

The Fewer the Better: Number of Goals and Savings Behavior

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ABSTRACT

This paper examines the effect of the number of goals on consumers' saving behavior. Drawing on research on implementation intention, the authors show that under some conditions, presenting a single savings goal leads to greater savings intention and actual savings than presenting multiple savings goals. Multiple goals typically evoke tradeoffs between competing goals, and thus increase the likelihood that people remain in a deliberative mindset and defer actions. In contrast, the authors propose and demonstrate that a single goal evokes a stronger implementation intention, which in turn has a greater effect on behavior change. Further, they show that the advantage of single goal over multiple goals on saving is attenuated when saving is easier to implement, or when the multiple savings goals are integrated rather than competing among themselves. Theoretical and practical implications are discussed.

Key words: saving, implementation intention, goals, number of goals, mindset

After reading about increasing concerns that household savings rates are declining (OECD Economic Outlook, 2008) and that households need to be persuaded to save more, a hypothetical agency decides to launch a program to persuade people to save. Researchers in this agency read up on the goal literature, and learn that setting a goal motivates individuals and make them strive harder to accomplish tasks (Gollwitzer 1990; Locke and Latham 1990) and meet targets (Shefrin and Thaler 1988). Further, research also suggests that multiple goals lead to higher performance (Locke and Latham 1990), or that the greater the number of means to pursue a goal, the more likely is one to pursue on that goal (Kruglanski et al. 2002).

The researchers conduct their own independent study and discover, somewhat unsurprisingly, that there are many good reasons to save. In particular, three of the most common goals for saving include children's education, healthcare needs, and building a nest-egg for retirement. Armed with this information, as well as the insights gained in their survey of the literature, the agency decides that they should "encourage households to save in order to have enough for their children's education, healthcare and for retirement." After all, three good goals for saving should be better than one (or no) goal.

In the present research, we make the opposite prediction; namely, presenting a single savings goal leads to higher goal achievement than presenting multiple savings goals. A large number of consumers who plan to save or would like to save more are unable to do so (Thaler and Benartzi 2004). It is a well-known fact that good intentions are not always translated into actions which could easily lead to the failure of goal attainment (Baumeister 2002; Gollwitzer 1999). We propose that compared with multiple goals which evoke considerations of the tradeoffs between the goals and thus put people in a deliberative mindset, a single goal facilitates their goal-related behavior by putting them in an implemental mindset. In one field study (Study 1), we show that encouraging workers to think of one savings goal resulted in higher savings rate over a period of six months than encouraging them to think about several savings goals. Subsequently, in three laboratory experiments, we replicate this effect, and

demonstrate that this effect is driven by the implementation intention associated with a single goal by a) conducting mediation analysis in Study 2, and b) by directly manipulating implementation intention in Study 3. Further, we show an attenuated effect of single goal over multiple goals when the goal is easy to implement (Study 2), or when the multiple goals do not compete with each other and thus the goal tradeoff is reduced (Study 4). We also address and rule out alternative explanations for our effects based on more vivid imagery of single goal, diluted goal importance of multiple goals, or easier goal accomplishment for single goal.

The rest of this article is divided in three sections. First, we review relevant literature on goal systems and the effects of goals on performance to develop our theoretical framework. Second, we describe the results of one field study and three laboratory experiments designed to test our framework. Finally, we conclude with a general discussion, offer directions for future research, and discuss implications for designing programs to enhance consumer welfare.

CONCEPTUAL FRAMEWORK

Research in the area of mental accounting (Thaler 1999) sheds light on the processes that consumers might use in making spending and savings decisions. This paradigm shows that rather than optimizing their spending decisions over the long run and over their entire basket, consumers make decisions in the narrower context of specific product categories (Heath and Soll 1996; Soman 2001) called mental accounts. The central theme of this research is that the likelihood of spending and saving is different for monies that are categorized into different mental accounts. As specific examples, money budgeted to be spent on entertainment will be more likely spent on entertainment than on shopping (Heath and Soll 1996), or money earmarked as savings is more likely to be saved than money in a “spending account” (Thaler 1999). Recent research has shown that in many cases, mental accounts are derived as a function of the consumers’ goals, and that the setting up of these accounts can also help

consumers in achieving their savings goals (Soman and Ahn 2010).

Indeed, goals play an important role in different aspects of consumer life such as risk-taking behavior (Atkinson 1957), academic project completion (Gollwitzer and Brandstatter 1997), or spending and savings behavior (Shefrin and Thaler 1988; Soman and Cheema 2004). Hull (1932) suggested that goals were reinforcers that influence learning efforts and behavior through conditioning. Other research used an expectancy-value based approach and indicated that anticipation of the goals leads people to strive to achieve them (Klein 1991; Lewin 1951). Goals also enhance motivation and performance because people derive value by making perceived progress toward the goal (Soman and Shi 2003). However, despite the positive effect of goals, existing research has shown that there is often a discrepancy between the goal intention and the actual implementation of the goal (Gollwitzer 1999). People fail to adopt positive behaviors to obtain their goal because of myopia, self-control problems, perceptual errors or distributed decisions (Ainslie and Haslam 1992; Baumeister 2002; Elster 1979; Herrnstein and Prelec 1991; Schelling 1984). Visceral factors such as hunger, thirst or pain can also exert a strong “uncontrollable” effect on one’s immediate spending behavior that one can not foresee from a temporal distance (Loewenstein 1996).

Translating Goals into Actions

What needs to be done in order to help people translate their goals into actions? Prior literature has suggested a number of different strategies for motivating action. These include precommitment (Thaler and Benartzi 2004), the use of decision points (Soman, Xu, and Cheema 2010) and partitions (Cheema and Soman 2008), side-bets and contracts, and avoidance of the tempting stimulus (Hoch and Loewenstein 1991). Other strategies include turning off attention away from the concrete qualities of immediate spending temptation and focus on its abstract qualities, making social comparisons, bundling the cost of giving in to the temptation, anticipating regret and guilt, or practicing different types of

mental simulation (Ainslie 1975; Hoch and Lowenstein 1991; Zhao, Hoeffler, and Zauberman 2007).

From a different perspective, researchers on implementation intention have studied different stages that individuals go through when they make goal-related decisions (Gollwitzer 1999). They propose that goal pursuance is characterized by two separate stages: an initial stage with a deliberative mindset, in which individuals are uncertain about their goals and seek to define a desired outcome by considering the tradeoffs between the goals; and a subsequent stage with an implemental mindset in which individuals have already established the goal they wish to pursue and are considering when, where, and how to attain the goal. This stream of research has demonstrated that forming implementation intentions increases the likelihood of behavioral enactment and leads to more successful goal attainment than merely forming a goal intention across different domains and tasks such as writing a report about Christmas vacation (Gollwitzer and Brandstatter 1997) or performing medical check-ups (Orbell et al. 1997). As the underlying mechanism for these effects, implementation intention highlights the link between a critical cue and a goal-directed response and the latter becomes automatically triggered in the presence of the critical cue (Gollwitzer 1999; Gollwitzer and Sheeran 2009). Subsequently, people become more committed to the goal and are more likely to engage in action-oriented behavior toward goal attainment (Dhar, Huber, and Khan 2007; Gollwitzer 1999).

Number of Goals and Implemental Mindset

How does number of goals relate to implementation intention and people's saving behavior? Prior research on goals has studied the role of multiple goals in performance, and reported mixed findings (Locke and Latham 1990). On one hand, research shows that when people have simultaneous multiple goals, they could usually only exceed in one goal but not the other due to limitations in cognitive capacities (e.g., Erez, Gopher, and Arazi 1990). However, in most other situations goals do not have to be pursued simultaneously and they are often causally interrelated in a positive way so that

actions taken to attain one goal help rather than hinder the attainment of other goals. As a result, multiple goals greatly increase performance (Ivancevich 1977; Locke and Latham 1990, 2002).

A closer look at these studies shows that the advantage of multiple goals was shown primarily relative to the no goal condition because the former was more specific and clear whereas no goal was rather vague. When it comes to the effect of multiple goals relative to a single goal, the level of specificity would be similar for both cases and hence we believe that multiple goals might lose its advantage over a single goal, due to the implementation intention evoked by the single goal. Research has shown that implemental mindsets can be induced in different ways. Mindsets can naturally change from deliberative to implemental as people finalize what goals they want to pursue and advance from one stage of the goal-attainment process to the next (Gollwitzer 1999). Alternately, instructing people to think about the how (vs. the why) of attaining a goal can also result in a shift in mindsets (Taylor and Gollwitzer 1995). In the consumption domain, studies have also shown that simply asking people to consider which of a number of alternative products they would prefer can activate an implemental mindset, resulting in higher purchase likelihood of these focal products and even other unrelated products (Xu and Wyer 2007, 2008). In our work, we propose that presenting consumers with a single goal can also help evoke an implementation intention compared with multiple goals because multiple goals evoke tradeoffs consideration among goals which retain people in a deliberative mindset and hinder them from goal-related actions. Supporting this prediction, prior research has also shown that enhanced tradeoffs lead to action deference (e.g., Thompson, Hamilton, and Petrova 2009).

Consider two hypothetical individuals, Tom and Jerry, who have both been recently exposed to a seminar on why it is important to save. While the contents of the seminar attended by both were identical, there was one notable difference. Tom was told it was important to save because he needed to focus on several goals – the education of his children, healthcare emergencies and as a stash for a proverbial rainy day. On the other hand, the seminar that Jerry attended stressed only one goal; say

having enough for children's education. In linking the case of Tom and Jerry to the research on mindsets, we believe that when people (like Tom) have several competing goals, they might still be in a deliberative mindset. That is, they may be contemplating which of these goals should be more important and by how much, and thus are not readily able to translate the savings goals into action. In particular, because multiple goals were competing for the limited monetary recourse (e.g., every dollar people save for their children's education is a dollar they can't save for their retirement), thinking about this trade-off prevents them from moving into an implementation mindset. However, when people (like Jerry) only have one goal, they no longer need to make goal trade-offs and are more likely to move onto the second stage of the goal pursuance -- a position to think about implementing the goal. As a result, their commitment with the task at hand (i.e., saving) will be stronger and their savings intention will be higher. Formally, we hypothesize that:

H1: A single savings goal leads to higher savings intention than multiple savings goals.

H2: The effect of number of goals on savings is mediated by the evoked implementation intention.

Prior research also suggests that implementation intention has its greatest benefits in complex and difficult situations (Gollwitzer 1999; Gollwitzer and Brandstatter 1997). For example, it was found that implementation intention greatly enhanced project completion compared with goal intention for students who needed to complete difficult projects (Gollwitzer 1999). However, when the projects were easy to implement and thus action initiation was easy, implementation intention did not produce any additional advantage (Gollwitzer 1999). Accordingly, we expect that the advantage of a single savings goal over multiple savings goal on consumer saving will be the greatest in situations where the savings plan is difficult, but attenuated when the plan is easy to implement:

H3: Implementation difficulty of savings plan moderates the effect of single savings goal over multiple savings goals on consumer savings.

One of the key assumptions in our theorizing about the weaker effect of multiple goals on saving is that the competition and the tradeoffs between different savings goals impede people from getting into an implementation mindset. If the competition between goals and the resulting hindered implementation intention are true, we expect the advantage of a single goal over multiple goals to be attenuated if the multiple goals are integrated rather than competing among themselves:

H4: The extent of goal competition moderates the effect of single savings goal over multiple savings goals on consumer savings.

We next report the results of four studies conducted to test these hypotheses. The first study was a field study conducted in a rural area in India where we found that activating a single savings goal led to significantly higher actual savings rate over a six-month window than activating multiple savings goal. Studies 2 to 4 were conducted in laboratory settings to assess the underlying process and related boundary conditions. Study 2 manipulated the implementation difficulty of the savings plan and replicated the field findings when the savings plan was difficult to implement. When the savings plan was easy to implement, the advantage of single goal were attenuated. Further, study 2 confirmed the mediation role of implementation intention in this pattern of effect. In study 3, we directly manipulated implementation intention and found that the difference between single goal and multiple goals on savings intention disappeared when an implementation mindset was induced. In study 4, we replicated the effect of single goal over multiple goals with a set of different single goals, and found that the effect of a single goal did not depend what the single goal was. It was the singularity rather than the content of the specific goal that mattered. More importantly, we showed an attenuated effect of single goal over multiple goals when multiple goals were integrated to lead towards a higher-order goal. Throughout the laboratory studies, we also discuss and rule out alternative accounts such as extent of imagery, dilution effect or goal difficulty effect.

STUDY 1

The purpose of study 1 is to test the effect of single goal over multiple goals on savings behavior in a field setting. In addition, based on prior research that has shown that tactics such as earmarking (which is similar to budgeting but takes more specific form such as envelopes to separate different accounts; Shefrin and Thaler 1988; Thaler 1985) increases savings behavior, we seek to test whether such tactic would impact the effect of a single goal on saving.

Method

This field study was conducted in a small town in India. We recruited households where the sole wage earner a) worked as an agricultural or as a factory worker), b) had two children aged between 2 and 6, c) earned cash income paid every two weeks [Income range: INR 2050-3000 per two weeks] and d) agreed to participate in a basic financial literacy program offered through a financial services firm and taught by one of the authors of this article. We eliminated participants who had unusual additional financial burdens (e.g., taking care of a sick relative, paying off pawnbroker loans, or covering household expenses for extended family elsewhere). Participants were recruited in collaboration with local social workers – the social workers informed laborers and their spouses that a financial planner would spend time with each household to discuss their incomes and expenses and to help them save money. All the materials used in this study were developed in the local language.

The services of the financial planner were availed by 83 households. The financial planner, accompanied by a social worker, visited each of these families and helped them identify better money management strategies, as well as expenses that could be controlled. The current savings rate of this group, as tracked over a three month period prior to running the present study was 3.15%.

Within this basic setup, the specific instructions and interventions provided to households varied according to a 1 [Control] + [2 (Number of Goals: Single vs. Multiple) x 2 (Envelopes: Provided or Not)]. Except in the control conditions, participating households were told that it is helpful to have specific goal(s) in mind while saving. In the single-goal conditions, participants were told to save more as it would help finance their children's education. In the multiple-goal conditions, they were provided with two additional savings goals – to save more in order to also finance any healthcare needs they might have, and to provide a nest-egg for when they retire. Participants in the control condition were given no specific goals at all.

To facilitate the earmarking of savings (Soman and Cheema 2011), we provided half households with a thick paper envelope to set aside cash that they wanted to designate as savings. They were specifically told that “some families have found it useful to set aside some cash from their wages in a separate location to facilitate savings.” The savings goal was further reinforced on the envelope – in the single-goal condition, the envelope had a small picture of a child while in the multiple-goal condition, there were three pictures (a child, a hospital and an old couple).

At the end of this meeting, the social worker informed the participating households that they would visit the household every two weeks to record the household's saving. Each household was provided with a sheet to record all expenses. For each of the next six months, social workers visited the 83 households, recorded spending (and saving) over the past period, recorded any changes in income frequency and level, and replenished any supplies (e.g., envelopes, recording sheets) that the household needed. At the end of the six months, we measured the total savings as a percent of the total income earned during that period as our dependent variable.

Results and discussion

A 2 (Number of Goals) x 2 (Envelopes) ANOVA showed a significant main effect of number of goals ($M_{\text{single goal}} = 9.24\%$ vs. $M_{\text{multiple goals}} = 5.79\%$; $F(1, 65) = 37.45, p < .001$) and envelopes ($M_{\text{envelopes}} = 8.46\%$ vs. $M_{\text{no envelopes}} = 6.90\%$; $F(1, 65) = 8.91, p < .005$; see Figure 1). No significant interaction was observed ($F(1, 65) = 1.90, p = .17$). Further, simple effect analysis also revealed a significantly stronger effect of single goal over multiple goals no matter whether envelopes were provided ($M_{\text{single goal}} = 10.57\%$ vs. $M_{\text{multiple goals}} = 6.21\%$; $F(1, 33) = 19.32, p < .001$) or not ($M_{\text{single goal}} = 8.04\%$ vs. $M_{\text{multiple goals}} = 5.28\%$; $F(1, 32) = 22.52, p < .001$). These results supported H1. Comparing those savings rates with the control condition, we also found that providing specific goals led to higher savings rate than providing no specific goals at all, even if the goals were multiple ($M_{\text{multiple goals}} = 5.28\%$ vs. $M_{\text{no goal}} = 3.54\%$; $t(1, 45) = 3.10, p < .005$). This is consistent with prior findings that multiple goals lead to greater performance than no goals (Locke and Latham 1990).

 Insert Figure 1 about here

The findings in study 1 supported H1, in that a single goal led to higher savings rate than multiple goals, and this pattern held regardless of whether earmarking aids (i.e., envelopes to set aside the saving) were provided. In the next three laboratory studies, we seek to replicate the results in a more controlled environment and also attempt to identify the underlying process driving these effects and rule out various alternative explanations.

STUDY 2

Study 2 was designed to test hypotheses H1 through H3 by manipulating number of goals and implementation difficulty of savings program. We had two specific objectives. First, we wanted to test whether the implementation difficulty of the savings program moderates the effect of number of goals on savings intention. Second, we sought to test for the mediating role of implementation intention in the

effect of number of goals. Further, we also addressed the question of whether the effect of a single goal might be driven by the fact that it could be imagined more concretely than multiple goals by adding a manipulation of the extent of visualization. If the difference in the extent of imagery is true, the stronger effect of single goal would be attenuated if people in the no-goal or multiple-goal conditions were prompted to visualize the savings goals.

Participants, Design, and Procedure

A total of 194 participants in an executive skills training program conducted by a Canadian university in collaboration with a financial services firm completed this study. All participants of this financial institution were a) male, b) between the ages of 30 – 36, c) were married, d) had either 1 or 2 children and e) were not considered to be expert investors. Their annual salary ranged from \$60,000 to \$86,000 (USD).

All participants were told that they would take part in two, ostensibly unrelated studies. In the first part, participants were asked to imagine that they and their spouse were about 30 years old and had two young children, and that they were the sole wage-earner in their family. They were provided with a table with their essential expenses for a typical month which totaled \$3800 (USD). Participants were told that they and their spouse had very little by way of savings, but they were now starting to look ahead. Subsequently, participants read that their financial advisors just had introduced a new savings program for them. The program required them to deposit a minimum of \$300 each month for 10 years to be invested in bonds and government securities. The guaranteed rate of return was 4% and the fund was fully backed by the government (see Appendix for details).

Within this basic set-up, we embedded a 2 (Implementation Difficulty: Easy vs. Difficult) x 2 (Visualization: No vs. Yes) x 3 (Number of Specific Goals: None vs. Single vs. Multiple) between-subjects study design. Implementation difficulty was manipulated by changing the salary, and hence the

surplus funds left over after incurring the essential expenses. In the difficult implementation conditions, participants were told that their monthly post-tax salary was \$4200 (USD), which would leave them with a discretionary amount of \$400 that they could use for shopping, entertainment, dining out or other purposes (i.e., after paying for the essential monthly expenses of \$3800). In the easy implementation conditions, their monthly post-tax salary was supposed to be \$5000, which would leave them with a discretionary amount of \$1200. Visualization was manipulated by giving participants appropriate instructions. In the visualization conditions, participants were further told to take a moment to imagine the specific goal(s) in the goal conditions and imagine this new savings program in the no goal conditions. In the no visualization conditions, participants proceeded directly to the questions.

Number of goals was manipulated through the description of the savings program and the manner in which it was presented. Participants in the no specific goal conditions first read about the program, and then read that their financial advisor left the decision to them as to whether or not they would sign up and open an account. In the single-goal conditions, participants read an extra sentence saying that the financial advisor reminded them that they were now getting to a point where they should start thinking about providing for their children's future education. In the multiple-goal conditions, the financial advisor reminded them that they were now getting to a point where they should start thinking about their future financial wellbeing, including providing for their children's education, housing expenses, retirement savings and other slush funds for emergencies.

As the dependent measures, we asked participants to indicate how likely they would be to open an account to join this program [hereafter, JOIN]. Responses were recorded on an 11-place scale [1 = Definitely No; 11 = Definitely Yes].

In the second, ostensibly unrelated part of the study, we included a measure for assessing whether participants had been primed by the first task to be in an implementation mindset. They were asked to suppose that they were looking for a new job. They were told that after searching for a while,

two positions for a same company caught their attention. Job A had the title of “Business Planning Manager” and Job B had the title of “Business Implementation Manager”. As the key differences between these two jobs, Job A’s key responsibilities included developing business plans and setting overall business goals and objectives, and the requirements were project development skill and being big-picture oriented and organized. On the contrary, Job B’s key responsibilities included carrying out business plans and identifying best practices and improvement opportunities. Its key requirements were project management skills and being detail-oriented and efficient. Both jobs were otherwise similar in terms of salary and outlook, time commitment and general requirements in terms of degree, skill and knowledge. After reading these descriptions, participants were asked to indicate their likelihood of applying to one of these jobs on a 1 (“Definitely apply to A”) to 11 (“Definitely apply to B”) point scale. We expected that a greater preference for Job B (involving the execution of business plans) would reflect a greater tendency to be in an implemental mindset.

Results and discussion

A 2 (Implementation Difficulty) x 3 (Number of Specific Goals) x 2 (Visualization) ANOVA with JOIN as the dependent variable showed a significant interaction between implementation difficulty and number of goals ($F(2, 182) = 3.73, p < .001$), as well as significant main effects of number of specific goals ($F(2, 182) = 8.08, p < .001$), implementation difficulty ($F(1, 182) = 21.97, p < .001$), and visualization ($F(1, 182) = 4.39, p < .05$). However, the interaction between visualization and number of goals ($F(2, 182) = .05, p = .95$) and the interaction between visualization and implementation difficulty ($F(1, 182) = .26, p = .61$) were not significant, nor was the three way interaction ($F(2, 182) = .70, p = .50$). This pattern of results showed that visualization simply functioned to increase the savings intention overall irrespective of the other manipulations. Given these non-significant interactions of visualization with other factors, we collapsed the two visualization conditions for ease of exposition and report a new

2 (Implementation Difficulty) x 3 (Number of Specific Goals) ANOVA as well as planned contrast below.

Savings intention. The new two-way ANOVA with JOIN as the dependent variable showed a significant main effect of implementation difficulty ($F(1, 188) = 21.97, p < .001$) and number of specific goals ($F(2, 188) = 8.08, p < .001$), which was qualified by a significant interaction between these two factors ($F(2, 188) = 3.73, p < .001$; see Figure 2). Specifically, when the savings program was difficult to implement, we replicated the stronger effect of providing single goal on participants' intention to join the new savings program, compared with providing multiple goals ($M_{\text{single goal}} = 7.65$ vs. $M_{\text{multiple goals}} = 5.36$; $F(1, 68) = 17.35, p < .001$), or no specific goal ($M_{\text{single goal}} = 7.65$ vs. $M_{\text{no goal}} = 5.32$; $F(1, 60) = 15.20, p < .001$). These results further supported H1. However, when the savings program was easy to implement, the advantage of single goal was attenuated such that it no longer led to higher intention of joining the new savings program compared with multiple goals ($M_{\text{single goal}} = 8.07$ vs. $M_{\text{multiple goals}} = 8.00$; $F(1, 64) = .02, p = .90$) or no specific goal ($M_{\text{single goal}} = 8.07$ vs. $M_{\text{no goal}} = 7.07$; $F(1, 58) = 2.34, p = .13$). This moderation of implementation difficulty on savings intention is consistent with prior research (Gollwitzer 1999; Gollwitzer and Brandstatter 1997) and provided direct support to H3.

 Insert Figure 2 about here

Implementation intention as the underlying mechanism. In terms of participants' implementation intention, the 2 (Implementation Difficulty) x 3 (Number of Specific Goal) ANOVA showed a similar pattern on participants' preference between the two job positions. We observed a significant main effect of implementation difficulty ($F(1, 188) = 6.50, p < .05$) and number of specific goals ($F(2, 188) = 9.37, p < .001$), which were qualified by a marginally significant interaction between these two factors ($F(2, 188) = 2.37, p = .09$). Consistent with the intention to join the savings program, when the savings program was difficult to implement, we found that participants in the single-goal condition indicated a

relatively higher preference towards the implementation-oriented job (Job B or Business Implementation Manager) compared with those in the multiple-goal condition ($M_{\text{single goal}} = 5.62$ vs. $M_{\text{multiple goals}} = 4.14$; $F(1, 68) = 17.77, p < .001$), or those in the no specific goal condition ($M_{\text{single goal}} = 5.62$ vs. $M_{\text{no goal}} = 4.00$; $F(1, 60) = 15.07, p < .001$). However, when the savings program was easy to implement, participants in the single-goal condition no longer had a greater preference towards the implementation-oriented job than those in the multiple-goal condition ($M_{\text{single goal}} = 5.50$ vs. $M_{\text{multiple goals}} = 4.97$; $F(1, 64) = 1.77, p = .19$) or no goal condition ($M_{\text{single goal}} = 5.50$ vs. $M_{\text{no goal}} = 5.00$; $F(1, 58) = 1.35, p = .25$).

We performed a set of additional analyses to test the potential mediating role of implementation intention (i.e., preference toward the implementation-oriented job) on the intention to join the savings program (Baron and Kenny 1986). First, the number of specific goals and implementation difficulty interactively predicted implementation intention ($F(2, 188) = 2.37, p = .09$). Second, implementation intention was significantly correlated with the savings intention ($r = .66, p < .001$). Third, the number of specific goals and implementation difficulty interactively predicted savings intention ($F(2, 188) = 3.73, p < .001$). Fourth, the effect identified in step 3 became non-significant ($F(2, 187) = 2.37, p = .10$) after implementation intention was added as a covariate ($F(1, 187) = 112.74, p < .001$) in the analysis. These analyses suggest a mediating role of implementation intention for the effect of number of goals and implementation difficulty on savings intention, consistent with the prediction in H2.

Results in study 2 provided further support for H1 and showed that a single savings goal led to higher savings intention compared with multiple savings goals (or no specific goals) when it was difficult to implement (i.e., tight discretionary income to join the savings program). However, consistent with H3 and prior research (Gollwitzer 1999; Gollwitzer and Brandstatter 1997), the advantage of single goal was attenuated when the savings plan was easy to implement (i.e., abundant discretionary income to join the savings program). Further, the mediation analysis supported H2 by showing that compared

with multiple or no goals, a single goal led to higher implementation intention which in turn increased intentions to join the savings plan.

While we found only a main effect of visualization in study 2 (i.e., the visualization manipulation increased savings overall, but the difference between the single- and multiple-goal condition persisted), we do agree with the intuition that a single goal is more easily and vividly imagined than multiple goals. In fact, the visualization manipulation could potentially have had different effects across the two goal conditions. In the multiple goal condition, visualization might have helped to some degree, but it is also likely that visualization could have boosted the effectiveness of the single goal by making it more vivid and salient. While we do not have all the evidence to make a more nuanced analysis, our evidence does suggest that the ability to visualize a single goal does not by itself explain the differences between the single- and multiple-goal conditions.

Post-test on goal importance. Study 2 tested the robustness of the field findings in a more controlled laboratory setting and provided evidence for the underlying process; however, one might argue that multiple goals might become less important because there could be some kind of averaging process by which the weaker goals work against the stronger goal (Shanteau 1975). In a post-test, we measured the importance ratings of different goals to assess whether one goal is perceived to be less important than the others. Fifty-three participants were recruited and presented with a similar scenario as that in study 2. The post-test used a four-level single factor design where the financial advisor reminded participants of either all three savings goals (Children's Future Education, Future Housing Expenses and Retirement Savings) or each of the three goals. Participants were then asked to think about the goal(s) mentioned by their financial advisor and evaluate each goal by its importance on an 11-point scale (1="Not important at all"; 11="Very important"). A repeated ANOVA in the multiple-goal condition showed no difference on the importance ratings for these three goals ($M_{\text{children's education}} = 8.00$ vs. $M_{\text{housing}} = 7.77$ vs. $M_{\text{retirement}} = 7.46$; $F(2, 24) = .29, p = .75$). These values were also not different from the rated

importance in the single-goal conditions ($M_{\text{children's education/multiple}} = 8.00$ vs. $M_{\text{children's education/single}} = 7.31$; $F(1, 24) = 1.42, p = .25$; $M_{\text{housing/multiple}} = 7.77$ vs. $M_{\text{housing/single}} = 7.69$; $F(1, 24) = .01, p = .92$; $M_{\text{retirement/multiple}} = 7.46$ vs. $M_{\text{retirement/single}} = 7.46$; $F(1, 24) = 0, p = 1.00$). This suggests that an account based on diluted goal importance in the multiple-goal conditions does not seem to drive the superiority of the single-goal condition. We further address this issue in Studies 3 and 4.

STUDY 3

This study was conducted in Hong Kong with three objectives. First, the measure of implementation intention and the mediation analysis in study 2 suggested that a single goal led to greater savings intention because it facilitated implementation intention. In study 3, we directly manipulate implementation intention orthogonally to the number of goals. If implementation intention evoked by single goal is truly the underlying mechanism for the stronger effect of single goal, we should observe an attenuation of the effect of single goal over multiple goals if we explicitly encourage implementation intention for people with multiple goals.

Second, both studies 1 and 2 used children's education as the single goal. Since the future of children tends to be a topic of special relevance to most parents, it is conceivable that the effects were driven by the affect associated with this particular goal rather than its singularity. Had we used another specific single goal, it would be uncertain whether the same effect would be obtained. In the present study, we used a different single goal (retirement savings) to check for robustness of the effect.

Third, Study 3 was designed to rule out two competing explanations. One alternative explanation of our effect might be that a single goal leads to higher savings intention because it seems easier to achieve than multiple goals which seem overwhelming and thus demotivating. We argue that it is not the difficulty of goal accomplishment in the multiple-goal conditions, but rather the tradeoff aversion due to the goal competition that defers people's actions. Study 3 addresses the difficulty account by showing

that goals with the same level of accomplishment difficulty (e.g., multiple goals) have different effects depending on people's mindset, which eliminates the possibility that difficulty level of goal accomplishment drives the results in our data. Lastly, we further address the account based on diluted goal importance.

Participants, Design, and Procedure

A total of 134 adult heads of households who were members of a market research panel in Hong Kong participated in this study. Participants were all working professionals with school aged children and were all in the same income range. The stimulus in this study was adapted from the scenario in the difficult-to-implement conditions of study 2 with amounts adjusted to reflect the local currency, cost of living and the income levels (i.e., discretionary amount of HKD \$4000 per month). Because the scenarios used in study 2 might have involved too many counterfactual scenarios with too many details of the savings program, we simplified the scenario and eliminated most details in order to increase the validity of the responses in study 3 (see Appendix for the stimuli).

Study 3 used a 2 (Number of goal: Multiple vs. Single) x 3 (Mindset: Control vs. Goal Intention vs. Implementation Intention) between-subjects design. Similar to study 2, the financial advisor in the multiple-goal conditions reminded participants that they were now getting to a point where they should start thinking about their future financial wellbeing and develop a suitable strategy to provide benefits such as their children's education, housing expenses, retirement savings and other funds for emergencies. In the single-goal conditions, the financial advisor only reminded the participants of one goal only, namely retirement savings.

Mindset was manipulated through specific instructions that directly asked people to think about the "how" vs. "why" of the savings program (Gollwitzer 1999). In the control conditions, participants did not receive additional instructions and answered questions directly. In the goal intention conditions

where we wanted participants to deliberate about their goals, we asked participants to consider the importance of joining this savings program - for example, the benefits associated with their future financial wellbeing. In the implementation intention conditions where we wanted participants to think about implementing the savings goal, we asked participants to consider the details of joining this savings program - for example, whether to invest in bonds or government securities, or whether to make a monthly or bi-weekly contribution (see Appendix for the instructions).

The main dependent variables again included respondent's likelihood of opening an account to join the savings program [hereafter, JOIN, 1 = Definitely No; 11 = Definitely Yes]. Participants were asked to rate the importance of the overall future financial well-being and the importance to start saving for the overall future financial well-being. Subsequently, they rated how easy/difficult they thought it was for them to join this savings program, and how easy/difficult they thought it was to achieve the savings goal(s) mentioned by their financial advisor. All responses were on 11 point scales.

Results and discussion

Savings intention. A 2 (Number of Goal) x 3 (Mindset) ANOVA on JOIN showed a significant main effect of number of goal ($F(1, 128) = 10.73, p = .001$) and mindset ($F(2, 128) = 3.46, p < .05$) on participants' savings intention. These effects were qualified by a significant 2-way interaction between those two factors ($F(2, 128) = 4.12, p < .05$) (see Figure 3). In the control conditions, we replicated earlier findings that a single goal led to a significantly higher intention to join the new savings program than multiple goals ($M_{\text{single goal}} = 6.43$ vs. $M_{\text{multiple goals}} = 4.57; F(1, 40) = 6.76, p < .05$). Likewise, in the goal-intention conditions a single goal outperformed multiple goals ($M_{\text{single goal}} = 7.16$ vs. $M_{\text{multiple goals}} = 4.64; F(1, 45) = 13.83, p = .001$). However, when participants were prompted with implementation intention by considering the details of joining the savings program, the single goal no longer led to higher savings intention than multiple goals ($M_{\text{single goal}} = 6.68$ vs. $M_{\text{multiple goals}} = 6.95; F(1, 43) = .12, p =$

.73). These results lend support to the notion that a single goal is superior because it induces an implementation intention.

 Insert figure 3 about here

Goal importance and difficulty of goal achievement. ANOVAs for the perceived importance of overall future financial well-being and the importance of starting to save for future financial well-being showed no significant effects (p 's > 0.20 for all main effects and interactions; see table 1 for means in different conditions). This again ruled out the dilution account and showed that the different effect of single goal vs. multiple goals on savings intention was not due to reduced goal importance perception in the multiple-goal conditions. Further, additional ANOVAs for the perceived difficulty of joining the savings program, and more importantly, the perceived difficulty of achieving the saving goals showed no significant effects (all p 's > 0.25; see table 1 for means). Thus, our manipulation of one versus many goals did not affect the perceived difficulty of joining the saving or achieving the savings goal, and thus the different effect of one vs. multiple goals cannot be attributed to these perceived difficulties of saving.

Study 3 used a different specific goal as the single goal and confirmed that the stronger effect of single goal we observed in studies 1 and 2 was not due to the specific savings example we provided (i.e. saving for children's future education). These results provided additional evidence to our H1. Further, while we measured people's implementation intention and tested its mediating role in study 2, we directly manipulated people's mindset by either prompting a goal intention or implementation intention in study 3. If implementation intention is truly the key underlying mechanism for the stronger effect of single goal over multiple goals, this advantage should be attenuated if multiple goals are also accompanied with implementation intention. This is exactly what we found in the present study. The direct measures on overall goal importance ruled out the dilution account. Further, along with the measures on perceived difficulty of goal accomplishment, the fact that the same number of goals (thus

the exactly same level of accomplishment difficulty) had a different impact on savings intention depending on the mindset provided indirect evidence to rule out goal difficulty account.

STUDY 4

Study 3 manipulated implementation intention and switched off the effect of single goal when people with multiple goals adopted an implementation intention via other means. Because our premise under the stronger effect of single goal over multiple goals is that multiple goals evoke considerations of the goal tradeoffs which impede people from moving into an implementation mindset, we believe that the advantage of single goal over multiple goals will weaken in situations where the multiple goals do not involve much trade-off and conflict. In study 4, we directly compared competing multiple goals with integrated multiple goals to test H4. Also, to further examine whether it is a specific single goal or the singularity of the goal that drives the effect of single goal, we used different single goals in study 4. To further rule out the dilution account and difficulty account, we again included measures of overall goal importance and difficulty of achieving the savings goal. Lastly, to provide additional support to our account based on implementation mindset, we measured participants' implementation intention.

Participants, Design, and Procedure

A total of 149 participants who were members of a market research panel study in India completed this study. Participants were all working professionals with school age children and in a comparable income range. The scenario used in study 4 was based on the one used in study 3 with adjustments made for local currency and income levels of the participant pool (see Appendix for the stimuli).

Study 4 used a six-level single factor between-subjects design. We used three single-goal conditions, each of which reminded participants of children's education, housing or retirement savings.

We used three multiple-goal conditions, each of which presented the participant with all the three goals described above with some additional instructions.

- a) Multiple / Control: This was the same as the control condition in study 3 such that the financial advisor reminded them of all three goals (i.e., children’s education, future housing and retirement savings).
- b) Multiple / Competing: The financial advisor further notes that “*one of the challenges consumer face is that different savings goals ‘compete’ with each other. For example every dollar you save for retirement is a dollar you can’t save for your children’s education or for future housing.*”
- c) Multiple / Integrated: The financial advisor further notes that “*although it can seem like different savings goals ‘compete’ with each other, the fact is that they all serve toward your overall goal of achieving future financial well-being.*”

This manipulation of goal competition was based on the theory on mental accounting that people might mentally allocate different money in different accounts (Thaler 1999), and our intention in the integrated condition was to reframe the multiple mental accounts as a single account.

After reading these scenarios, participants were first asked whether they would like to open an account and join this program (Yes or No). Next, they were asked to indicate how likely they would be to open an account to join the savings program based on an 11-point scale. For those participants who decided to join the program, they were also asked to indicate the minimum savings amount that they would put into this savings account every month. Further, participants were asked to rate the importance of the overall future financial well-being and the importance to start saving for each of the goal(s) mentioned by their financial advisor. Subsequently, they rated how easy/difficult they thought it was to achieve the savings goal(s) mentioned by their financial advisor, and how likely they thought it is for them to achieve those goals. As manipulation checks for participants’ consideration of goal competition,

we asked participants to rate the extent to which they were thinking about a) saving for different usage purposes, b) competing savings purposes, and c) the overall savings goal without worrying about specific purposes. All responses were on 11-point scales.

In order to measure participants' implementation intention, we adopted the computer-choice question from Xu and Wyer (2007). Participants were asked to imagine that they were looking to purchase a computer and provided with the descriptions of two alternatives. They were asked to either choose one of the two or defer making a choice. We predicted that participants in the single-goal condition and integrated-multiple-goal condition would be more likely to choose one of the two computers instead of deferring their choice than those in the multiple-goal/control and multiple-goal/competing conditions.

Results and discussion

Manipulation checks for perceived goal competition. We found significant effects of the extent that participants considered 1) saving for different usages ($F(5, 143) = 3.75, p < .005$) and 2) competing savings purposes ($F(5, 143) = 32.52, p < .001$). Further contrast tests showed that participants in the multiple/control condition and multiple/competing conditions thought more about different savings usages than participants in the multiple/integrated and single conditions (average Ms = 6.30 vs. 5.06), and those in the former two conditions also thought more about competing savings purposes than the latter two conditions (average Ms = 7.73 vs. 4.49). We also observe a significant difference on the extent participants thought about the overall savings goal without worrying about specific purposes ($F(5, 143) = 3.94, p < .005$). Participants in the multiple/integrated condition thought about the overall savings goal significantly more than the other three conditions (average Ms = 7.29 vs. 5.68). Our manipulation of competing vs. integrated goals was therefore successful.

For our main measures, we first conducted separate tests for the three single-goal conditions. A chi-square test on the binary choice of joining showed no significant differences ($M_{\text{single/children's education}} = 77\%$ vs. $M_{\text{single/future housing}} = 77\%$ vs. $M_{\text{single/retirement savings}} = 75\%$; $\chi^2(2) = .02, p = .99$). One-way ANOVAs also confirmed that there was no difference in relative likelihood to join the program ($M_{\text{single/children's education}} = 7.46$ vs. $M_{\text{single/future housing}} = 7.00$ vs. $M_{\text{single/retirement savings}} = 7.58$; $F(2, 35) = .45, p = .64$), or minimum monthly deposit ($M_{\text{single/children's education}} = \125.77 vs. $M_{\text{single/future housing}} = \111.62 vs. $M_{\text{single/retirement savings}} = \69.58 ; $F(2, 35) = .54, p = .59$) across the three single-goal conditions. Thus, we collapsed the three single-goal conditions and conducted our analysis based on a four-level (number of goals: single, multiple/control, multiple /competing, and multiple/integrated) between-subject design.

Binary choice and relative likelihood of joining the savings program. An overall chi-square analysis showed a significant difference across conditions for participants' choice of joining the savings program ($\chi^2(3) = 39.05, p < .001$; see Figure 4A). We found that more participants in the single-goal chose to join this program than in the multiple/control condition ($M_{\text{single}} = 76\%$ vs. $M_{\text{multiple/control}} = 21\%$; $\chi^2(1) = 23.23, p < .001$). However, in the conditions with multiple goals, significantly more people would like to join the program if the goals were framed as integrated ($M_{\text{multiple/integrated}} = 66\%$ vs. $M_{\text{multiple/control}} = 21\%$; $\chi^2(1) = 39.05, p < .001$), which was no longer different from the single/control condition ($M_{\text{multiple/integrated}} = 66\%$ vs. $M_{\text{single}} = 76\%$; $\chi^2(1) = 1.02, p = .31$). If the competition was explicitly noted, percentage of people who would like to join the program did not change relative to the control condition ($M_{\text{multiple/competing}} = 20\%$ vs. $M_{\text{multiple/control}} = 21\%$; $\chi^2(1) = .01, p = .91$). This is consistent with our theorizing that people naturally think about the competition among the goals when facing multiple savings goals. Participants' relative likelihood of joining the program on the continuous scale completely replicated the patterns of binary choice ($F(3, 145) = 25.04, p < .001$; see Figure 4B).

Minimum monthly deposit. We coded the monthly deposit amount of those people who chose not to join the savings program as \$0 and ran an overall ANOVA on monthly deposit. The result showed a

significant difference across conditions ($F(3, 145) = 7.30, p < .001$; see Figure 4C). Participants in the single-goal condition indicated a significantly higher number than in the multiple-goal/control condition ($M_{\text{single}} = \$103.18$ vs. $M_{\text{multiple/control}} = \23.02 ; $F(1, 74) = 10.12, p < .005$). However, if the multiple goals became integrated, people were willing to deposit a significantly higher amount ($M_{\text{multiple/integrated}} = \96.40 vs. $M_{\text{multiple/control}} = \23.02 ; $F(1, 74) = 10.54, p < .005$), which was no longer different from the single-goal condition ($M_{\text{multiple/integrated}} = \96.40 vs. $M_{\text{single}} = \$103.18$; $F(1, 74) = .05, p = .82$). In the multiple-goal condition with specified competition, the minimum monthly deposit did not differ from its control condition ($M_{\text{multiple/competing}} = \20.14 vs. $M_{\text{multiple/control}} = \23.02 ; $F(1, 75) = .04, p = .85$).

 Insert Figures 4A, 4B and 4C about here

Goal importance and difficulty of goal achievement. The ANOVA for the perceived importance of the overall future financial well-being showed no significant effect across the four conditions ($F(3, 145) = 1.07, p = .37$). In terms of the importance of each specific goal, there was no difference for the importance of children's education ($F(3, 120) = .98, p = .41$) and retirement savings ($F(3, 119) = 1.19, p = .32$; see table 2 for means) across the four conditions. We observed a difference for the importance of future housing ($F(3, 120) = 3.69, p < .05$), however, a closer look suggested that the difference was attributed to a lower importance rating in the single-goal condition compared with the three multiple-goal conditions (average $M_{\text{single}} = 6.15$ vs. $M_{\text{multiple}} = 7.74$). That the importance ratings in the single-goal condition were either the same as or even lower than in the multiple-goal conditions, yet a single goal still led to significantly higher savings intention and minimum deposit amount than multiple goals showed that the effect of single goal cannot be due to its higher perceived goal importance. No difference was found in terms of the perceived difficulty of joining the savings program ($F(3, 145) = .38, p = .77$), and the likelihood of achieving the saving goals across conditions ($F(3, 145) = .91, p = .44$; see table 2 for means). This indicated that our manipulation of number of goals did not affect the

perceived difficulty of joining the saving or likelihood of achieving the savings goal, and thus the different effect of single vs. multiple goals cannot be attributed to perceived difficulties of savings goals.

Implementation intention (Computer choice). Participants' computer choice showed a significant difference across conditions ($\chi^2(3) = 27.85, p < .001$). Supporting our prediction that single goal led to higher implementation intention and action orientation, we found that more participants in the single condition chose a computer (rather than deferring the choice) than in the multiple/control condition ($M_{\text{single}} = 84\%$ vs. $M_{\text{multiple/control}} = 42\%$; $\chi^2(1) = 14.48, p < .001$). However, if the multiple goals were integrated, it significantly increased percentage of people choosing a computer ($M_{\text{multiple/integrated}} = 79\%$ vs. $M_{\text{multiple/control}} = 42\%$; $\chi^2(1) = 10.79, p < .001$), which was no longer different from the single-goal condition ($M_{\text{multiple/integrated}} = 79\%$ vs. $M_{\text{single}} = 84\%$; $\chi^2(1) = .35, p = .55$). If the goals were competing, percentage of people who made a computer choice did not change compared with the control condition ($M_{\text{multiple/competing}} = 37\%$ vs. $M_{\text{multiple/control}} = 42\%$; $\chi^2(1) = .19, p = .67$). These findings confirmed the prediction that single goal facilitated an implementation mindset whereas multiple goals impede people from moving into such an action-oriented mindset because of the goal competition and trade-off considerations for the multiple goals. However, once we eliminate the competition among the multiple goals, the hurdle to the implementation mindset is removed, and multiple goals become as effective as a single goal.

Study 4 used different single goals and the results replicated the advantage of single goal on savings intention while ruling out the explanation that the effect was due to a specific goal. More importantly, study 4 manipulated goal competition and showed that when the goals did not involve competition and thus the tradeoff was not an issue, the effect of single goal over multiple goals was attenuated, providing evidence to H4. This also confirmed our assumption that it is the competition and tradeoff between goals in the multiple-goal conditions that prevent people from moving into implementation mindset. Once the tradeoff among multiple goals was weakened, the disadvantage of

multiple goals was attenuated. Participants' implementation intention measure fully replicated the findings in savings intention, which provided additional (indirect) support to H2 that it was the implementation intention that drove the effect of single goal vs. multiple goals. In addition, the direct measures on overall goal importance and goal difficulty again ruled out the dilution and goal difficulty accounts.

GENERAL DISCUSSION

One common strategy to encourage individuals to save is to bombard them with multiple reasons to save. For instance, household financial advice websites often emphasize multiple reasons – for instance, “9 reasons to save money” (see <http://www.bankrate.com/brm/news/sav/2006savmg/criticala1.asp>) or the “Seven most important reasons to save.” (See <http://moneyfor20s.about.com/od/reasonsandwaystosave/tp/Top-7-Reasons-to-Save-Money.htm>). The underlying assumption for this strategy is the belief that when faced with several good saving goals, individuals are more likely to save. In our research, we show that such a strategy can backfire and that a single savings goal can actually result in an increased savings rate than multiple savings goals. Specifically, drawing on the implementation intention literature (Gollwitzer 1999), we argue that multiple goals activate a more deliberative mindset due to the trade-off consideration between different goals whereas a single goal prompts an implemental mindset which leads to greater action engagement and higher savings.

Results from four studies provide evidence for our theorizing. Study 1 demonstrated the effect of providing a single goal over multiple goals in improving people's actual savings rate over six months in a rural area in India. Studies 2 - 4 replicated these basic effects in laboratory settings while providing additional support to the underlying mechanism. Specifically, the mediation analysis in study 2 showed that a single goal indeed led to higher implementation intention, which in turn resulted in stronger

intention to save. Study 2 showed that the advantage of single goal over multiple goals was stronger when the savings program was difficult to implement, and this advantage was attenuated when the program was easy to implement (Gollwitzer 1999; Gollwitzer and Brandstatter 1997). In study 3, we directly manipulated implementation intention and found that the stronger effect of single goal on savings intention over multiple goals went away when participants were explicitly asked to form implementation intentions in the multiple-goal condition. These findings suggest that the key reason for the effect of single goal is the implementation intention it activates. In study 4, we showed that the effect of single goal over multiple goals on savings intention and implementation intention was attenuated once the goal trade-off and thus the hurdle to implementation mindset was eliminated. We ruled out more vivid imagery of a single savings goal as an alternative explanation in study 2, and ruled out accounts based on diluted importance and difficulty of goal accomplishment in studies 3 and 4. In addition, studies 3 and 4 also showed that the effect of a single goal is not because of the content of a specific goal, but rather its singularity. These findings offer novel insights to designers of savings products and to policy-makers interested in encouraging consumer saving.

It is noteworthy that in our study 2, we showed that the effect of single goal over multiple goals is dependent on the implementation difficulty of the savings program (i.e., having tight vs. abundant budget to join the savings program), such that it is stronger for a goal that is difficult to implement and weakened for a goal that is easy to implement. However, we also argue that ease of accomplishing the goal is not the underlying mechanism for the effect of single goals. While this might appear conflicting at the first sight, we wish to emphasize that we differentiate between two types of goal difficulty in our studies: implementation difficulty (e.g., how ease or difficult to join the savings program) vs. accomplishment difficulty (how easy or difficult to accomplish the ultimate goals mentioned by the financial advisor). Given they are two different constructs, the moderating role of implementation

difficulty does not qualify the conjecture that the effect of single goal is due to the perceived ease of accomplishment of the goal(s), which is supported by our findings in studies 3 and 4.

Contribution and Future Research

Existing research on consumers' financial decision-making has examined the impact of different factors on consumers' financial decision including the effect of mental accounting, payment mechanisms, earmarking on consumer spending and saving (Prelec and Loewenstein 1998; Soman 2001; Thaler 1999), or the effect of temporal separation between payments and consumption on consumer decision (Gourville and Soman 1998). We add to this stream of research by demonstrating another way to increase savings behaviour/intention -- limiting the number of savings goals to evoke an implementation mindset which leads to higher savings behaviour/intention.

From a broader perspective, a large amount of research has been devoted to resolve the discrepancy between a good goal intention and the actual implementation of the goal, and suggested strategies such as precommitment, partitions, avoidance of the tempting stimuli or mental simulation (Cheema and Soman 2008; Hoch and Loewenstein 1991; Thaler and Benartzi 2004; Zhao et al. 2007). Our findings contribute to this goal literature by proposing a novel approach to facilitate goal attainment, namely through the identification and highlighting of one single goal rather than multiple goals because the former facilitates an implementation mindset. In this sense, we also add to the implementation literature by showing that beyond explicitly instructing people to form an implementation intention (Gollwitzer 1999), or prompting a precedent choice (Xu and Wyer 2007), an implementation mindset can also be achieved through number of goals presented.

Our work provided interesting findings regarding the effect of number of goals in saving behaviour. This extends prior research with mixed findings on the effect of multiple goals (Locke and Latham 1990). Although multiple goals were found to be more effective, these previous findings were

mostly based on the comparison between multiple goals and no goals because multiple goals were more specific than no goals (Locke and Latham 1990). We explicitly compare multiple goals with single goal and show a stronger effect of single goal over multiple goals. At the first sight, this may seem contradictory to the findings in the attitude literature regarding the strong effect of presenting multiple argument of using a product. For example, according to ELM, attitude change occurs either through the central or peripheral route (Petty and Cacioppo 1984). Regardless of which route is activated, a higher number of arguments should lead to more positive product evaluation or attitude toward an object. We believe the reason for the different findings in our research could be because of the difference between behaviour intention and general attitude, or the relationship between the arguments (integrated or conflicting). An extensive comparison of attitude and behaviour intention is beyond the scope of the current research. However, future research could fruitfully study why the number of arguments has a different effect for attitude and behaviour, and how conscious information processing (ELM) vs. automatic activation of behaviour intentions (due to a single goal) might play a role in these effects.

In addition, while our current research domain is consumers saving, future research could investigate whether these principles also apply to non-savings behaviour such as going to the gym, participating in health or weight loss programs, or even getting tasks accomplished.

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FIGURE 1: STUDY 1 RESULTS

SINGLE GOAL LEADS TO HIGHER SAVINGS RATE

OVER SIX MONTHS COMPARED WITH MULTIPLE GOALS

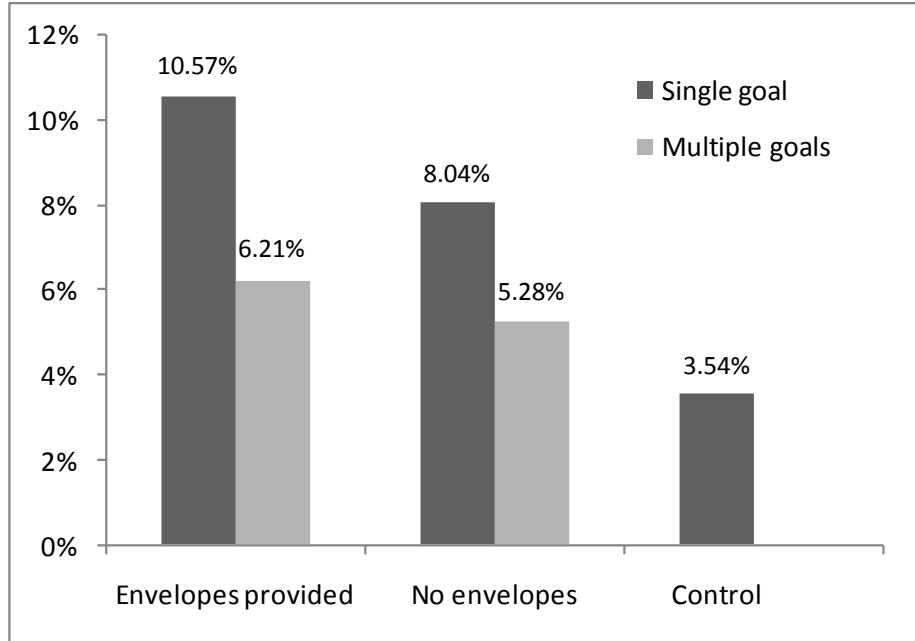


FIGURE 2: STUDY 2 RESULTS

**IMPLEMENTATION DIFFICULTY MODERATES THE EFFECT OF SINGLE GOAL
OVER MULTIPLE GOALS ON SAVINGS INTENTION**

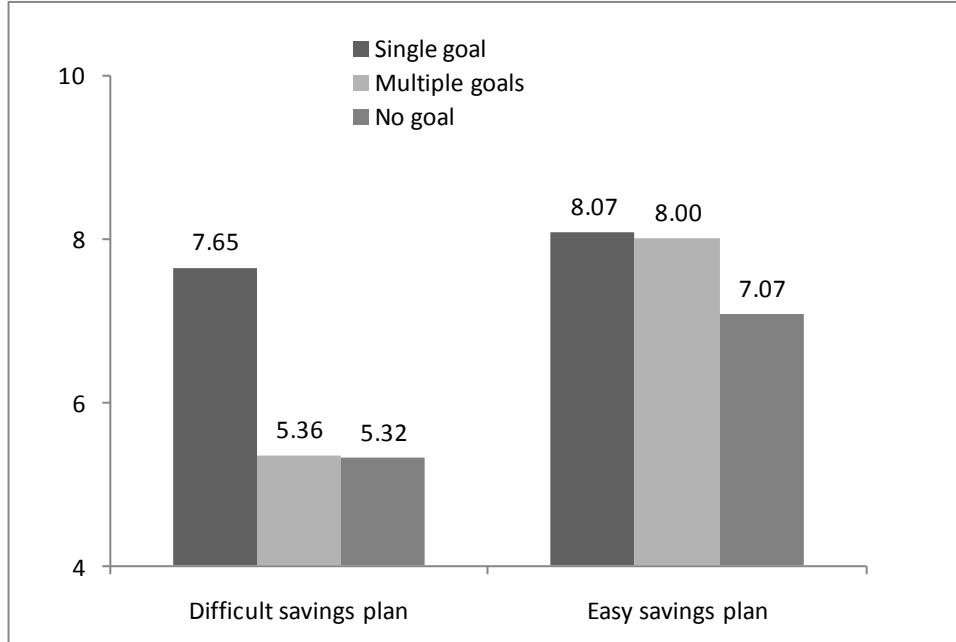


FIGURE 3: STUDY 3 RESULTS

THE EFFECT OF SINGLE GOAL OVER MULTIPLE GOALS ON SAVINGS INTENTION VANISHES IF IMPLEMENTATION INTENTION IS PROMPTED

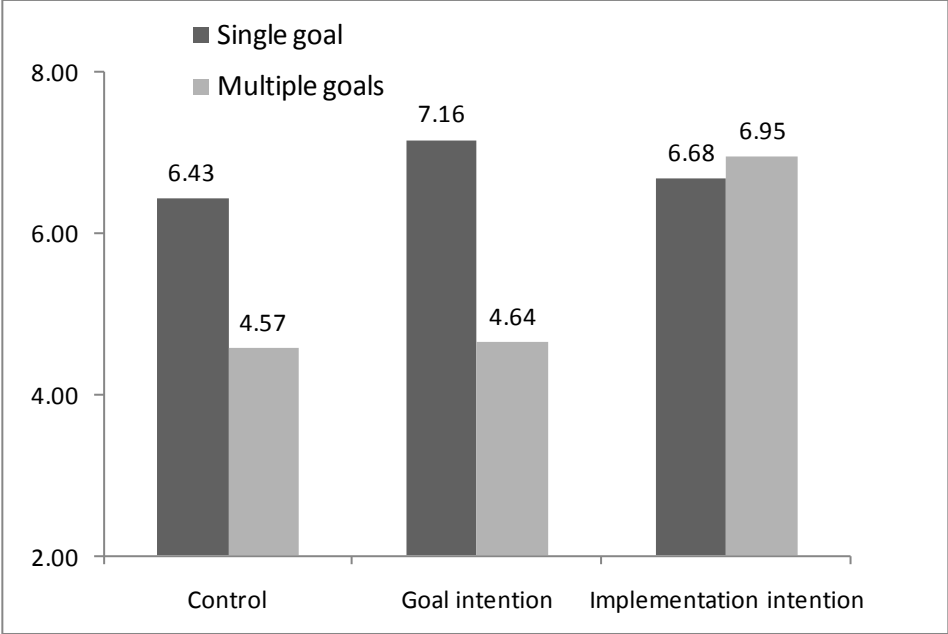


FIGURE 4A: STUDY 4 RESULTS

PERCENTAGE OF PEOPLE JOINING THE SAVINGS PROGRAM

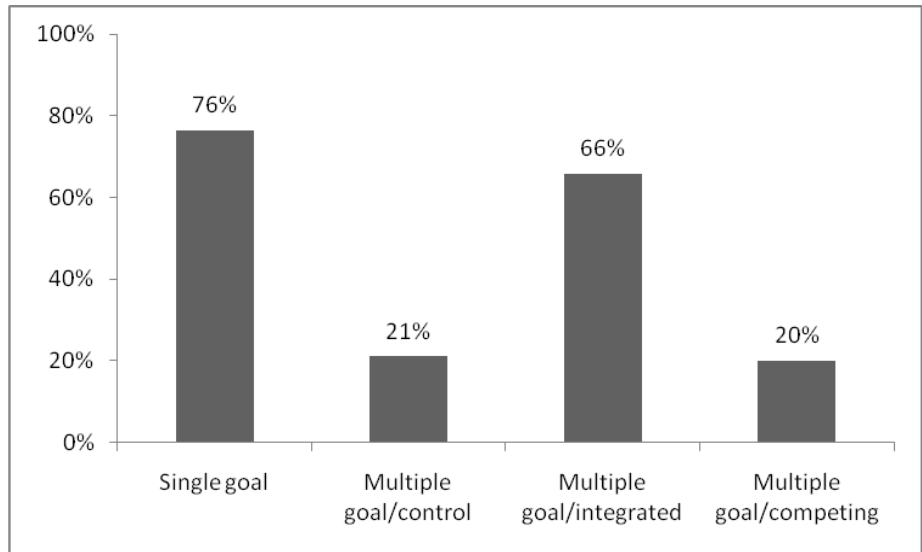


FIGURE 4B: STUDY 4 RESULTS

SAVINGS INTENTION

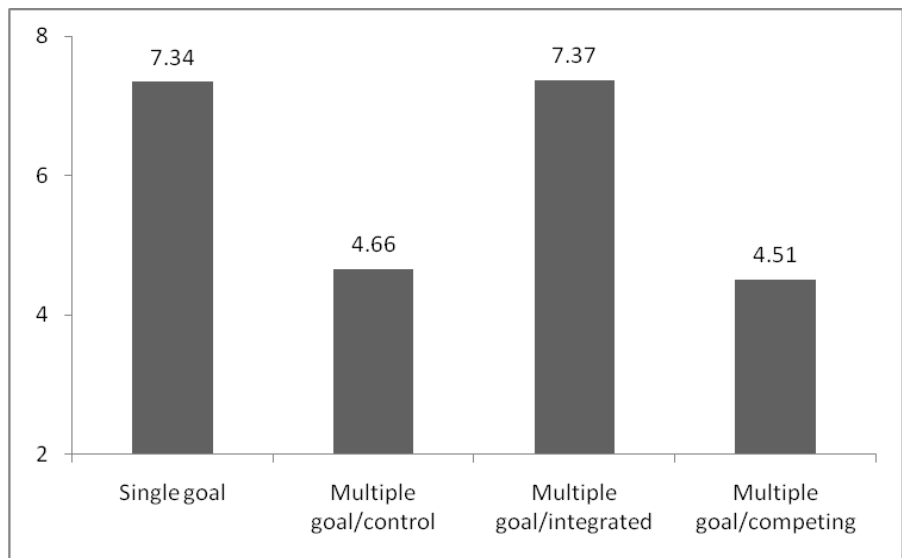


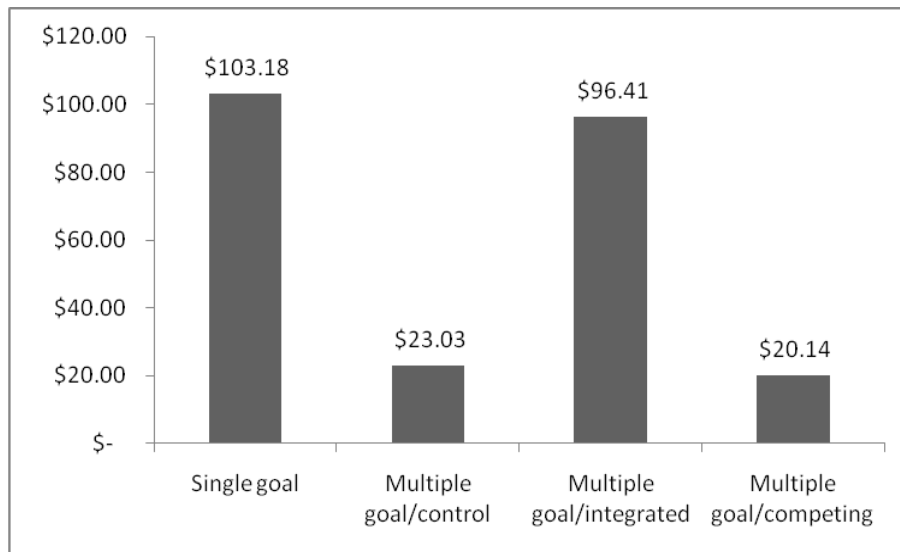
FIGURE 4C: STUDY 4 RESULTS**MINIMUM MONTHLY DEPOSIT**

TABLE 1: STUDY 3 MEANS FOR PERCEIVED IMPORTANCE AND DIFFICULTY

	Control		Goal intention		Implementation intention	
	Single	Multiple	Single	Multiple	Single	Multiple
Importance of future financial well-being (1 = Not important; 11 = Very important)	7.76	7.48	7.68	8.10	8.00	7.40
Importance of starting to save (1 = Not important; 11 = Very important)	7.10	8.00	7.32	7.97	7.56	7.35
Difficulty of joining the program (1 = Very easy; 11 = Very difficult)	8.57	7.86	8.05	8.14	8.64	7.65
Difficulty of achieving the savings goal(s) (1 = Very easy; 11 = Very difficult)	8.29	7.95	7.84	7.79	7.56	8.25

Note: No significant simple effects were observed for each measure across different conditions.

TABLE 2: STUDY 4 MEANS FOR PERCEIVED IMPORTANCE AND DIFFICULTY

	Single goal	Multiple /control	Multiple /integrated	Multiple /competing
Importance of overall financial well-being (1 = Not important; 11 = Very important)	6.87	7.45	7.34	7.51
Importance of children's education (1 = Not important; 11 = Very important)	7.92	7.37	7.47	8.03
Importance of future housing (1 = Not important; 11 = Very important)	6.15	7.71	7.50	8.00
Importance of retirement savings (1 = Not important; 11 = Very important)	7.00	7.71	7.08	7.23
Difficulty of joining the program (1 = Very easy; 11 = Very difficult)	4.97	5.32	5.08	4.94
Likelihood of achieving the savings goal(s) (1 = Not at all; 11 = Very likely)	7.47	6.97	6.97	6.83

Note: No significant simple effects were observed for each measure across different conditions.

APPENDIX

STIMULI FOR STUDY 2:

Imagine that you and your spouse are about 30 years old and have two young children. Your monthly post-tax salary is \$4200 [\$5000], you are the sole earner in your family, and your essential expenses for a typical month are as follows:

Category	Monthly expense
Childcare	\$600
Apartment Rental (all utilities inclusive)	\$1,800
Transportation and cell phone	\$400
Groceries	\$800
Other bills	\$200

This leaves you with a discretionary amount of \$400 [\$1200] per month which you can use for shopping, entertainment, dining out or other purposes. You and your spouse have very little by way of savings, but you are now starting to look ahead.

Your financial advisor just has introduced a new savings program to you. The program requires you to deposit a fixed amount each month for 10 years, to be invested in bonds and government securities. Below are the key features of this program:

Features	Specification
Fully backed by the government	Yes
Guaranteed rate of return	4%
Maturity	10 years after the account creation
Minimum monthly deposit	\$300

Your advisor leaves the decision to you as to whether or not you would sign up and open an account. However, he does remind you that you are now getting to a point where you should start thinking about providing for your children's future education [thinking about your future financial wellbeing, including providing for your children's education, housing expenses, retirement savings and other slush funds for emergencies].

Note: Currency is in US Dollar in this study.

STIMULI FOR STUDY 3:

Suppose you have a job with reasonable payment which gives you a monthly discretionary income of about \$4000 after necessary expenses such as rent, supermarket food bills and utilities. You have very little by way of savings, but you are now starting to look ahead.

Your financial advisor just has introduced a new savings program to you. The program requires you to deposit a fixed amount regularly for 10 years to be invested in bonds and certificates of deposits with a guaranteed rate of return of 4%.

Your advisor leaves the decision to you as to whether or not you would enroll and open an account. However, he does remind you that you are now getting to a point where you should start thinking about your future financial wellbeing and develop a suitable strategy to provide benefits such as retirement savings [such as your children's education, housing expenses, retirement savings and other funds for emergencies].

Note: Currency is in HK Dollar in this study.

MINDSET MANIPULATION FOR STUDY 3:

Goal intention:

Before making your decisions, please take a moment to consider the importance of joining this savings program. For example, you could think about the benefits associated with your future financial wellbeing.

Implementation intention:

Before making your decisions, please take a moment to consider the details of joining this savings program. For example, you could think about whether to invest in bonds or government securities, or whether to make a monthly or bi-weekly contribution.

STIMULI FOR STUDY 4:

Suppose you have a job with reasonable payment which gives you a monthly discretionary income of about Rs. 40000 after necessary expenses such as rent, supermarket food bills and utilities. You have very little by way of savings, but you are now starting to look ahead.

Your financial advisor just has introduced a new savings program to you. The program requires you to deposit a fixed amount regularly for 10 years to be invested in bonds and certificates of deposits with a guaranteed rate of return of 4%.

Your advisor leaves the decision to you as to whether or not you would enroll and open an account. However, he does remind you that you are now getting to a point where you should start thinking about your future financial wellbeing and develop a suitable strategy to provide for expenses such as your children's education, future housing, retirement savings and other funds for emergencies [such as your children's education] [such as future housing] [such as retirement savings].

Note: Currency is in Indian Rupee in this study.