectual properties (Sigala, 2018). These unethical practices are inimical for B to B cooperation, but they increase competition between the involved firms, impacting their performances (Yang et al., 2017).

However, in B to B marketing research, scholars have predominantly projected sharing resources and compatibilities with competitors result in higher levels of performance, but they have not considered a potential diminishing return of effects (Fang, 2006; Ritala, 2012; Crick, 2018; Al-Kwifi et al., 2021). However, if the firms involved in B to B relationship management cooperate with untrustworthy competitors, negative outcomes could be experienced, like diluting their competitive advantages, losing intellectual properties, yielding tensions with their rivals, misusing human resources, data, and so on (Tidstorm et al., 2018; Raza-Ullah, 2019; Seifzadeh et al., 2021).

Extant literature has not explicitly analyzed this dark side of the sharing economy by investigating unethical practices and their impacts on B to B coopetition and firm performance. In the present study, the relational view theory and resource-based theory have been integrated to explain the underlying mechanisms behind such a non-linear relationship existing between coopetition and firm performance (Akpinar & Vineza, 2016; Koronios et al., 2020; Chatterjee, Ghosh, & Chaudhuri, 2020a). They also help in evaluating the the dark side of the sharing economy where unethical practices impact B to B coopetition and firm performance, which has not been explicitly studied so far (Shu, Jin, & Zhou, 2017; Hoffmann et al., 2018; Chatterjee, Ghosh, & Chaudhuri, 2020b). Against this background, this study aims to address the following research objectives.

[i] To understand the negative aspects of the sharing economy.

[ii] To examine the unethical practices in sharing economy and its consequences on B to B coopetition.

[iii] To investigate the impact of B to B coopetition on firm performance.

2. Literature review

In the marketing literature, the dark side is considered a situation which is inimical to the firm (Daunt & Greer, 2017). In the B to B marketing relationship, there is always a negative aspect in working with partners who have varied objectives, vague contracts, and close interpersonal ties (Abosag, Yen, & Barnes, 2016). If distrust exists in B to B marketing activities in the sharing economy, there will be uncertainty resulting in firm performance deteriorating (Fang, 2006; Crick, Crick, & Chaudry, 2019; Chatterjee et al., 2020a). Before the dark side of the sharing economy in B to B coopetition is explored, it is necessary to review the earlier literature concerning the dark side of commercial relationship among firms. From the B to B marketing perspective, the dark side of value co-creation, or value co-destruction, has been examined (Chowdhury, Gruber, & Zolkiewski, 2016; Zhang et al., 2018). Value cocreation is associated with businesses improving their service offerings and quality, and so on, to create value for customers that helps them to outperform industry rivals (Ranjan & Read, 2016; Chatterjee et al., 2019). Value co-destruction emerges from a scenario where firms misuse customers' resources, efforts, and experience, thus creating negative outcomes (Daunt & Harris, 2017).

Many studies have analyzed the aspects of value co-creation and value co-destruction, thus incorporating the concepts in B to B marketing literature (Peters et al., 2018; Cabiddu, Moreno, & Sebastiano, 2019). Also, studies on the dark side of inter-firm relationships have been conducted in other areas of B to B marketing literature. Grandinetti (2017) analyzed the dark side of the buyer-seller relationship, where different partners involved in supply chain channels could struggle to manage the interplay between cooperation and competition. If the interplay between cooperation and competition is unstable, negative outcomes will occur, especially in

the context of vertical cooperation (Raza-Ullah, Bengtsson, & Kock, 2014). Velu (2019) studied vertical cooperation between Samsung and Apple and noted that Samsung supplies a few components for Apple's iPhone, which means that, although these two firms are rival entities, they collaborate on some aspects. Thus, vertical cooperation involves two or more firms as supply chain partners, simultaneously cooperating and competing (Leite et al., 2018; Crick, 2020; Pillai et al., 2021). However, the above-mentioned studies did not exhaustively explore or analyze the ethical issues in the sharing economy, which unethical practices could impact coopetition (cooperation and competition), prompting firm dis-performance (Chatterjee et al., 2021; Rana et al., 2021).

3. Theoretical underpinning and development of hypotheses

3.1 Theoretical underpinning

To conceptualize the exact nature of the relationship between coopetition and firm performance, the authors have taken help from relational view theory (Dyer & Singh, 1998) and resource-based view (RBV) theory (Crick et al., 2019). RBV theory is used to analyze the relationship between a firm's tangible and intangible assets with its performance, where tangible assets are resources and intangible assets are capabilities, skills, and expertise (O'Cass, Ngo, & Siahtiri, 2015; Cortez & Johnston, 2019). RBV theory helps to explain that, by collaborating with rival firms, it is possible for a firm to acquire new assets (tangible and intangible) which it would not have been able to access following an individualistic business pattern (Hannah & Eisenhardt, 2018).

In the present study, the concept of RBV theory has been extended with the inputs from relational view theory to successfully account for how the quality and efficiency in the B to B relationship could impact firm performance (Lavie, 2006). The relational view theory advocates how businesses need to trust the competitors they collaborate with for mutually

beneficial outcomes (Dyer, Singh, & Hesterly, 2018). Positive aspects of cooperation could be explained by RBV theory, whereas relational view theory could explain that if firms are involved in working with untrustworthy and unethical competitors, they will experience a range of adverse outcomes, like losing intellectual properties and diluting their competitive advantages by misusing data and human resources (Raja-Ullah, 2019; Crick et al., 2019). In the present study, integrating RBV theory and relational view theory could help to evaluate some of the dark sides which happen when firms collaborate with competitors who indulge in unethical practices, adversely impacting coopetition and leading to firms' dis-performance (Hoffmann et al., 2018).

With the joint concepts of RBV theory and relational view theory, the measure of a firm's dis-performance has been operationalized with innumerable capacities which depend on outcomes, including competitive and collaborative disadvantages, deterioration of market-level survival, as well as sales performance (Dyer et al., 2018; Jin & Cho, 2018). With the inputs from the literature review and the theoretical underpinnings, a theoretical model is proposed, which is shown in Figure 1.

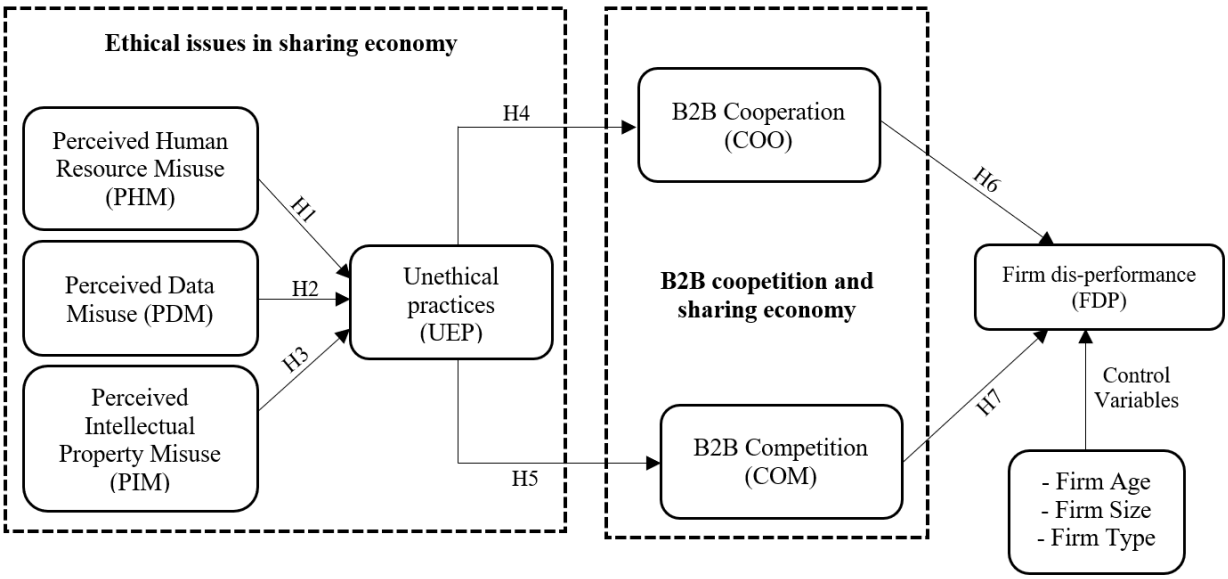

Figure 1: Conceptual model (Adopted from Dyer & Singh, 1998 and Barney, 1991)

3.2 Formulation of hypotheses

The study has been able to identify some determinants impacting unethical practices of the firms. The unethical practices could lead to affect coopetition, which in turn could impact firm performance. In this section, these determinants will be explained, and attempts will be taken to formulate the hypotheses.

3.2.1 Perceived human resource misuse (PHM)

The business model for the sharing economy has become popular in B to B marketing literature (Eckhardt & Bardhi, 2015; Key, 2017). Firms involved in a cooperative and competitive B to B business relationship could use the human resources of other collaborative firms which are underutilized (Harvey et al., 2019). This process helps the benefitted firms to reduce costs, optimize resource utilization, and achieve greater flexibility to ensure success (Chakraborty, 2016). Firms take advantage of resources even from their rival firms to ensure competitive advantage, which corroborates RBV theory (Barney, 1991).

However, due to the nature of the sharing economy, there are concerns that rival firms' unethical practices could generate distrust in coopetitive activities (Yang et al., 2017). In the new business model concerning the sharing economy that includes the involvement of several firms in B to B relationship management activities, employees of one firm may be utilized in another firm (sharing of resources). In such a case, if an employee discloses business secrets of the parent firm to the engaging firm, that act would be considered unethical and immoral behaviour (Jha & Singh, 2021). To perform an unethical act, the doers' own conscience is the deciding agent (Simões et al., 2019). An individual exhibits unethical behavior because of a selfish decision that benefits only that individual (Haines, Street, & Haines, 2008). Thus,

misuse of human resource is perceived to be an unethical practice. Accordingly, it is hypothesized as follows.

H1: Perceived human resource misuse (PHM) has a positive impact on unethical practices (UEP) adopted by a firm involved in the sharing economy.

3.2.2 Perceived data misuse (PDM)

In the sharing economy, the B to B business model, in terms of coopetition, has taken a new shape (Eckhardt & Bardhi, 2015). Firms involved in such B to B activities are considered as both collaborators and competitors. The firms taking part in coopetition cooperate with each other by lending tangible and intangible resources to achieve competitiveness, as corroborated by RBV theory (Barney, 1991). However, in such exchanges, the scope of indulging in unethical practices cannot be overruled (Jha & Singh, 2021).

It has been observed that a firm's policies and practices are characterized by its trustworthiness, transparency, and responsibility, which create a sense of rightness and fairness among the firm's stakeholders (Murphy, Laczniak, & Wood, 2007). However, if a firm indulges in activities which are considered immoral, the firm is considered to be unethical (Simões et al., 2019). If, in the context of the sharing economy, a firm involved in coopetition uses the data of other firms in an unauthorized way for its own benefits, it is considered as an unethical, unfair and immoral act (Carrigan & Attalla, 2001). Such unethical behavior exhibits purely selfish decisions, which helps only the firm that behaves unethically and is detrimental to the interest of the other firms (Haines et al., 2008). Thus, a coopetitive firm that misuses other firms' data is perceived to be acting unethically, which is considered immoral. Accordingly, it is hypothesized as follows.

H2: Perceived data misuse (PDM) has a positive impact on unethical practices (UEP) adopted by a firm involved in the sharing economy.

3.2.3 Perceived intellectual property misuse (PIM)

Scholars have argued that gaining the consumers' trust is considered a key factor for a firm to take multifarious risks which could help it to perform better (Chow & Holden, 1997; Choi, Eldomiaty, & Kim, 2007). Some recent studies have evidenced that consumer trust is partly rooted in the ethical considerations of the firms' various business activities (Roman & Ruiz, 2005; Murphy et al., 2007). A firm's ethical activities are assessed by how responsible, transparent, and truthful its policies and practices are, which create feelings of fairness and rightness among stakeholders (Murphy et al., 2005). However, anecdotal sources continually report specific cases where firms have exhibited unethical behavior to achieve financial goals (Harrison & Scorse, 2006). For example, if a coopetitive firm benefits from another firm's formula or other intellectual property without any authority to do so, that firm's act is construed to be unfair and against its moral obligations (Chou & Zolkiewski, 2018). The misue of another firm's intellectual properties is construed as unethical. Accordingly, it is hypothesized as follows.

H3: Perceived intellectual property misuse (PIM) has a positive impact on unethical practices (UEP) adopted by a firm involved in the sharing economy.

3.2.4 Unethical practices (UEP)

In the sharing economy, collaborating firms can acquire tangible (resources) and intangible (capabilities) assets from the other firms to improve their performance. This concept is in consonance with RBV theory (Barney, 1991). RBV theory posits that valuable, rare, inimitable, and non-substitutable (VRIN) assets help to develop a firm's competitiveness. A firm gains these resources through the process of coopetition. Relational view theory (Dyer & Singh,

1998) has documented how quality and efficiency of the collaborating firms in the B to B context can be improved through cooperation, ensuring better performance (Dyer et al., 2018). However, in the context of the sharing economy, everyone expects that collaborating firms would behave responsibly and ethically (Burchell & Cook, 2006). It has been found that some firms that cooperate in the sharing economy have misused other firms' human resources, data, or intellectual property. Such actions are considered unfair and immoral, and therefore unethical (Murphy et al., 2005). These practices harm the trust of the other firms that cooperate in the B to B relationship management (Leonidou, Leonidou, & Kvasova, 2013), and thus, the sense of cooperation is hampered. Accordingly, it is hypothesized as follows.

H4: From the perspective of the sharing economy, unethical practices (UEP) negatively impact B to B cooperation (COO).

Unethical practices in the sharing economy are interpreted as the actions taken by a firm involved in coopetition activities which are not aligned with the spirit of the social norms, which other firms deem unacceptable (Bersoff, 1999). Some of the common unethical practices are misleading product information, unhealthy and unfair competition, manipulating accounts, bribery, trade secret misappropriation, and so on (Kaptein, 2011). Unethical business practices are conceptualized as anything which falls below the minimal standard of the existing business code of conduct (Kish-Gephart, Harrison, & Treviño, 2010). These practices include actions of the firms involved in coopetition that are widely recognized as being morally wrong and leading to the mistreatment of the environment or people (Treviño, den Nieuwenboer, & Kish-Gephart, 2014).

In the sharing economy, firms involved in B to B competition try to surpass others with the help of resources lent by other firms (Clarke-Hill, Li, & Davies, 2003). Competition helps the firms to improve their marketing position, as well as their performances, at the expense of their counterparts who are otherwise their competitors (Gnyawali & Park, 2011). If such competition

is fair and healthy, none of the involved firms feel annoyed. But if, with such collaboration, one of the firms behaves unethically, it leads to unfair competition (Gnyawali et al., 2016). Accordingly, the following hypothesis is formulated.

H5: From the perspective of the sharing economy, unethical practices (UEP) negatively impact B to B competition (COM).

3.2.5 B to B cooperation (COO)

Cooperation is considered as one of the constituents of coopetition, where coopetition is defined as "a paradoxical relationship between two or more actors, regardless of whether they are involved in horizontal and vertical relationship, simultaneously involved in cooperation and competition interactions" (Bengtsson & Kock, 2000, p.411). B to B cooperation is considered as a coordinated, complementary action between the partners involved in the B to B relationship (Madanaguli et al., 2021). Cooperation is interpreted as the actions taken towards in an interdependent relationship for a common interest in achieving a single outcome (Anderson & Norus, 1990). The concept of cooperation helps solve common problems and conflicts between the interacting parties (Barnes, Yen, & Zhou, 2011). B to B cooperation is construed as an effort of a firm to collaborate with a specific partner to achieve a common goal of mutual interest (Leonidou et al., 2013; Mirkovski, Davison, & Martinsons, 2019). Thus, B to B cooperation is perceived to help the firms to achieve better performance. Using this logic, the following hypothesis is formulated.

H6: Unethical B to B cooperation (COO) in the sharing economy positively impacts firm dis-performance (FDP).

3.2.6 B to B competition (COM) and firm dis-performance (FDP)

Competitiveness is conceptualized as a comparision of a firm's ability and performance to sell and supply goods and services in a specific market to other firms' ability and performance in that market (Lawrence, 2002). Fair competition gives consumers the best quality and price of

the goods and services (Thompson, 2004). It boosts innovation among firms for better products or more efficient processes (White, 2021). In terms of the economic aspects, the main purpose of healthy competition among firms is to discipline them to provide good quality goods and services at optimized prices (Stigler, 1972). When the firms function in the context of the sharing economy, cooptative firms could borrow tangible and intangible VRIN resources from other firms to enhance their capabilities to improve their performance, which is in conformity with the concept of RBV theory (Barney, 1991). Competition is a rivalry between the coopetitive firms who sell similar types of products and services with a focus to achieve growth in profits, revenue, and market share (Manthri, Bhokray, & Momaya, 2015). In the sharing economy, if some firms involved in B to B relationship management activities indulge in unethical practices by misusing other firms' human resources, data, and intellectual properties, the competition becomes unfair, which is perceived to impact firm performance. Unethical practices adopted by a firm is perceived to impact on coopetition, which in turn influences the firm's financial, marketing, and operational performance. Accordingly, it is hypothesized as follows.

H7: Unethical B to B competition (COM) in sharing economy positively impacts firm dis-performance (FDP).

The present study has used three control variables, firm age, firm size, and firm type, that impact on firm dis-performance (FDP). Control variables are supposed to enhance the internal validity of the present study by limiting the influence of confounding and several other external variables.

4. Research methodology

In this section, the research strategy will be delineated. The present research study has used a quantitative research methodology and has collected data by the help of a survey (Wang & Jeong, 2018).

4.1 Research instruments

With the inputs from extant literature and the theoretical background, the instruments to measure the constructs were prepared to confirm content validity. Through a corrective procedure, provided by Carpenter (2018), some items were prepared to be appropriate for this study's aim. The items were pretested, and, from the outcome, some of their syntax and formats were corrected to improve their understandability. After the pretest stage, a pilot test was performed to assess the probable response rate and to confirm scale validity. The authors distributed the proposed questions to a small sample of respondents who were not included in the main survey, although their background and the criteria used to select them were the same as the main survey. From the results of the pilot test, some of the items were corrected and some of the items were dropped to improve the reliability of the relevant constructs.

Experts with knowledge and expertise in the domain of this study were consulted to enhance the comprehensiveness of the questionnaire and to ensure that the items are easy to understand, they are not ambiguous, and they are not difficult to answer. In this way, 33 items were fine tuned. The questionnaire was then provided to the respondents, and their responses were quantified on a 5-point Likert scale, ranging from Strongly Disagree (SD), marked as 1, to Strongly Agree (SA), marked as 5. The details of the instruments with their resources are provided in the Appendix.

4.2 Collection of data

To target the respondents, some of the authors used professional connections with some key officials of the associations of several business organizations. These include CII, NASSCOM, and PHD Chamber of Commerce. To collect data at less cost and quickly, the authors posted the questionnaire online with Google Docs. The link to the questionnaire was shared with the known officials of these associations. The questionnaire was sent to 902 managers of 16 selected different sized firms operating in the healthcare, IT, retail, and financial service

sectors. Efforts were made to collect data from managers of different firms, since they take most of the decisions. The online questionnaire contained 33 questions with five options of each question, and each respondent was required to select one out of five options. After four weeks (February 2021), all the prospective respondents were reminded to respond, and within the scheduled time, 343 responses were received. The response rate was 38%. The authors scrutinized these 343 responses and found that 16 responses were incomplete and did not consider them. Therefore, analysis was made on 327 responses against 33 questions. This is within the allowable range (Deb & David, 2014). The detail characteristics of the sample is provided in Table 1.

Table 1: Sample characteristics (N=327)

Characteristics	**Category**	**Number**	**Percentage (%)**
Hierarchy of management	Senior manager	82	25.0
	Midlevel manager	98	30.0
	Operational manager (Junior)	147	45.0
Firm size	Big firm (revenue > 1 USD billion per year)	152	46.5
	Mid-level firm (revenue USD 100 million to 1 billion per year)	95	29.0
	Small firm (revenue < USD 100 million per year)	80	24.5
Industry type	Financial service	72	22.0
	Healthcare service	33	10.1
	Hospitality sector	42	12.8
	Retail sector	40	12.2
	Telecommunication sector	50	15.4
	IT Service	90	27.5

5. Analysis of data and the results

The approach of this study is flexible to manage a complex model. To analyze the results, the partial least squares structural equation modelling technique was used (Hair et al., 2016) with SmartPLS 3.2.3 software (Rana et al., 2021). For this process, non-parametric bootstrapping of 5000 resamples has been used to estimate the path coefficients of different linkages and to test the hypotheses by structural equation modelling.

5.1 Measurement properties and discriminant validity test

To assess content validity, the loading factor (LF) of each instrument has been measured. For verifying validity, reliability, and internal consistency of each construct, the average variance extracted (AVE), composite reliability (CR), and Cronbach's alpha (α) have been estimated. It has been found that all the estimated values are within the permissible range. The results are shown in Table 2.

Table 2: Measurement properties

Constructs / Items	**SD**	**Mean**	**LF**	**AVE**	**CR**	**α**	**t-values**
PHM				0.80	0.84	0.87	
PHM1	1.5	3.6	0.85				22.11
PHM2	1.7	3.4	0.94				26.12
PHM3	1.1	4.1	0.90				39.17
PHM4	1.2	3.2	0.88				36.09
PDM				0.88	0.94	0.96	
PDM1	1.4	3.7	0.96				24.11
PDM2	1.7	2.8	0.92				26.17
PDM3	1.5	2.4	0.97				32.19
PDM4	1.1	3.9	0.92				31.13
PIM				0.78	0.82	0.87	
PIM1	1.6	3.7	0.85				34.61
PIM2	1.9	3.5	0.87				36.72
PIM3	1.7	2.9	0.84				17.91
PIM4	1.1	2.7	0.87				27.11
UEP							
UEP1	1.4	3.9	0.96	0.86	0.89	0.93	33.11
UEP2	1.6	4.2	0.90				37.17
UEP3	1.7	3.6	0.97				32.02
UEP4	1.1	3.8	0.95				36.11
UEP5	1.8	4.1	0.85				34.05
COO				0.85	0.89	0.96	
COO1	1.2	3.6	0.96				26.17
COO2	1.4	3.5	0.91				24.12
COO3	1.9	2.9	0.88				21.13
COO4	1.5	2.7	0.92				29.17
COO5	1.7	3.8	0.95				32.18
COM				0.85	0.89	0.93	
COM1	1.4	3.9	0.96				33.17
COM2	1.3	3.4	0.94				26.21
COM3	1.6	2.6	0.85				34.22
COM4	1.9	3.7	0.95				20.07
COM5	1.7	4.1	0.90				24.18
FDP				0.81	0.84	0.86	
FDP1	1.8	2.9	0.92				26.17
FDP2	1.4	2.7	0.89				36.12
FDP3	1.9	3.2	0.95				39.17
FDP4	1.6	4.1	0.96				33.07
FDP5	1.3	3.7	0.82				36.46
FDP6	1.1	3.5	0.86				31.17

It is observed that the square roots of all the AVEs are greater than the corresponding bifactor correlation coefficients, which satisfies Fornell and Larcker criteria (Fornell & Larcker, 1981). This confirms discriminant validity. The results are shown in Table 3.

Table 3: Discriminant validity (Fornell and Larcker criteria)

Constructs	PHM	PDM	PIM	UEP	COO	COM	FDP	AVE
PHM	0.89							0.80
PDM	0.17	0.94						0.88
PIM	0.19	0.26	0.88					0.78
UEP	0.32	0.29	0.19	0.93				0.86
COO	0.36	0.27	0.21	0.17	0.92			0.85
COM	0.26	0.31	0.34	0.30	0.34	0.92		0.85
FDP	0.20	0.37	0.30	0.36	0.39	0.31	0.90	0.81

Diagonal = √AVE

To support the Fornell and Larcker criteria, the heterotrait-monotrait (HTMT) correlation ratio test has been performed (Henseler et al., 2014). All the values of the constructs have been found to be less than 0.85, which confirms discriminant validity (Voohees et al., 2016). The results are shown in Table 4.

Table 4: Heterotrait – Monotrait (HTMT) test

Construct	PHM	PDM	PIM	UEP	COO	COM	FDP
PHM							
PDM	0.51						
PIM	0.37	0.27					
UEP	0.26	0.19	0.24				
COO	0.32	0.32	0.37	0.33			
COM	0.43	0.26	0.34	0.37	0.24		
FDP	0.47	0.17	0.22	0.27	0.19	0.32	

5.2 Common method variance (CMV)

This study depends on cross-sectional data. Hence it is necessary to ascertain whether data so collected suffer from the defect of bias. However, to mitigate the bias, some premptive measures had been taken. At the pretest stage of the survey, the questions were rectified so that the prospective respondents could understand the questions and answer them properly. Moreover, the respondents were assured that their anonymity and confidentiality would be strictly preserved. If the test still has any bias, Harman's post hoc single factor test (SFT) has

been conducted. The results revealed that the first factor accounted for 29.87% of the variance. It is less than the recommended cutoff value of 50% (Podsakoff et al., 2003), confirming that the data could not distort the result.

5.3 Hypotheses testing

To test the hypotheses, the bootstrapping procedure with 5000 resamples has been undertaken. Considering a separating distance of 7, cross-validated redundancy has been assessed by evaluating the Q^2 value, which came out to be 0.062 (positive). This confirms that the model has predictive relevance (Mishra et al., 2018).

To ascertaining the model fit, the standardized root mean square error residual (SRMR) has been considered as a standard index. On analysis, the values of SRMR emerged as 0.061 for PLS and 0.031 for PLSc (Mishra et al., 2018). As both the values are less than 0.08 (Hu & Bentler, 1999), it confirms that the model is in order. This process helps to compute the path coefficients of different linkages along with other necessary parameters. The results are shown in Table 5.

Table 5: Path coefficients / R^2 values, p-values, and remarks

Linkages	**Hypotheses**	**R^2 values / Path coefficients**	**p-values**	**Remarks**
Effects on UEP		R^2=0.43		
By PHM	H1	0.21	p<0.001(***)	Supported
By PDM	H2	0.32	p<0.01(**)	Supported
By PIM	H3	0.29	p<0.05(*)	Supported
Effects on COO		R^2=0.45		
By UEP	H4	- 0.27	p<0.001(***)	Supported
Effects on COM		R^2=0.48		
By UEP	H5	- 0.33	p<0.01(**)	Supported
Effects on FDP		R^2=0.71		
By COO	H6	0.46	p<0.001(***)	Supported
By COM	H7	0.49	p<0.001(***)	Supported

With all these inputs, the validated model is shown in figure 2.

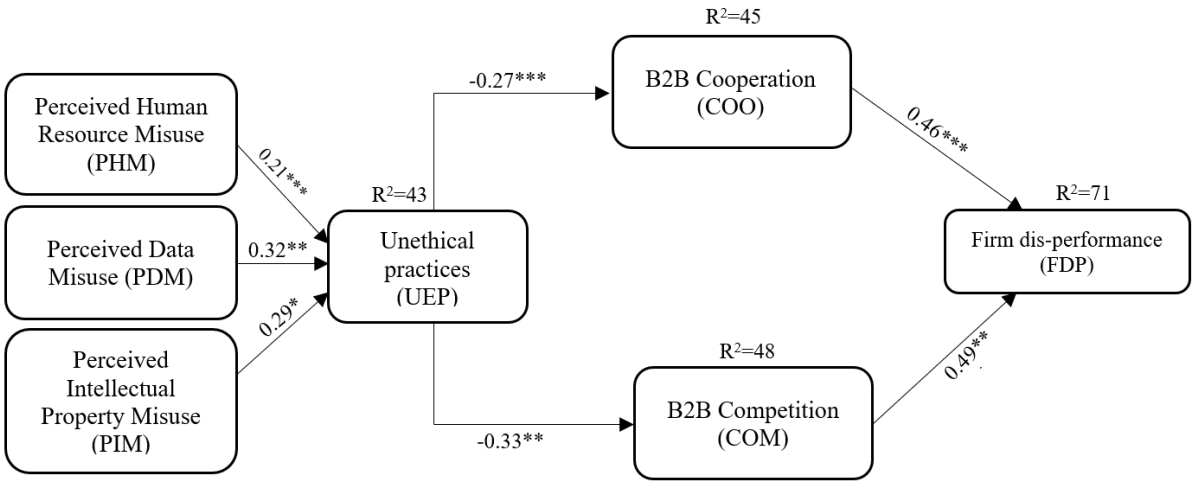

Figure 2: Validated model (Using SEM)

5.4 Results

The results show that the seven hypotheses that were formulated have been validated by the statistical procedure. The results demonstrate that PHM, PDM, and PIM significantly and positively impact UEP, since the concerned path coefficients are 0.21, 0.32, and 0.29, respectively, with corresponding levels of significance as $p<0.001$(***), $p<0.01$(**), and $p<0.05$(*) (H1, H2, and H3).

The results also show that UEP impacts COO and COM significantly and negatively, since the magnitudes of the concerned path coefficients are 0.27 and 0.33 with levels of significance as $p<0.001$(***) and $p<0.01$(**), respectively (H4 and H5). The results also demonstrate that COO and COM impact FDP significantly and positively, since the concerned path coefficients are 0.46 and 0.49 and respective levels of significance as $p<0.001$(***) and $p<0.001$(***).

In terms of the coefficients of determination (R^2), the results transpired that PHM, PDM, and PIM could explain UEP to the tune of 43% ($R^2=0.43$), whereas UEP could impact COO and COM to the tune of 45% ($R^2=0.45$) and 48% ($R^2=0.48$), respectively. From the results it appears that COO and COM simultaneously could explain FDP to the extent of 71% ($R^2=0.71$), which is the explanative power of the model. The present study has used three control variables, firm age, firm size, and firm type, to investigate their impact on firm dis-performance (FDP).

The analysis indicates that these three control variables on FDP do not significantly impact on FDP, since the values of R^2 are found to not be affected by the addition of these three control variables (Hossain et al., 2020).

6. Discussion

Prior to this study, the B to B marketing literature conceptualized that, by being involved in coopetition activities, firms are likely to ensure high levels of performance (Akpinar & Vineze, 2016; Crick, 2018). Such investigations enriched the extant literature on coopetition in the sharing economy, which highlighted that through coopetition activities, firms develop abilities to acquire tangible and intangible assets from other collaborating firms, which the firms could not accomplish by following an individualistic business pattern (Chou & Zolkiewski, 2018; Velu, 2019).

Few works were found that analyzed the consequences of coopetition under unethical practices, leading to a heterogeneous relationship between coopetition and firm performance (Ang, 2008). In such a scenario, the present study attempted to project how different adverse characteristics of firms could influence them to indulge in unethical activities, destabilizing the coopetition process and harming their performance. In this context, the firms involved in the sharing economy will indulge in unethical practices such as misusing human resources, data, and intellectual property (H1, H2, and H3). These hypotheses are found to have received support from another study (Chowdhury et al., 2016).

The present study also highlighted that firms' unethical practices negatively impact cooperation (COO) and competition (COM) (H4 and H5). This idea has received support from a study by Kock (2019), which described the dark side of coopetition in another context. The present study has also shown that if the quality of cooperation and competition deteriorate, it will heavily and adversely affect firm performance (H6 and H7). This idea has also been supported in another study (Park, Srivastava, & Gnyawali, 2014).

6.1 Theoretical contribution

The present research has provided several theoretical contributions to the extant literature. Researchers have observed that extant literature is silent on how some factors in the sharing economy that some firms, collaborating on coopetition activities, adopt could cause them to indulge in unethical practices, adversely affecting firm performance. Unethical practices negatively impact coopetition processes in the sharing economy resulting in firm dis-performance. In such a scenario, the present study has investigated the dark side of the sharing economy by examining the impact of unethical practices on B to B coopetition activities that affect firm performance. In this context, the present study is claimed to have enriched the extant literature on the sharing economy by providing some valuable inputs.

The present study has been able to successfully link RBV theory with coopetition constructs to demonstrate that, by collaborating with rival firms, it is possible for firms to acquire VRIN resources and capabilities, which would not be possible if they follow an individualistic business style (Hannah & Eisenherdt, 2018). Since RBV could only deal with the salient issues concerned with the interplay between cooperation and coopetition, the present study has extended the underlying concept of RBV theory to a relational view in order to assess how the quality of inter-firm relationship impacts the performance of the firms in the context of the sharing economy (Lavie, 2006). Therefore, the present research has successfully used the concept of relational view theory to highlight that not only gaining VRIN resources will suffice but the style of business involving the sharing economy requires firms to trust the competitors for mutually beneficial outcomes (Dyer et al., 2018). The present study has successfully interpreted that, if firms work with untrustworthy competitors in the coopetition activities, a wide range of performance-harming results are experienced, including misuse of data, human resources, and intellectual property (Raza-Ullah, 2019). By integrating RBV theory and relational view theory, the present study has been able to evaluate the dark sides of such

collaboration in the context of the sharing economy. This is also claimed as a special theoretical contribution of this study.

By collecting survey data from a sample of 101 vineyards and wineries in New Zealand, Crick et al. (2019) investigated the dark side of coopetition and found that coopetition has a non-linear relationship with market performance, customer satisfaction performance, and financial performance of the B to B firms in the sharing economy. The concept of Crick et al. (2019) study has been extended in the present study to demonstrate how different factors impact unethical practices adopted by the firms involved in coopetition activities to adversely influence coopetition, leading to dis-performance of the firms, from the perspective of the sharing economy. This is claimed to have added some substantial inputs to the extant literature on the dark side of the sharing economy.

6.2 Implication to practice

The present study provides numerous implications to the practitioners. This study has observed that misuse of human resources, data, and intellectual property are the basic factors which impact unethical practices (H1, H2, and H3). The firms involved in coopetition activities should focus attention on their rival firms so that they do not have any scope to indulge in such misuses. This can be ensured by assessing in advance if the concerned firms using others' assets can be trusted or not. Here, managers' assessment capability is critical. If there is any doubt or if the collaborating firms have a bad reputation, the other firms should not share their assets with them in coopetition activities.

Ideally, the firms involved in coopetition activities in the sharing economy should embrace the benefits of collaboration, which include acquiring the competitor's capabilities (intangible assets) and resources (tangible assets), which the firms will not have access to if they follow an individualistic business approach. After obtaining such advantages from coopetition, the firms need to be careful not to indulge in excessive coopetition activities (Crick, 2019), which

could reduce the individual firms' talent availability and performance. Hence, it is recommended to optimize the extent of coopetition partnership.

With the help of a formal or an informal agreement, the firms need to acknowledge in advance to what extent and how they will cooperate and compete before the coopetition activities are terminated. This agreement could be considered as a practical tool for mitigating the dis-performance of firms involved in cooperation and competition with the rival firms (H4, H5, H6, and H7). The present study has shown that to reduce the effects of the dark side of the sharing economy, businesses need to share resources and capabilities to improve performance, but firms must simultaneously maintain their individual presence in the competitive market. It will help the firm to be able to reduce its dependency on the other firms' assets. If the firms could maintain a balance between coopetition activities and an individualistic business approach in a calibrated manner in the everchanging competitive business landscape, they could acquire ability and learn from their competitors to gain better business performance.

6.3 Limitations and future scope

The present study provides both theoretical and practical implications to the B to B marketing literature in the context of the sharing economy. Still, there are some limitations of this study which have provided enough scope for future researchers. This study is based on findings which depend on cross-sectional data. This yields problems of causality between the constructs, giving rise to endogeneity problems. It is suggested that, to remove such defects, future researchers should conduct a longitudinal study. The explanative power of the proposed theoretical model is 71%, and it is suggested that to improve this, future researchers should consider including other constructs and boundary conditions, to examine if they could improve the explanative power of the proposed theoretical model. The results of this study are based on the inputs of respondents from different firms of India. Hence the results suffer from the defects of external validity. To project a generalizable result, future researchers should collect inputs

from respondents dispersed across the globe. The survey has been conducted with the inputs of 327 usable respondents. This is not adequate even to represent the entire Indian business landscape. It is suggested that future researchers should collect data from more respondents to portray the results in a generalizable form. This study has not analyzed an alternative model (rival model), which could have been used to compare with the proposed theoretical model. Such comparative analysis would have ascertained the effectiveness and comprehensiveness of the proposed model. It is suggested that the future researchers experiment with a rival model and conduct further analysis.

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Appendix: Summary of Questionnaire

Items	Source	Statements	Response [SD][D][N][A][SA]
PHM1	Eckhardt & Bardhi, 2015; Key, 2017	Our firm shares our employees with our competitors.	[1][2][3][4][5]
PHM2	Simões et al., 2019; Jha, & Singh, 2021	Sharing human resources with competitors may indulge in unethical practices by our competitors.	[1][2][3][4][5]
PHM3	Barney, 1991; Chakraborty, 2016; Harvey et al., 2019	I believe that employees should be trained appropriately before sharing them with competitors.	[1][2][3][4][5]

PHM4	Haines et al., 2008; Yang et al., 2017	Competitors may try to extract secret information from the shared employees.	[1][2][3][4][5]
PDM1	Barney, 1991; Eckhardt & Bardhi, 2015	In sharing economy rival firm's data can be misused by the collaborative firms in various ways.	[1][2][3][4][5]
PDM2	Murphy et al., 2007; Simões et al., 2019	Misuse of collaborative firm's data could lead to unethical practices in sharing economy.	[1][2][3][4][5]
PDM3	Carrigan & Attalla, 2001; Jha & Singh, 2021	I believe that in sharing economy, rival firms may obtain secret data of the collaborative firm.	[1][2][3][4][5]
PDM4	Carrigan & Attalla, 2001; Haines et al., 2008	Our firm never tries to get the rival firms' secret data unethically.	[1][2][3][4][5]
PIM1	Chow & Holden, 1997; Choi et al., 2007	I believe that in sharing economy there is high chances of misuse of intellectual properties of the collaborative competitors.	[1][2][3][4][5]
PIM2	Roman & Ruiz, 2005; Murphy et al., 2007	Our firm has never misused intellectual properties of rival firms while collaborating.	[1][2][3][4][5]
PIM3	Murphy et al., 2005; Harrison & Scorse, 2006	Intellectual capital is the most vulnerable assets which could be easily misused by the rival firms in a sharing economy.	[1][2][3][4][5]
PIM4	Akpinar & Vineza, 2016; Chou & Zolkiewski, 2018	Misuse of intellectual properties of the rival firms in sharing economy could hamper the reputation of the firms.	[1][2][3][4][5]
UEP1	Barney, 1991; Dyer & Singh, 1998	I believe that Unethical practices in sharing resources will negatively impact the firm.	[1][2][3][4][5]
UEP2	Dyer et al., 2018; Leonidou et al., 2013	Unethical practices in sharing economy will be harmful in B to B collaboration activities.	[1][2][3][4][5]
UEP3	Clarke-Hill et al., 2003; Murphy et al., 2005; Burehell & Cook, 2006	Unethical practices in sharing economy negatively impacts B to B competition.	[1][2][3][4][5]
UEP4	Bersoff, 1999; Kaptein, 2011; Gnyawali & Park, 2011	We never encourage unethical practices in our firm in coopetition activities.	[1][2][3][4][5]
UEP5	Kish-Gephart et al., 2010; Trevino et al., 2014; Gnyawali et al., 2016	We have a strict policy to check any unethical practices in our firm.	[1][2][3][4][5]
COO1	Anderson & Norus, 1990	Our firm collaborates with our competitors.	[1][2][3][4][5]
COO2	Bengtsson & Kock, 2000; Madanaguli et al., 2021	Our firm shares assets with our competitors.	[1][2][3][4][5]
COO3	Barnes et al., 2011	I believe collaboration with competitors is a good concept.	[1][2][3][4][5]
COO4	Leonidou, 2013	Unethical collaboration with competitors will lead to firm dis performance.	[1][2][3][4][5]
COO5	Mirkovski et al., 2019	I believe that a fully active collaboration with our rival firms will benefit our firm.	[1][2][3][4][5]
COM1	Lawrence & Robert, 2002	I believe that the competitors play an important role in sharing economy.	[1][2][3][4][5]
COM2	Liberto Daniel, 2020	Our firm has experienced unethical behavior while collaborating with some of our competitors.	[1][2][3][4][5]
COM3	Thompson, 2004	Collaborating with the competitors could be mutually beneficial for both the firms.	[1][2][3][4][5]
COM4	Stigler George, 1972	Collaboration with competitors will bring value proposition for both the competitors.	[1][2][3][4][5]
COM5	Barney, 1991	We have multiple competitors with which our firm collaborates.	[1][2][3][4][5]
FDP1	Manthri et al., 2015	Unethical practices in sharing economy will reduce overall profitability.	[1][2][3][4][5]

FDP2	Thompson, 2004	The operational performance could be hampered due to unethical practices in sharing economy.	[1][2][3][4][5]
FDP3	Lawrence & Robert, 2002	Unethical practices in sharing economy will lead to firm dis-performance.	[1][2][3][4][5]
FDP4	Barney, 1991	Growth in sales revenue could be severely impacted in case of unethical practices followed by our firm.	[1][2][3][4][5]
FDP5	Thompson, 2004	Customers could be dis-satisfied in case of any un-ethical practices by any collaborative firms with its competitors.	[1][2][3][4][5]
FDP6	Barney, 1991; Lawrence & Robert, 2002	Return on assets could be negative in case of unethical practices followed in coopetition activities.	[1][2][3][4][5]

SD = Strongly Disagree; D = Disagree; N = Neither agree nor disagree; A = Agree; SA = Strongly Agree