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# Subjectivity in incentive schemes, cognitive orientations and counterproductive knowledge behavior: an experimental study

Subjectivity in  
incentive  
schemes

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## Abstract

**Purpose** – This study aims to examine the causal relationship of subjective incentive schemes on counterproductive knowledge behavior. Besides, this study also identifies the moderating role of cognitive orientation on the relationship between those two variables.

**Design/methodology/approach** – This study used a  $2 \times 2$  between-subjects laboratory experiment with accounting undergraduate students as the subjects.

**Findings** – Subjective-based incentive schemes reduce the tendency for counterproductive knowledge behavior. Also, the collectivist cognitive orientation negatively influences the behavior. However, cognitive orientation does not act as a moderator in the causal relationship of incentive schemes and counterproductive knowledge behavior.

**Originality/value** – To the best of the authors' knowledge, this study is the first that investigates and finds the effect of inclusion of subjectivity in incentive schemes and the level of individual's collectivism on the reluctance to share knowledge in the workplace. This study has also strived to reduce an overlapping between the concept of knowledge sharing and counterproductive knowledge behavior by applying the right basic concept during the experiment.

**Keywords** Experiment, Knowledge sharing, Individualism-collectivism, Cognitive orientation, Counterproductive knowledge behavior, Subjective incentive schemes

**Paper type** Research paper

## 1. Introduction

Knowledge sharing is the basis and indication of the development and use of knowledge within the company and is considered as a competitive advantage (Nonaka, 2008) and organizational learning (Chenhall, 2003). This behavior positively affects an individual's task performance (Kim and Yun, 2015). In a contemporary organization, intraorganizational knowledge optimization has turned into a strategic priority since the business has become more knowledge dependent (Serenko, 2019). Thus, companies pay more attention to this behavior to improve both employees' and the organization's performance.

Meanwhile, besides a positive knowledge behavior, the other construct is a counterproductive behavior. Nevertheless, this construct receives less attention in the area of knowledge sharing research (Serenko and Bontis, 2016a). Counterproductive knowledge behavior consists of reluctance to give knowledge, which is requested by coworkers or share



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knowledge which is not what the coworkers required (Serenko, 2019). According to Serenko and Bontis (2016a), counterproductive knowledge behavior can take several forms. One of them is knowledge hiding, which includes components of knowledge request and intention. Some behaviors indicating knowledge hiding are like playing dumb (pretend not to have the requested information), being evasive (provide incorrect information) and or rationalized hiding (offer a justification for balking) (Connelly *et al.*, 2012). Although both knowledge sharing and counterproductive knowledge behaviors are in the knowledge management area, there is an overlapping understanding between knowledge sharing and some specific terms of counterproductive knowledge behavior, such as knowledge hiding (Serenko and Bontis, 2016a). Nonetheless, Serenko and Bontis (2016a) claim that an increase in knowledge sharing is not similar to the decrease in counterproductive knowledge behavior. The aforementioned encourages a more study that directly examines the counterproductive knowledge behavior.

Previous research suggests that relative performance evaluation motivates willingness to be better compared to the coworkers when all employees' performances are known by each, particularly when an individual-based incentive scheme is applied (Berger *et al.*, 2019). Thus, the management control design somehow determines the employees' behavior, including knowledge behavior. However, there are a limited number of studies that examine the effect of the management control system and management accounting on knowledge-sharing behavior. Some of the existing literatures are Cheng and Coyte (2014), Haesebrouck *et al.* (2017) and Taylor (2006) about the effect of incentive. Cheng and Coyte (2014) confirm that subjective performance evaluation can lead to the tendency of knowledge sharing, especially when the management is concerned about human-based intangible assets. Subjective evaluation and incentive are expected to provide flexibility to the evaluator, to remedy any perceived deficiency in objective performance evaluation (Bol and Smith, 2011). Subjective evaluation not only evaluates employee's performance based on the formulaic target achievement but also considers behavior as the component of assessment (Bol, 2008). Those previous findings encourage further research to examine the effect of subjective performance evaluation on counterproductive knowledge behavior, seeing that this variable is not similar to the knowledge-sharing behavior.

Xie *et al.* (2006) suggest that a reporting behavior based on a management control system depends on the individual's cognitive orientation. In other words, every individual reacts differently to a management control system based on their cognitive orientation, whether they are a collectivist or individualist, according to their priority basis to behave – self-desire or other people. Sánchez-Expósito and Naranjo-Gil (2017) find that cognitive orientation distinguishes an individual's tendency to reporting performance. Regarding these prior studies, the conformity between cognitive orientation types and management control systems is necessary to make the systems effective. Thus, this study also aims to further examine the moderating effect of cognitive orientation on an individual's behavior, especially in counterproductive knowledge behavior. In sum, this research examines the effect of subjective performance evaluation use on counterproductive knowledge behavior with collectivism–individualism cognitive orientation as the moderating factor.

In Indonesia, as one of the collectivist society country, knowledge behavior is likely almost not problematic. However, several companies explicitly engage in encouraging knowledge-sharing behavior among the employees through formal knowledge management, such as Semen Indonesia (Semen Indonesia, 2017), Bank of Indonesia and PT Telkom (Sulistiyorini, 2015). It indicates that individuals' willingness to share knowledge with their coworkers has become a company's concern. Most of Indonesia society is collectivists. This fact invites more research on its implication on knowledge behavior.

Borges *et al.* (2019) find that Indonesians are influenced by team-oriented culture, and thus have higher knowledge-sharing level. This finding is in line with Hussinki *et al.* (2017), who show that national cultures specify mental models that determine how knowledge-sharing practices are designed and implemented within the organization. Therefore, this research intends explicitly to confirm the effect of an individual's level of collectivism on counterproductive knowledge behavior in the Indonesian context.

This study is important for several reasons. First, this study concerns incentive scheme effect on an individual's behavior, which needs an effectivity in the system. An adequate performance evaluation provokes an employee's organizational citizenship behavior and leads to an increase in individual's and company's performance. Second, this research strives to find the conformity between the incentive scheme and cognitive orientation to reach the highest effectivity of management control system implementation. Finally, this study is important to add the literature on counterproductive knowledge behavior seeing the limited number of research studies in this area.

According to those important reasons, this research is supposed to provide two kinds of contributions. Empirically, this research contributes to the stream of knowledge management and management control systems by demonstrating the effect of the management control system and an individual's internal factors on an individual's behavior. Besides, this research also applies the basic concept of counterproductive knowledge behavior in the experimental process to distinguish and reduce overlapping between knowledge sharing and counterproductive knowledge behavior. Practically, this study provides a recommendation to company management in conforming the types of incentive schemes and cognitive orientations to develop the intended behavior that is productive knowledge behavior.

## 2. Literature review and hypotheses development

### 2.1 Agency theory in performance evaluation and incentives

Agency theory explains that the company's focus is to minimize agency costs caused by different concerns between principal and agent. The difference in interest indicates the behavior deviations of the agent, which will be mitigated by the principal.

The use of agency theory in the management accounting area is to explain incentive problems generated by moral hazard and adverse selection. Agency theory illustrates the fundamental properties in performance measures to be more useful and build an optimal contract (Lambert, 2006). Incentives and information exchange issues are related to the agency theory framework (Hakansson and Lind, 2007). More specific on performance evaluation and incentive provision, the use of agency theory is studied by Holmstrom and Milgrom (1991), who find that the focus of agency theory is to identify the way to motivate the agent to serve common company interest. Agents increase their performance only if the proportionate compensation follows the effort.

Kunz and Pfaff (2002) suggest that performance evaluation has two significant functions. First, performance evaluation aims to control impulsive behavior by adjusting interests by providing contingent incentives. Second, performance evaluation functions to evaluate every input contribution toward overall output so that the compensation provision depends on the individual's performance. Agency theory not only demands balance in a framework to evaluate the incentives contract but also provides adequate insight about its limitations and obstacles to calculate the inherent problems in the existing reward system (Kunz and Pfaff, 2002).



### 2.2 Theory of individualism-collectivism and cognitive orientation

The dimension of individualism refers to the degree of interdependence among the members of society (Hofstede, 2010). Theory of individualism-collectivism is a theory, which explains two types of individual's behavior tendency, namely, individualist and collectivist (Chow *et al.*, 2000). The distinction is based on the attributes that comprise self-perception, attribution, cognition, identity and emotion, values, motivation, social behavior, attitudes, norms, attitudes toward privacy, communication, morality, responsibility, conflict resolution, personality and professional behavior (Triandis, 1995). Generally, the difference lies in the emphasis on personal interest and a common interest (Chow *et al.*, 2000).

Individualism indicates the condition when the self-interest is more prominent than common interest. Individualists assume themselves as separate parties from the group and different from the other group members. On another hand, collectivism is a cognitive orientation that tends to assume themselves as a bound part of the group (Triandis and Gelfand, 1998). Naranjo-gil *et al.* (2012) suggest that team performance is affected by the types of incentives applied within the team, e.g., individual incentives or group incentives. Cognitive orientation has a role as the booster of the incentives scheme effect and indicates the need of conformity between the applied incentives scheme and cognitive orientation of the evaluated party. A collectivist (individualist) employee tends to have a higher team performance in the group (individual) incentives scheme. Based on this theory, individual's cognitive is grouped into two types of orientations, namely individualism and collectivism.

More specifically, an individual's cognitive orientations consist of four types as follows: horizontal individualism, vertical individualism, collectivism horizontal and vertical collectivism (Triandis *et al.*, 1998). The terms of vertical and horizontal are used to show the emphasis on cognitive orientation. Horizontal means the emphasis on equality, whereas vertical means emphasis on the hierarchy (Triandis and Gelfand, 1998). Based on Triandis (1995), the distinction between vertical and horizontal within the concept of collectivism and individualism is based on self-concept, fiscal orientation, values and political system. At the individual level, collectivism and individualism are demonstrated by the level of dependence on others. An individualist tends to act independently and not depend on others, whereas a collectivist tends to have higher interdependence with others.

### 2.3 Counterproductive knowledge behavior

Counterproductive knowledge behavior comprises active and passive behaviors (Berger *et al.*, 2019). An active behavior is indicated by not sharing an accurate knowledge to the coworkers, whereas the passive behavior is unintentionally retaining knowledge. The specific term of this negative behavior is knowledge hiding. It is defined as an individual's intentional attempt to retain or hide their knowledge when demanded by others. Thus, the main element of knowledge hiding is demand and intention (Connelly *et al.*, 2012; Connelly and Zweig, 2015; Serenko and Bontis, 2016a).

Productive knowledge behavior (knowledge sharing) and counterproductive knowledge behavior are different based on their motivation valence and focus (Serenko and Bontis, 2016a). Knowledge sharing can be motivated by a sense of responsibility, accountability and obligation to the organization and/or because of altruism, willingness to help and friendliness to coworkers. On the other hand, knowledge hiding is driven by egotism, greed and cost-benefit consideration. Besides knowledge hiding, the other forms of counterproductive knowledge behavior consist of disengagement from knowledge sharing (Ford *et al.*, 2015), partial knowledge sharing (Ford and Staples, 2010), knowledge hoarding (Hislop, 2003), knowledge-sharing ignorance (Israilidis *et al.*, 2015), counter-knowledge

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sharing (Cegarra-Navarro *et al.*, 2015; Martelo-Landroguez *et al.*, 2019) and knowledge sabotage (Serenko, 2019).

#### *2.4 Subjective incentives scheme*

The use of subjectivity in an incentive scheme is intended to provide evaluator discretionary to correct perceived weakness in the other areas in the evaluation system (Bol and Smith, 2011). Subjectivity provides flexibility on performance evaluation weighting, discretion in adjusting bonus with the real performance, use of subjective rating and flexibility in determining work dimensions (Ittner *et al.*, 2003). The intended dimensions are difficult to measure in an objective way such as leadership quality, personal integrity, professional trait, support to a colleague or team performance (Bol, 2008). As per Cheng and Coyte (2014), a subjective incentive scheme encourages an increase in team performance. It indicates that the inclusion of behavior as the object of performance measurement leads the individuals to put more effort to improve it.

Subjective incentives are based on subjective evaluation. The use of subjective performance evaluation provides an essential advantage (Merchant and Van der Stede, 2017). That is, this type of evaluation corrects flaws in the result measures, as evaluators can also insert judgment based on their knowledge of the situation faced by employees in performing their jobs. Subjectivity in evaluation and incentives means leaving the contract flexible to encourage the employee to keep doing their best and seeing targets as achievable (Merchant and Van der Stede, 2017).

#### *2.5 Incentives scheme and counterproductive knowledge behavior*

Agency theory suggests that individuals act based on their self-interest (Jensen and Meckling, 1976). In other words, individuals can only give their efforts for any purpose based on cost-benefit consideration (Cheng and Coyte, 2014). Cost referred to is the time and effort exerted to any action. In the context of knowledge behavior, individuals will share knowledge only if they gain any personal benefit. Prior study confirms that when management practice fosters accountability of knowledge sharing through evaluation and incentives provision, the behavior tends to be bigger (Wang *et al.*, 2014).

The application of a subjective incentive scheme enables individuals to be evaluated based on their behavior. Performance evaluators may decide a manager to play a role as a team player or effectively promote employee (Merchant and Van der Stede, 2017). Therefore, performance evaluation not only focuses on the quantitative formulation but also individuals' active role in their job. Based on the agency theory, the use of a subjective incentive scheme leads individuals to perceive that sharing knowledge with others will improve their performance level and incentives (Cheng and Coyte, 2014). Thus, knowledge hiding does not generate an expected benefit to either the individual or evaluator. Otherwise, the use of formulaic incentives scheme leads to a higher perceived cost because the incentives reference is solely based on the formulaic weight, which does not involve the evaluation of an individual's behavior. Individuals perceive knowledge sharing as an action, which causes competitor to obtain high incentives. Consequently, individuals tend to hide knowledge or do negative knowledge behavior to manage their level of incentives. Hence, the first hypothesis is as follows:

- H1.* Subjective-based incentives tend to lead counterproductive knowledge behavior to a lower level than objective-based incentives.

### *2.6 Cognitive orientation and counterproductive knowledge behavior*

[Xie et al. \(2006\)](#) find that the source of leniency in self-rating is the nature of individuals who tend to be individualistic. The main indication of an individualist is the self-enhancement or self-emphasis. Therefore, in the process of self-ratings, individuals will accentuate their performance so that they tend to provide a more lenient rating for themselves. This result is in line with the theory of individualism-collectivism, which suggests that individualists give a more profound emphasis on themselves ([Triandis and Gelfand, 1998](#)).

Referring to theory of individualism-collectivism in the context of counterproductive knowledge behavior, it is predicted that individualists tend to promote their performance and choose to retain their knowledge from coworkers. Owning a knowledge for individualists is perceived as an advantage that distinguishes them from others and does not allow others to own it, as it will create competitors. [Sánchez-Expósito and Naranjo-Gil \(2017\)](#) find that an individualist tends to increase the level of performance misreporting. Otherwise, collectivists tend to confound themselves with others, including their work team, so they do not attempt to favor their performance by not retaining knowledge to share with others. Thus, counterproductive knowledge behavior is higher on individualist than on collectivist. Therefore, the second proposed hypothesis is as follows:

*H2.* Individualistic tends to lead counterproductive knowledge behavior to a lower level than collectivistic.

### *2.7 Interaction between incentives scheme and cognitive orientation on counterproductive knowledge sharing*

[Sánchez-Expósito and Naranjo-Gil \(2017\)](#) find an interaction between the type of management control system and an individual's cognitive orientation. It implies that management should consider the employee's primary cognitive orientation in designing a management control system to reach the effectivity of the system. [Wang et al. \(2014\)](#) suggest that an individual's level of extraversion (sociable, friendly, assertive, ambitious and active) determines the level of relationship between evaluation and knowledge sharing, which is more extravert tends to have a more significant effect.

Subjective incentives scheme tends to increase the level of knowledge sharing than objective incentives scheme ([Cheng and Coyte, 2014](#)). The incentive scheme is part of the management control system. It indicates that the types of incentives scheme effects on counterproductive knowledge behavior are also determined by the individual's cognitive orientation ([Sánchez-Expósito and Naranjo-Gil, 2017](#)). Based on agency theory, individuals will share their knowledge only if they perceive any intended benefits, which are more significant than the cost to do it. Therefore, subjective incentives scheme provides benefit for individuals who share knowledge with their coworkers.

On the other hand, this behavior is also based on an individual's cognitive orientation. This behavior is explained by the theory of individualism-collectivism. Individualists who work on subjective incentives scheme will share knowledge less voluntarily than collectivists. Thus, the level of knowledge sharing of an individualist is predicted to be lower than collectivist, although in the same incentives scheme (i.e. subjective incentives scheme). Meanwhile, when individualist and collectivist work in the objective incentives scheme, the counterproductive knowledge behavior tends to be higher for the individualist. This explanation leads to the third hypothesis:

*H3.* Individualism-collectivism cognitive orientation moderates the effect of subjective-based incentives scheme on knowledge-sharing behavior.



### 3. Research method

#### 3.1 Research design

This research relied on  $2 \times 2$  between-subject experimental design with undergraduate students as the participants. Specifically, this study is a vignette experiment that is intended to investigate behavior in the level of intention, attitudes and actual behavior (Aguinis and Bradley, 2014). Initially, this research involved 83 students. Five data did not pass the manipulation check. Thus, only 78 data can be further analyzed.

#### 3.2 Research variables

Counterproductive knowledge behavior is defined as an intentional behavior to retain or hide knowledge even though there has been a demand from coworkers (Serenko and Bontis, 2016a). The measurement of this variable is by assigning score 1 for each counterproductive knowledge behavior. It is when individuals are not willing to fulfill the knowledge request submitted by their coworkers. The value of this variable is the accumulation number of behavior occurrences along the experiment process.

Subjective incentives scheme is an incentive scheme that includes evaluation of behavioral aspects, whereas an objective incentive scheme is an incentive scheme based only on the quantitative formulation of performance (Cheng and Coyte, 2014). Therefore, there are two types of manipulations as follows: subjective-based and objective-based incentives. This research adapts and adjusts the scenario from study by Cheng and Coyte (2014). The difference between the two manipulations is based on the existence of flexibility in delivering performance evaluation. Subjective-based incentives provide discretionary for supervisors to use their judgment to determine the performance rating. On the other hand, the objective-based incentives scheme has an explicit weighting in each point of evaluation while the supervisors are not allowed to use their subjectivity.

Cognitive orientation comprises collectivist and individualist, which indicates an individual's focus to behave. Collectivist (individualist) inclines to focus more on the group (self) (Triandis and Gelfand, 1998). This study uses ten horizontal collectivism items of Singelis *et al.* (1995) to measure an individual's cognitive orientation. The use of those items is to describe the relationship between individuals and their coworkers. The high overall score suggests support to the notion of equality, freedom to be themselves and not to be compared with others and the absence of effort to be superior to others (Triandis and Gelfand, 1998). Horizontal collectivism refers to social cohesion and an individual's satisfaction in life (Triandis, 1995), which is in line with the context of relationship and behavior to the coworkers intended to identify.

Besides Singelis *et al.*'s (1995) instrument, the measurement of cognitive orientation also uses six collectivism items by Kashima *et al.* (1995). Thus, there are 16 measurement items for cognitive orientation. The participants determine their agreement to the statements by choosing the five-points Likert scale from 1 "strongly disagree" to 5 "strongly agree." The variable score is the average of each individual's score from all the statements. All the participants' median score is used as a cutoff to determine an individual as an individualist or a collectivist. The participants below (above) the median are collectivist (individualist).

#### 3.3 Experiment task and procedure

An instrument for this research is adopted and modified from several prior pieces of research. First, the case of incentives scheme is based on study by Cheng and Coyte (2014), which is the inclusion of subjective aspects to the incentives scheme in the form of knowledge behavior and group dynamics. On the other side, an objective scheme is entirely based on the formulaic aspects of an individual's performance. Second, the experimental



assignment is referred to as given by Haesebrouck *et al.* (2017). The participants are assigned to identify and correct possible mistakes in a payroll schedule for which each individual in a group has a different schedule.

Before the experiment, the participants fill a cognitive orientation questionnaire to categorize them into individualist and collectivist. Then, after categorizing their traits based on the median score, the participants are randomly assigned to an experimental task according to subjective and objective incentives schemes. The participants are divided into groups, which consist of two persons on the same incentives scheme. They have information about the details of the incentives scheme and have to identify and correct some errors on a payroll sheet papers. Each person in a group works on different division payroll sheets while each person has different types of expertise. The expertise is given in the form of a formula to find and correct errors on the payroll sheet. Thus, an exchange of information is possible to occur. To request a formula help from their partners, the participants have to fill a request form and submit it. If the intended partners give permission, they should fill "Yes" on the request form by attaching a requested type of expertise. Filling "No" means not willing to fulfill the request. Based on the assignment, the number of counterproductive knowledge behavior is measured according to the times of unfulfilled knowledge request submitted by partners.

**4. Results and discussions**

*4.1 Participants*

An experiment was conducted at the private college in Surabaya. The participants were 83 accounting students who have passed the Management Control System subject. The participant data proceeded for further analysis if the participant correctly answered the manipulation check. The participants are required to answer and check an agreement level for two statements after the experimental task.

The first statement is, "Your incentives are based solely on the target achievement." The right answer for participants in the subjective (objective) scheme is "False" ("True"). The second statement is, "The maximum number of target (performance) you can achieve is [...]." The right answer for both schemes is 6 points. Of 83 participants, 1 did not complete the demographical data. Meanwhile, four participants failed the manipulation check. Thus, the total data for further analysis consisted of 78 participants.

*4.2 Descriptive statistics*

Table 1 indicates that the participants are averagely 21.09 years old ( $\sigma = 0.74$ ) with a range of 20–24 years old, in which a majority are women (84.62%). The minimum and maximum grade point average (GPA) are, respectively, 2.70 and 3.94 at an average score of 3.55 ( $s = 0.25$ ). Before being grouped into collectivism and individualism, the descriptive statistics of the participants' cognitive orientation scores are identified with the means score of 4.03 ( $\sigma = 0.38$ ) from the range 2.06–5.00. The means tendency to approach the maximum value indicates that most of the participants are practically

Variable	N	Minimum	Maximum	Mean	SD
Age	78	20.00	24.00	21.0897	0.74181
GPA	78	2.70	3.94	3.5483	0.25347
Cognitive orientation	78	3.06	5.00	4.0280	0.37832
Counterproductive knowledge behavior	78	-3.00	2.00	-0.8205	1.06593

**Table 1.**  
Descriptive statistics

collectivists. That is, in line with the fact that the Indonesian society is a collectivist society (Hofstede, 2010). This finding is supported by the means score of counterproductive knowledge behavior of  $-0.82$  ( $\sigma = 1.07$ ), which signifies the participants' tendency to share knowledge rather than not to when they receive any requests from their coworkers. The maximum and minimum score of this dependent variable are 2.00 and  $-3.00$ , respectively.

To ensure adequate randomization, the examination of the difference between demographic information, including age, gender and GPA, is conducted. This test is important as the experimental task was randomly assigned by ignoring the inherent factors on the subject (Nahartyo and Utami, 2016). The results show no differences between age ( $\chi^2 = 0.877$ ,  $df = 12$ ,  $p > 0.05$ ), gender ( $\chi^2 = 0.856$ ,  $df = 3$ ,  $p > 0.05$ ) and GPA ( $\chi^2 = 0.199$ ,  $df = 132$ ,  $p > 0.05$ ) based on the treatment assignment. This result indicates that the randomization has been effective.

#### 4.3 Hypotheses testing

*H1* proposes that subjective incentives scheme tends to cause a lower level of counterproductive knowledge behavior than objective incentives scheme. In other words, the prediction is that subjective incentives scheme negatively affects the counterproductive knowledge behavior. Hypotheses testing using ANCOVA is presented in Table 2, which shows  $p = 0.05$  ( $F = 9.710$ ). This result indicates that there is an effect of subjective incentives scheme on counterproductive knowledge behavior. Based on the extent of the dependent variable in each incentive scheme, the means score is lower when the subjective incentive scheme ( $-1.077$ ) is applied than when an objective incentive scheme ( $-0.405$ ) is applied. Thus, subjective incentives scheme negatively affects counterproductive knowledge behavior, or *H1* is supported.

*H2* predicts that a collectivist tends to do the lower level of counterproductive knowledge behavior than an individualist. Table 2 shows  $p < 0.05$  ( $F = 8.277$ ), which indicates that cognitive orientation affects counterproductive knowledge behavior. The means of the dependent variable are lower on collectivists ( $-1.050$ ) than on individualists ( $-0.432$ ). Therefore, collectivism negatively affects counterproductive knowledge behavior, or *H2* is supported.

Dependent variable: counterproductive knowledge behavior					
Source	Type III sum of squares	df	Mean square	<i>F</i>	<i>P</i>
Corrected model	25.388 <sup>a</sup>	4	6.347	7.461	0.000
Intercept	3.896	1	3.896	4.580	0.036
Gender	10.820	1	10.820	12.719	0.001
Incentive	8.260	1	8.260	9.710	0.003
Cog_Orient	7.041	1	7.041	8.277	0.005
Incentive × Cog_Orient	2.204	1	2.204	2.591	0.112
Error	62.100	73	0.851		
Total	140.000	78			
Corrected total	87.487	77			

Note: <sup>a</sup> $R^2 = 0.290$  (Adjusted  $R^2 = 0.251$ )

**Table 2.**  
Results of  
hypotheses testing

*H3* predicts that individualist-collectivist cognitive orientation has a moderating effect on the causal relationship between subjective incentives scheme and counterproductive knowledge behavior. Table 2 shows  $p < 0.05$  ( $F = 2.591$ ), which means that the variable does not have a moderating effect on the causal relationship. Thus, *H3* is empirically not supported.

#### 4.4 Discussions

The hypotheses' testing provides support on *H1* and *H2*, but not on *H3*. In another word, the results support the predictions on the negative effect of subjective incentives scheme and cognitive orientation on counterproductive knowledge behavior. In this causal relationship, cognitive orientation does not play a role as a moderating variable. The discussion of each result is provided further.

The result of *H1* testing supports that subjective incentives scheme leads to counterproductive knowledge behavior into a lower level than objective incentives scheme does. This negative causal relationship is in line with studies by Cheng and Coyte (2014) and Wang *et al.* (2014), who state that if management practice encourages knowledge-sharing behavior through the evaluation and incentives provision, this behavior tends to be in a greater extent. This finding is consistent with agency theory, which explains the consideration of cost-benefit right before doing an action. Individuals tend to do the action only if the benefit is higher than the cost to do it. In the context of counterproductive knowledge behavior, the application of a subjective incentive scheme encourages individuals to share rather than retain knowledge from their coworkers, as sharing the knowledge will provide more benefit in the form of incentives addition, given that this behavior is included in a component of incentives calculation. On the contrary, the decision to retain knowledge after being requested by coworkers will lose the chance to obtain a complement score as the base of incentives, so such behavior is avoided. Therefore, the subjective incentive scheme is useful to reduce counterproductive knowledge behavior.

The testing result of *H2* supports that collectivist tends to behave counterproductively less regarding knowledge compared to individualist. Individualists tend to focus on themselves than on others, including in the context of incentives, who tend to behave by prioritizing or at least not inflicting themselves to a financial loss. To complete their task, individualist does not pay attention to their coworkers' need or do an action, which hampers their performance. In this context, knowledge-sharing behavior or giving a knowledge that has been requested by coworkers is perceived as a task hampering action and then can impact their incentive achievement. On the other hand, collectivists tend to pay attention to coworkers' needs, although it potentially delays their work. Thus, collectivism generates lower counterproductive knowledge behavior than individualists. This finding is in line with study by Sánchez-Expósito and Naranjo-Gil (2017) and the theory of collectivism-individualism. Higher the level of collectivism, lower the propensity to retain their knowledge from others.

The result of *H3* testing does not show support on the prediction that cognitive orientation is a moderating variable on the relationship between subjective incentives scheme and counterproductive knowledge behavior. In other words, although the incentive scheme and cognitive orientation affect the dependent variable, cognitive orientation does not become a contingency factor on the causal relationship between incentives scheme and the negative knowledge behavior. This finding is predicted as the result of the emergence of interpersonal interaction within the team, which causes no pattern on the effect of incentives scheme based on the cognitive orientation. In consequence, the potential factor, which distinguishes the incentive scheme effect, is the reciprocity within the group. Productive



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exchange mode, i.e. individuals who own the knowledge consider that they are responsible to the company and drive individuals to behave positively by sharing knowledge (Serenko and Bontis, 2016b).

This result of the moderating effect examination also implies that the effect of incentives scheme on counterproductive knowledge behavior likely is strengthened or attenuated by other variables. A potential variable is a soft reward, which can be in the form of personal reputation and intimacy with coworkers. The existence of soft reward, which can be obtained by sharing knowledge, can stimulate individuals to be not reluctant to share requested knowledge by their coworkers, whether to keep their reputation and or to keep their relationship with (Wang and Hou, 2015). Other theories, e.g. self-determination theory, may become the basis for different perspectives in explaining this result.

### 5. Conclusions

An experiment aims to examine the effect of a subjective-based incentive scheme on counterproductive knowledge behavior and the moderating effect of cognitive orientation on the predicted causal relationship. The existing literature focuses more on the individuals' effort to share knowledge or knowledge-related behavior from a positive perspective. However, there few pieces of literature which observe knowledge behavior from a negative perspective; it is in the form of counterproductive knowledge behavior.

This study results in three essential points. First, the use of subjectivity in the incentives scheme reduces the propensity to retain knowledge or information, which has been requested by coworkers. The inclusion of behavioral aspects as the component of incentives determinants leads individuals to behave consistently to gain higher incentives, which is by sharing knowledge. This result is in line with agency theory. Second, collectivist-individualist cognitive orientation affects the tendency to behave counterproductively related to knowledge. Collectivists, i.e. individuals who are more focused on others than themselves, tend to avoid such behavior rather than individualist. This result is in line with the theory of collectivism-individualism. Third, cognitive orientation does not distinguish the effect of the incentives scheme on counterproductive knowledge behavior. This result leads to the prediction that reciprocity and the presence of soft reward will have a more significant effect on the causal relationship. These findings also imply that national culture, which is followed by the tendency of individuals' level of collectivism, affects knowledge behavior; in this context, Indonesians are well on depicting this fact.

This study strives to reduce an overlapping understanding between knowledge sharing and counterproductive knowledge behavior by applying the concept of counterproductive knowledge behavior in the experimental task and procedure. It is by emphasizing the existence of knowledge request as the prerequisite condition of this behavior. This study is not free from any limitations. First, the existing literature on the concern of counterproductive knowledge behavior is still rare, so the literature basis of this study remains limited. Second, this study ignores individuals' level of expertise on the task, which may affect their knowledge behavior. Still, as an effort to control the confounding effect of this variable, the GPA effect on the dependent variables has been conducted and found insignificant. Third, this research finds gender is a covariate, which shows the different level of counterproductive knowledge behavior between man and woman.

Future research is expected to examine the existence of reciprocity and soft reward within a group, which possibly causes lower counterproductive knowledge behavior.

Besides, future research can use multiple task settings to identify the effect of subjective incentives scheme on knowledge behavior in the long run. Last but not least, further research can develop the experimental design of this study into other more specific types of counterproductive knowledge behaviors.

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