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## RESEARCH ARTICLE

# A longitudinal investigation of customer cooperation in services: The role of appraisal of cooperation behaviors

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**Abstract**

The customer cooperation level in behavior change programs (e.g., weight-loss programs, alcohol-quitting programs, and debt management programs) is low, which leads to a low program success rate. To address this problem, this study draws on the goal-driven behavior theory and develops a theoretical framework to explain how goal intention, and behavioral appraisal processes influence the subsequent cooperation behaviors, which, in turn, influence customers' goal attainment. A two-wave longitudinal survey was used to test the theoretical model. Results show that customers' appraisals of the cooperation behaviors play a vital role in influencing customers' cooperation behaviors. Three appraisal factors (self-efficacy, instrumental belief, and affect toward cooperation behaviors) fully mediate the relationship between goal intention and cooperation. Customer cooperation contributes directly to goal attainment. Both theoretical and managerial implications are provided.

**KEYWORDS**

appraisal processes, customer cooperation, goal attainment, goal-driven behavior

## 1 | INTRODUCTION

Although significant efforts have been made to address societal problems such as obesity, overwhelming debt, and alcohol addiction, these issues are still troubling the current society. For example, the Federal Reserve reported that by March 2016, 38.1% of U.S. households own an average credit card debt of \$16,048 and the revolving debt had reached up to \$929 billion (Harrow, 2016). Although many behavior-change programs (e.g., debt management programs and weight loss programs) have been developed to address these problems; individuals' success rates in these programs are rather low. For example, 50% of those who begin weight loss programs quit or drop out within the first 6 weeks (Inelmen et al., 2005). The average dropout rate for debt management programs is more than 45% (Maeda, 2010).

Lack of customer cooperation is one major cause of the low success rate in these behavior-change programs. Customer cooperation is obtained when customers work collaboratively with the service provider to achieve mutually beneficial program goals (Lancastre & Lages, 2006). Typical customer cooperation behaviors

include observing the program rules, following the program guidelines and suggestions, and cooperating with the service employees, etc., all of which help the service provider and the customer achieve a satisfactory service outcome. However, a low level of customer cooperation is prevalent in various behavior-change programs. For example, Dellande, Gilly, and Graham (2004) found that more than half of the participants in weight loss programs fail to comply with the service programs' guidelines and suggestions. Although obtaining customer cooperation is critical in behavioral change services, research on customer cooperation is still scarce. The extant theoretical frameworks are insufficient in explaining how cooperation behavior is enacted in the behavior-change program context. The psychological mechanism underlying customer cooperation has been relatively ignored.

To bridge this research gap, our study integrates the goal-driven behavior theory (Bagozzi & Dholakia, 1999) and the motivated reasoning theory (Agrawal & Maheswaran, 2005; Jain & Maheswaran, 2000) to establish a theoretical framework that explains the role of goal intention and behavioral appraisal processes in influencing cooperation behaviors. The theoretical framework sheds new light

on the psychological mechanism underlying the relationship between goal intention and customer cooperation behaviors. Specifically, we hypothesize that three behavioral appraisal factors (self-efficacy toward cooperation, instrumental belief toward cooperation, and affect toward cooperation) mediate the relationship between goal intention and cooperation. Moreover, to exclude alternative theoretical explanations, we compared our mediation model with a moderation model as well as a direct-effect model. In the moderation model, besides their direct effects on customer cooperation, the three appraisal factors also moderate the relationship between goal intention and cooperation. In the direct-effect model, the three appraisal factors and goal intention all have direct effects on cooperation. These model comparisons help researchers understand how the three appraisal factors and goal intention function together in driving cooperation behaviors. Managerially, the new insights provided by this study will help service providers develop more effective strategies to engage customers in cooperation behaviors, thereby enhancing the success rates of behavior-change programs.

## 2 | LITERATURE REVIEW

Past research on customer cooperation is largely embedded in customer cocreation literature. Because customers are treated as “partial employees,” it is important for the customer to be cooperative and observant of the guidelines and suggestions from the service provider (Kelley, Donnelly, & Skinner, 1990). Cooperation includes a number of basic or threshold cocreation activities that facilitate the service delivery process and help to realize the mutually beneficial program goals. For example, a patient of a clinic should cooperate with doctors in developing medical solutions (Bitner & Brown, 2008); a client of a financial service program should apply the suggestions of the financial advisor to his/her personal finance practices (Auh, Bell, McLeod, & Shih, 2007). Such cooperation behaviors benefit consumers through improved service quality and customized service content (Dabholkar, 2015; Guo, Arnould, Gruen, & Tang, 2013; Xie, Bagozzi, & Troye, 2008). They also benefit the service program through increased customer satisfaction and service productivity (Lovelock & Young, 1979; Mills & Morris, 1986).

Several studies have investigated the factors that influence customer cooperation or customer compliance in behavior-change programs. For example, Bettencourt (1997) found that perceived organizational support influenced cooperation, whereas customer commitment and past customer satisfaction did not. Dellande et al. (2004) focused on the role of service providers and found that service providers' expertise and homophily significantly influenced customers' compliance behavior via their effects on consumers' role clarity, ability, and motivation. Guo et al. (2013) emphasized the role of organizational customer socialization and found that customer socialization including role clarity, task mastery, and goal congruence significantly contributed to consumer coproduction behaviors (including cooperation) and consumer well-being. Most of the studies from the cocreation literature examined customer cooperation from

the social exchange perspective, and the identified antecedents of cooperation are limited to the organizations' relationship investment (e.g., organizational socialization and organizational support). However, the proximal psychological drivers of cooperation are not fully clear, and the psychological mechanism underlying customer cooperation has been relatively neglected.

In psychology literature, the way in which a behavior is enacted and the psychological mechanism underlying the intention-behavior relationship have been studied for several decades. A classical behavior model is Fishbein's theory of reasoned action (i.e., TRA), which suggests that one's behavior is determined directly by his/her intention to conduct the behavior (Ajzen & Fishbein, 1980). However, TRA assumes that conducting the focal behavior is completely under one's volitional control, which restricts its application in a narrow scope (Davis, Bagozzi, & Warshaw, 1992). Later, Ajzen (1991) introduced a revised model termed as the theory of planned behavior (i.e., TPB), in which individuals' perceived control was incorporated to explain behaviors not completely under individuals' volitional control. Armitage and Conner (2001) conducted a meta-analysis to examine the effectiveness of TPB and found that TPB accounted for only 27% and 39% of the variance in behavior and intention, respectively. Addressing a philosophical problem of whether any behavior can be both volitional and nonvolitional, Bagozzi (1992) suggested the categorization of the focal behaviors into intended action (e.g., an actor has a reason for acting) and unintended action (e.g., habit, impulse, or reflex). Furthermore, Bagozzi and Warshaw (1990) indicated that intended behaviors are more or less problematic to perform when attempting to obtain a desired outcome, and defined those behaviors that have “impediments standing in the way” as goal-driven behaviors. To explain the goal-driven behaviors, Bagozzi and Warshaw (1990) brought forward the theory of trying, which shifted the research focus to the goal striving process and trying, suggesting that there are various intermediary steps between goal intention and goal achievement. Later on, Bagozzi and Dholakia (1999) further expanded and deepened the goal-driven behavioral theory. Bagozzi and Dholakia (1999) described the goal-driven behavior in a two-stage model: goal setting and goal striving. Perugini and Bagozzi (2001) incorporated anticipated emotions and goal desire into the goal-driven behavior framework. Their study found that the goal-driven framework explained more variance of behavior than TPB.

The early behavior models (e.g., TRA and TPB) assume intention invariably leads to behavior. However, later studies, especially studies on goal-driven behavior, suggested that there is a gap between intention and behavior and one's intentions are not necessarily or automatically transformed into action (Carrington, Neville, & Whitwell, 2014; Orbell & Sheeran, 2000; Rhodes & de Bruijn, 2013; Sniehotta, Scholz, & Schwarzer, 2005). Two major research streams have emerged in explaining this gap. One research stream emphasizes the role of implementation between goal intention and behavior. It focuses on the detailed implementation plan such as when, where, how, and how long to perform the acts to achieve the goal (Ajzen, Czasch, & Flood, 2009; Bagozzi, Dholakia, &

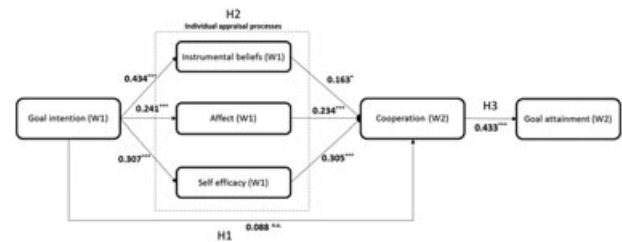
Basuroy, 2003; Gollwitzer & Sheeran, 2006). Gollwitzer (1999) suggested that by pairing goal-directed behavior with critical stimulus cues, implementation plans can automate the initiation and guide performance of behavior without much cognitive control. More recently, several studies (e.g., Ajzen et al., 2009) suggested that implementation intentions can improve the likelihood of performing subsequent behaviors as it produces a sense of commitment to the intended behavior.

The other research stream suggests that enactment of intentions is a function of consumers' appraisal processes toward the potential means or instrumental acts. These studies identified different appraisal processes and explored how these appraisal results influence subsequent behaviors (Bagozzi & Dholakia, 1999; Bagozzi, Baumgartner, & Yi, 1992; Conner & Armitage, 1998). For example, in the context of coupon usage, Bagozzi et al. (1992) identified three appraisal processes (self-efficacy toward the acts, instrumental belief toward the acts, and affect toward the acts) and found that the interaction among the three appraisal factors significantly influenced individuals' performance of the instrumental acts. Although prior studies provide some new insights regarding how goal-directed behaviors are enacted, the relationships among goal intention, appraisal processes, and goal-directed behavior are not yet well-understood. Particularly, little is known about the role of the appraisal processes underlying the relationship between goal intention and goal-driven behaviors.

To fill in this gap, this study is set to disentangle the relationships among goal intention, appraisal processes, and goal-driven behaviors in the context of customer cooperation in behavior-change programs. Most existing studies on customer cooperation take the activation of cooperation behavior for granted as if consumers are always mentally ready to engage in cooperation behaviors while largely overlooking the role of consumers' appraisals in enacting cooperation behaviors. Our study argues that customers' appraisals of their self-efficacy, instrumental belief, and affect toward cooperation are critical in determining whether or not and to what extent consumers would engage in cooperation behaviors in a behavior-change service program. Above all, this study will not only build on the goal-driven behavior theory by shedding new light on the appraisal processes intervening between goal intention and goal-driven behavior, but also expand our understanding of how cooperation behaviors are enacted in a behavior-change program.

### 3 | THEORETICAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

Our theoretical framework of customer cooperation is developed based on an integration of the goal-driven behavior theory (Bagozzi & Dholakia, 1999) and the motivated reasoning theory (Agrawal & Maheswaran, 2005; Jain & Maheswaran, 2000). Specifically, we propose that goal intention leads to customer cooperation both directly and indirectly via its influence on consumers' appraisal processes (including self-efficacy, instrumental belief, and affect toward cooperation). Customer cooperation, in turn, helps consumers achieve their preset goals. Because this framework draws on



**FIGURE 1** The framework of the appraisal of customer cooperation

the goal-driven behavior theory, this study will first provide a brief overview of the theory and then discuss the development of the hypotheses. The theoretical framework is presented in Figure 1.

#### 3.1 | Goal-driven behavior theory

Goals play a vital role in the purposive behavior of consumers. Bagozzi and Warshaw (1990) claimed that decision makers consider goals as problematic as they believe either external (e.g., time constraints and environmental contingencies) or internal (e.g., ability limitations and unconscious habits) factors would stand in the way. To overcome the impediments and achieve preset goals, customers need to go through two stages: goal setting and goal striving. Goal setting is a predecisional appraisal process leading to the establishment of goal intention. Examples of the figurative questions are "what are the goals I can pursue?" or "why do I want or not want to pursue them?" (Bagozzi & Dholakia, 1999). Goal striving includes goal implementation processes in which individuals conduct instrumental acts to attain and maintain goals. Bagozzi et al. (1992) suggested that the appraisal processes toward instrumental acts play an important role in enacting the instrumental acts. Specifically, they identified three distinct appraisal processes including self-efficacy toward the acts, instrumental belief toward the acts, and affect toward the acts, each of which evaluates one critical aspect of the instrument acts. The three appraisal processes work additively or multiplicatively to determine the extent to which consumers would engage in the instrumental acts to enhance the likelihood of goal achievement and together provide diagnostic information and insights regarding customers' mindsets in performing the instrumental acts. Conducting instrumental acts will eventually lead to goal achievement.

#### 3.2 | Cooperation and goal-driven behavior

We argue that customer cooperation in a service program is a goal-driven behavior by nature. In a behavior-change program, participants usually have a goal of making changes in their lives (e.g., losing weight in a weight loss program or paying off debt in a debt management program). Cooperation is the instrumental act that helps customers to achieve these preset goals. For example, in a debt management program, being cooperative and following the credit counselor's guidelines and suggestions (e.g., budgeting monthly, reducing credit card usage, and saving for emergencies) help a customer

achieve the preset goal of paying off his/her debt. Typically, the goal pursuit process in a behavior-change program is very challenging, characterized by a high level of confrontation between the desirable end-state goal and the unpleasant goal striving process. For example, overweight individuals desire a fit and healthy body but shudder at the rigorous diet requirements. In other words, individuals may encounter difficulty or reluctance in initiating the instrumental cooperation behaviors in a behavior-change program. Thus, it is critical to understand the psychological mechanism in enacting customers' cooperation behavior in a behavior-change program, which will help the behavior-change program develop effective strategies to assist their customers in achieving their program goals.

### 3.3 | Goal intention and cooperation

As discussed in the literature review section, the relationship between intention and behavior has been widely examined in psychology literature. Behavior models (e.g., TRA and TPB) consistently suggest that behavioral intention leads to actual behavior. In the goal-driven behavior theory, Bagozzi and Dholakia (1999) explained that goal intention occurs when individuals desire to achieve a preset goal and the preset goal can be achieved through an execution of instrumental acts. In other words, to achieve a preset goal, goal intention leads to the implementation of instrumental acts. The greater the goal intention, the more likely an individual will perform the instrumental acts in the goal striving process. For example, in a weight loss or debt management service program because cooperation serves as the instrumental acts that help customers achieve their preset program goals, consumers with a stronger goal intention are more likely to engage in cooperation.

**H1:** *Customers' goal intention is positively related to their subsequent cooperation behaviors.*

### 3.4 | The mediating effects of appraisal processes

In this study, we propose that the gap between goal intention and goal-driven behaviors can be explained by consumers' appraisal of the instrumental acts. Appraisal of the instrumental acts is the evaluation of available means to determine the best course of action to achieve the preset goal (Bagozzi et al., 1992). Consumers' appraisal of the instrumental acts is particularly critical when striving to achieve a challenging goal (Bagozzi & Dholakia, 1999). Bagozzi et al. (1992) identified three distinct appraisal processes used in evaluating the instrumental acts of goal-driven behaviors. The first appraisal process is self-efficacy toward instrumental acts that refers to a consumer's belief in one's ability to successfully conduct the instrumental acts (Bagozzi & Dholakia, 1999). It is similar to Heider's (2013) notion of "can" as a disposition and serves as a self-judgment of whether one has the ability to conduct the behavior. Whether or not one will conduct the instrumental acts during the goal striving process depends partially on the self-efficacy appraisal that one holds toward the instrumental acts.

Bagozzi and Dholakia (1999) pointed out that the self-efficacy appraisal toward the instrumental acts is particularly important in pursuing challenging goals. The second appraisal process, instrumental belief, refers to one's assessment of the likelihood that the initiation of instrumental acts will lead to the attainment of an end-state goal. One will not perform instrumental acts unless he/she believes there is a strong enough connection between the instrumental acts and the end goal. Consistently, Davidson (2001) stated that instrumental belief is a necessary determinant to perform a reasoned action. The third appraisal process is affected toward instrumental acts, and it accounts for one's emotional preference. Some instrumental acts have affective consequences that are independent of the value of goal. In other words, some instrumental acts might be more attractive than others given that performing some actions might be more pleasant than others. In sum, self-efficacy and instrumental belief are primarily cognitive appraisal linkages between motivations and goal attainment, and its effect provides information about the emotional consequences of engaging in a goal pursuit process. According to the goal-driven behavior theory, the three distinct appraisal processes are critical in enacting the instrumental acts.

Extant studies suggest that motivation may affect individuals' decision-making and attitude formation through biased cognitive processes (Jain & Maheswaran, 2000; Kunda, 1990). These biased processes are termed as motivated reasoning, which describes the influence of motivation on cognitive processes (Agrawal & Maheswaran, 2005; Jain & Maheswaran, 2000). Specifically, strong motivation or directional goals may enhance the accessibility of knowledge structures that are consistent with a desired conclusion. In the context of goal-driven behaviors, consumers with strong motives and goal intentions tend to positively assess cooperation behaviors, generating positive affect toward cooperation behaviors and producing strong instrumental belief and confidence in performing cooperation behaviors. Moreover, the goal-driven behavior theory suggests that appraisal processes toward instrumental acts could significantly influence subsequent behaviors (Bagozzi & Dholakia, 1999). For example, in the context of coupon usage, Bagozzi et al. (1992) found that the three appraisal processes significantly influenced coupon usage behavior. Similarly, in the context of behavior-change programs, it is expected that the positive cognitive and emotional appraisal of instrumental acts (i.e., cooperation behaviors) is likely to lead to a high level of customer cooperation. Thus, according to the motivated reasoning theory and the goal-driven behavior theory, consumers' goal intention influences their appraisals of cooperation behaviors, which, in turn, affect cooperation behaviors. In other words, customers' appraisals of cooperation behaviors mediate the relationship between goal intention and cooperation behaviors.

**H2:** *The effect of goal intention on cooperation behaviors is mediated by the appraisal of (a) self-efficacy, (b) instrumental belief, and (c) affect toward cooperation behaviors.*

### 3.5 | Cooperation and goal attainment

The goal-driven behavior theory suggests that performing instrumental acts contributes directly to goal attainment (Bagozzi & Dholakia, 1999). They pointed out that customers are more likely to achieve their goals when they take responsibility for their service outcomes and become accountable for the performance of the related activities. Consistently, several prior studies (e.g., Dellande et al., 2004; Murgraff, Walsh, & McDermott, 2000) provided empirical evidence for the direct relationship between instrumental acts and goal attainment.

Cooperating with the service provider is particularly important in a behavior-change program because obtaining the preset program goals in a behavior-change program is typically challenging to the program participants. Unlike many other goals that might only require consumers' self-involvement, the behavior-change goal usually requires outside help from the behavior-change program. For example, in a debt management program, to achieve their goals, participants have to follow the suggestions from the credit counselor and apply the guidelines to their daily lives, such as budgeting regularly, tracking monthly expenses, and reducing credit card use. The extent to which participants can cooperate with the service provider largely determines whether they can achieve their preset goals or not. In addition, through active participation during the service delivery process, customers become empowered and feel responsible for the end results (Fuchs, Prandelli, & Schreier, 2010). As a result, they become more engaged in pursuing their goals. Thus, the better the customer cooperates with the service provider, the more likely the customer will achieve the goal.

**H3:** *Customer cooperation is positively related to customers' goal attainment.*

## 4 | RESEARCH METHODOLOGY

### 4.1 | Data collection

To test the hypothesized relationships, this study used the debt management program as the research context and conducted a two-wave longitudinal survey design. We chose the debt management program as the research context for two reasons. First, in a debt management program, to pay off their debt clients need to be cooperative with and follow suggestions from credit counselors. Thus, a debt management program is an appropriate context to study customer cooperation. Second, accumulated credit card debt has increasingly become a social problem in the U.S. Findings from this study will help to develop solutions for this important social problem.

For data collection, we obtained the cooperation from a major national credit counseling organization. A total of 3,500 subjects were randomly selected from the clients of the national debt management program. A random drawing of multiple cash prizes was provided as the participation incentive. The questionnaires were inserted in the debt management program's monthly newsletters and were delivered to subjects by mail. In the first wave, 364 complete questionnaires were received. The low response rate in Wave

1 (around 11%) might be due to the sensitive nature of the research topic and the collection of personal financial information. The second wave of data collection was launched 3 months later. Out of the subjects who completed the Wave 1 survey, 341 agreed to participate in the Wave 2 survey. In Wave 2, 190 subjects completed the survey. We then merged the data from the two waves. We removed 23 cases that were either incomplete or had questionable answers (e.g., "7" for all questions), resulting in a data set with 167 cases. To check for nonresponse bias, early and late responses were compared in each wave on the basis of key demographic variables and constructs (Armstrong & Overton, 1977). Moreover, the participants who participated in only the first wave survey and those who attended both waves were also compared. There was no indication of response bias.

### 4.2 | Measurement

We used a combination of reflective and formative measures. The measures of the reflective constructs including goal intention and goal attainment were borrowed from existing studies (See Table 2). Goal intention was measured by three items adapted from Perugini and Bagozzi (2001). Goal attainment was measured by three items adapted from Bagozzi et al. (2003). All measures used a 7-point Likert scale.

Because there are no established scales for customer cooperation in the context of debt management, we generated six cooperation behaviors from our focus group interview with credit counselors: budgeting on a regular basis, tracking your monthly expenses, saving money for the future on a regular basis, carefully reading statements from banks and credit card companies, stopping unnecessary purchases, and learning about money management (See Table 3). To measure customer cooperation, we asked "To achieve your goal of debt reduction, how frequently did you perform each of the following acts?" in our questionnaire. For each of the appraisal constructs, we asked consumers to evaluate each of the six cooperation behaviors. Specifically, we asked "How much do you like doing each of following tasks?" to measure affect toward the cooperation behaviors. We asked "How confident are you that you can successfully perform each of following tasks?" to measure self-efficacy toward the cooperation behaviors. We asked "How much do you believe that performing each of these same tasks can help you achieve your goal concerning your debt?" to measure instrumental belief toward cooperation behaviors. These items were treated as formative measures because each item captures one important aspect of the construct. The three appraisal factors were treated as formative constructs.

In estimating the model, this study also incorporated several control variables including gender, education, income, total debt, and presatisfaction level. These variables are not of theoretical interest but aim to control for rival explanations and unexplained variance. Goal intention, the three appraisal factors, and all the control variables were measured in Wave 1. Cooperation and goal attainment were measured in Wave 2. The descriptive statistics and the correlations among variables are presented in Table 1.

**TABLE 1** Correlation matrix

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Debt_Total (1)	1										
Education (2)	0.287	1									
Gender (3)	-0.135	-0.002	1								
Income (4)	0.395	0.333	-0.192	1							
Presatisfaction (5)	0.109	0.100	0.025	0.067	1						
Affect (6)	0.075	0.069	0.077	-0.104	0.294	1					
Goal intention (7)	0.032	0.199	-0.003	0.038	0.368	0.314	1				
Instrumental belief (8)	-0.012	-0.024	0.121	-0.022	0.404	0.529	0.505	1			
Self-efficacy (9)	0.064	-0.095	0.042	-0.191	0.313	0.799	0.324	0.585	1		
Cooperation (10)	0.140	0.013	0.103	-0.046	0.306	0.616	0.336	0.526	0.646	1	
Goal attainment (11)	0.116	0.005	0.053	0.014	0.202	0.244	0.304	0.299	0.221	0.459	1

### 4.3 | Data analysis

We used partial least squares structural equation modeling (PLS-SEM) to analyze the data. PLS-SEM is capable of handling both reflective and formative constructs and has greater statistical power in dealing with small sample sizes than traditional covariance-based SEM (Hair, Ringle, & Sarstedt, 2011). Before running PLS-SEM, we evaluated construct validity for all constructs.

#### 4.3.1 | Construct validation

For the reflective constructs, this study assessed validity and reliability in multiple ways including factor loadings, Cronbach's  $\alpha$ , and average variance extracted (AVE). As shown in Table 2, all constructs exhibit adequate validity and reliability. Specifically, the Cronbach's  $\alpha$  and composite reliability of all constructs were above the threshold of 0.7 (Fornell & Larcker, 1981). The AVE surpassed the threshold of 0.5 for all constructs (Hair et al., 2011). Following Fornell and Larcker's (1981) criterion, which requires a construct's AVE to be larger than the square of its largest correlation with any construct, all the reflective constructs perform well in discriminant validity.

For the formative measures, this study used the variance inflation factor (VIF) to test multicollinearity (Diamantopoulos & Winklhofer,

2001). As shown in Table 3, all VIF values of outer indicators were far below the threshold value of 5, and outer loadings were greater than 0.50 (Hair, Hult, Ringle, & Sarstedt, 2016). The inner VIF values of affect, instrumental belief, and self-efficacy toward cooperation are 3.009, 2.023, 3.466, respectively, all of which are lower than the threshold value of 5, indicating multicollinearity is not a concern in this study.

#### 4.3.2 | Results

After establishing the validity of all the constructs, we tested the hypotheses by examining the path coefficients in the structure model. We used a bootstrapping procedure (5,000 samples) to evaluate the significance of the paths (Garson, 2016). Table 4 presents the model results and demonstrates the mediating effects of the appraisal factors. This study adopted the Bontis, Booker, and Serenko (2007) approach to test for mediation. First, goal intention showed a significant direct effect on cooperation ( $\beta = 0.318$ ,  $t = 2.739$ ). Second, when we included self-efficacy, instrumental belief and affect as mediators into the model, the relationship between goal intention, and cooperation became nonsignificant ( $\beta = 0.088$ ,  $t = 1.147$ ). However, goal intention had a significant effect on self-efficacy, instrumental belief, and affect ( $\beta = 0.307$ ,  $t = 3.222$ ;

**TABLE 2** Reflective measurements

	Mean	SD	Loadings	AVE	CR	Alpha
Goal intention (reflective, Wave 1)				0.777	0.913	0.856
I am planning to achieve the goal.	6.263	1.223	0.837			
I will make an effort to achieve the goal.	6.497	0.856	0.912			
I intend to achieve the goal.	6.479	0.891	0.894			
Goal attainment (reflective, Wave 2)				0.910	0.968	0.950
I did very well in achieving debt reduction during the last three months.	5.443	1.934	0.941			
I feel successful in improving my financial condition during the last 3 months.	5.365	1.937	0.961			
Given my effort, I am satisfied with the progress I made during the last 3 months.	5.485	1.833	0.959			

**TABLE 3** Formative measurements

Construct	Affect (W1)			Self-efficacy (W1)			Instrumental belief (W1)			Cooperation (W2)				
	Question	VIF	Loadings	Weights	How confident are you that you can successfully perform each of the same tasks?	VIF	Loadings	Weights	How much do you believe that performing each of these same tasks can help you achieve your goal concerning your debt?	VIF	Loadings	Weights	To achieve your goal of debt reduction, how frequently did you perform each of the following tasks?	
1. Budgeting on regular basis		3.431	0.730	0.181	2.918	0.708	0.059	0.375	2.508	0.772	0.375	1.946	0.632	0.106
2. Tracking your monthly expenses		2.952	0.632	0.137	2.650	0.680	0.198	-0.127	2.826	0.694	-0.127	2.022	0.655	0.167
3. Saving money for the future on a regular basis		1.379	0.624	0.207	1.266	0.536	0.123	0.249	1.642	0.730	0.249	1.205	0.524	0.151
4. Carefully reading statements from banks and credit card companies		1.553	0.642	0.082	1.716	0.732	0.190	0.232	1.973	0.733	0.232	1.314	0.652	0.297
5. Stopping unnecessary purchases		1.318	0.699	0.383	1.596	0.875	0.529	0.362	1.364	0.718	0.362	1.422	0.591	0.071
6. Learning about money management		1.426	0.775	0.428	1.499	0.662	0.235	0.246	1.937	0.761	0.246	1.529	0.876	0.581

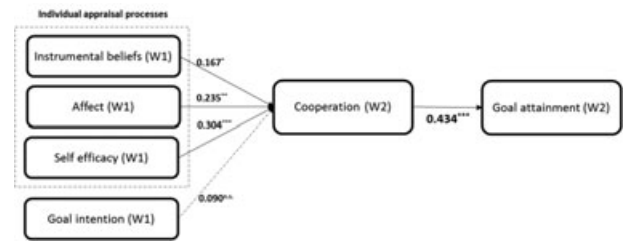
Note. VIF: variance inflation factor.



$\beta = 0.434$ ,  $t = 4.034$ ;  $\beta = 0.241$ ,  $t = 2.446$ , respectively). Third, self-efficacy, instrumental belief, and affect had a significant impact on cooperation ( $\beta = 0.305$ ,  $t = 2.361$ ;  $\beta = 0.163$ ,  $t = 1.681$ ;  $\beta = 0.234$ ,  $t = 2.007$ , respectively). Therefore, self-efficacy, instrumental belief, and affect fully mediated the relationship between goal intention and cooperation. Furthermore, cooperation behavior directly leads to goal attainment. The path coefficient from cooperation to goal attainment is 0.433 ( $t = 5.600$ ). The variances explained in cooperation and goal achievement are 0.491 and 0.220, respectively.

In conclusion, all our hypotheses are supported. The effect of goal intention on cooperation is fully mediated by appraisal process factors. There is no direct significant effect of goal intention on cooperation when appraisal process factors are present. Some relationships among goal intention, appraisals factors, and cooperation are interesting. Specifically, goal intention has a stronger effect on instrumental belief ( $\beta = 0.434$ ) than on self-efficacy ( $\beta = 0.307$ ) and affect ( $\beta = 0.241$ ). However, the pattern of the relationship strength between appraisal factors and cooperation is the opposite. The self-efficacy factor has the highest impact on cooperation behavior ( $\beta = 0.305$ ), whereas instrumental belief has the lowest impact ( $\beta = 0.163$ ). Although not hypothesized, we found that goal attainment contributed directly to customer satisfaction ( $\beta = 0.163$ ,  $t = 2.155$ ), which indicates that obtaining customers' preset goal has important implications for the service provider in term of enhancing customer satisfaction.

In addition, we tested whether the interactions among the three appraisal factors are significant in influencing customer cooperation. Different from Bagozzi et al. (1992), we did not find a significant



**FIGURE 2** The direct effects model

relationship between the three-way interaction and instrumental acts ( $t = 1.567$ ) in our research setting. The two-way interactions between self-efficacy and instrumental belief ( $t = 1.107$ ), between self-efficacy and affect ( $t = 0.227$ ), and between instrumental belief and affect ( $t = 0.059$ ) on cooperation were not significant either.

In regard to the role of appraisal in cooperation behaviors, there are two potential alternative theoretical models. One potential alternative is a direct-effect model, in which appraisal could be considered as a process independent of goal intention, and each appraisal factor along with goal intention exerts a direct effect on cooperation behavior (see Figure 2). The other alternative model is a moderation model, in which the three appraisal factors would serve as moderators, moderating the paths between intention and cooperation (see Figure 3). To exclude these alternative explanations, we ran two competing models, and the results are presented in Figures 2 and 3. In the direct-effect model, all appraisal factors including self-efficacy, instrumental belief and affect have significant effects on cooperation behavior and the path coefficients are 0.304

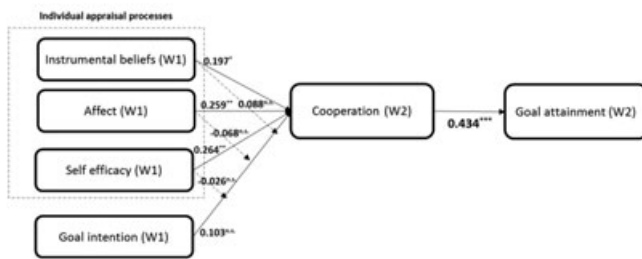
**TABLE 4** Results of the structural model

	Endogenous variables				
	Affect (W1)	Instrumental belief (W1)	Self-efficacy (W1)	Cooperation (W2)	Goal Attainment (W2)
Control variables					
Gender	0.020	0.135*	0.023	0.021	0.007
Income	-0.193***	0.043	-0.206***	-0.035	-0.005
Education	0.064	-0.123	-0.110	-0.002	-0.012
Debt_total	0.039	-0.030	0.084	0.123*	0.039
Presatisfaction	0.156*	0.250**	0.188**	0.048	0.076
Exogenous variable					
Goal Intention (W1)	0.241***	0.434***	0.307***	0.088	
Mediators					
Affect (W1)				0.234**	
Instrumental belief (W1)				0.163*	
Self-efficacy (W1)				0.305***	
Intermediary variables					
Cooperation (W2)					0.433***
$R^2$	0.153	0.340	0.226	0.491	0.220

\* $p < 0.1$ .

\*\* $p < 0.05$ .

\*\*\* $p < 0.01$ .



**FIGURE 3** The moderation effects model

( $t = 2.122$ ), 0.167 ( $t = 1.673$ ), and 0.235 ( $t = 2.472$ ), respectively. However, with the presence of appraisal factors, goal intention exerts no significant effect on cooperation ( $\beta = 0.090$ ;  $t = 1.226$ ). The variance explained in cooperation and goal achievement is 0.500 and 0.220, respectively. In the moderation model, none of the interactions between self-efficacy and goal intention ( $t = 0.214$ ), between instrumental belief and goal intention ( $t = 1.025$ ), and between affect and goal intention ( $t = 0.492$ ) were significant. The variance explained in cooperation and goal achievement is 0.506 and 0.220, respectively. Although the explained variance of the above alternative models is close to our proposed mediation model, the empirical results, especially the nonsignificant paths (i.e., the effect of goal intention on cooperation and the two-way interactions between appraisal factors), are unjustifiable and contradictory to the existing intention-behavior framework theories. As such, our originally hypothesized mediation model is the best fitting model of the data.

## 5 | CONCLUSION AND DISCUSSION

Our results show that goal intention drives customer cooperation behaviors. These effects are indirect and carried through the full mediating effect of customers' appraisals toward cooperation behaviors. These findings demonstrate the importance of the appraisal processes in customer cooperation in behavior-change programs. Specifically, appraisal toward cooperation behaviors is the proximal determinant of customer cooperation. Goal intention does not automatically lead to cooperation. Instead, the behavioral appraisal processes activate the behavior and convert intention into actual behaviors. Among the three appraisal factors, self-efficacy toward cooperation exerted the strongest effect on cooperation followed by effect toward cooperation. This finding supports Bagozzi's argument that self-efficacy appraisal is especially important in obtaining challenging goals (Bagozzi & Dholakia, 1999).

Contradictory to Bagozzi et al. (1992), we did not find the significant effect of the three-way interactions among three appraisal factors on instrumental acts (i.e., cooperation) in our research context. The inconsistent findings might be caused by the different research contexts. Our research context of cooperation in a behavior-change program is characterized by constant company-customer interactions and high demand for self-control, which is considerably different from Bagozzi's research context of coupon usage in which consumers are mainly self-motivated. Moreover, none

of the two-way interactions among the three appraisal factors on instrumental acts were significant. This result indicates that the three appraisal factors may function independently and do not necessarily interact with each other. Above all, the behavior appraisal processes might function differently in driving the goal-directed behavior in different research settings.

Consistent with Dellende et al. (2004), we found that cooperation helps customers achieve their preset program goals, which, in turn, enhance customer satisfaction with the service program. This result indicates that customer cooperation is instrumental for customers when striving to obtain their personal goals. Obtaining customers' personal goals helps to enhance both customers' personal well-being and the service program's benefits.

## 6 | IMPLICATIONS

This study contributes to research on the goal-driven behavior theory and the intention-behavior relation by shedding new light on the role of the three consumer appraisal processes in activating goal-driven behaviors. In particular, we examined three alternative theoretical explanations regarding the relationships among appraisal factors, goal intention, and instrumental acts. Instead of working side-by-side with motivation in enacting instrumental acts or moderating the relationships between motivation and instrumental acts, we found that the three appraisal factors fully mediate the relationships between goal intention and instrumental acts. These results are consistent with motivated reasoning research, which suggests that motivations bias individuals' appraisal and cognition, which in turn influences their behaviors (Agrawal & Maheswaran, 2005; Jain & Maheswaran, 2000). Above all, our findings provide new insights regarding how the three appraisal processes function in driving instrumental acts and shed new light on the gap between intention and behavior.

This study also contributes to cooperation literature in several important ways. First, diverting from the dominant social exchange view, this study establishes a goal-driven approach to studying customer cooperation. Second, this study enriches cooperation research by demonstrating the critical role played by appraisals toward cooperation in driving cooperation behaviors. Specifically, we found that the appraisal process fully mediates the effects of goal intention on customer cooperation. Finally, different from most previous studies on cooperation or more broadly customer cocreation that largely rely on cross-section surveys, this study used a two-wave longitudinal survey, which allowed us to capture the temporal relationships in the dynamic research context and test the causal relationships among factors.

Beyond the theoretical implications, this study also provides important implications for practitioners. Our results demonstrate that customers' appraisal of cooperation behaviors play a vital role in influencing cooperation behaviors. Specifically, consumers' self-efficacy, instrumental belief, and affect toward cooperation behaviors largely determine to what extent they will comply with the

service provider. Thus, in socializing customers to a behavior-change program, service providers should emphasize the three aspects and help consumers establish positive appraisal outcomes. For example, service providers need to stress the importance of being cooperative in obtaining their personal goals, thus enhancing customers' instrumental belief toward cooperation. It is important to provide customers with training and instructions regarding how to effectively conduct the required behaviors, increasing their efficacy towards the cooperation behavior. In addition, service providers need to provide constant tangible and emotional support to their participants to make their cooperation processes comfortable. These strategies are particularly important for the behavior-change programs because most cooperation behaviors (e.g., dieting in a weight-loss program or limiting credit card use in the debt management program) are challenging and unpleasant to the customers. In addition, the service provider needs to understand that helping customers achieve their preset goals is critical to the success of the service program because goal achievement will help to enhance customers' satisfaction with the service program.

## 7 | LIMITATION AND FUTURE RESEARCH

This study used a single research context along with a relatively small sample size, which limits the generalizability of the findings. Future research with a larger sample and from multiple research contexts should be conducted. This study focuses solely on the goal-driven behavior theory in studying customer cooperation. Other theoretical approaches should be used to study cooperation. This study did not find a significant relationship between the interactions of the three appraisal factors and instrumental acts (i.e., cooperation) as found in Bagozzi et al. (1992). Future research is needed to explore how the three appraisal processes interact in influencing instrumental acts and some boundary conditions might be identified. Despite the above limitations, this study contributes to the customer cooperation literature with a goal-driven behavior approach and offers new insights into the role that customer appraisal plays in enacting cooperation behaviors.

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