Managerial Overcommitment in Corporate Acquisition Processes

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The weight of available evidence indicates that most acquisitions impair rather than enhance the value of the acquiring firm. However, relatively little is known about why executives tend to err in making acquisitions. Building upon an important line of thought, the authors of this paper focus on the acquisition decision process and particularly the tendency for strategists to simply become over-committed to making a specific acquisition. Using well-controlled laboratory data, the authors examine some specific determinants of over-commitment to an acquisition, yielding important insights for subsequent field research and for our general understanding of acquisition success and failure.

Donald C. Hambrick

Abstract

This study investigates a problem that may occur during corporate acquisitions: managers who become committed to acquiring a particular target firm, regardless of benefit to the acquiring firm. Three factors that may create commitment to a particular target were investigated: (1) personal responsibility for the decision to acquire the target, (2) competition for the target, and (3) whether the decision to acquire the target is public. These factors were varied in a simulated corporate acquisition where participants began an acquisition and then were given negative information about the target. They were later given the choice of continuing with the acquisition or withdrawing and investing elsewhere. As predicted, personal responsibility for the decision to acquire the target, competition for the target, and a public decision context all increased participants' commitment to acquiring the target, despite the negative information. Participant work and acquisition experience did not affect these results.

Field studies of acquisitions suggest that commitment to acquiring a specific target occurs during the acquisition process. Since the acquisition process is a potentially important determinant of acquisition outcomes, commitment to targets has negative implications for these outcomes. This study adds a systematic empirical investigation of the determinants of commitment in acquisition situations. Studies in nonacquisition settings have demonstrated that personal responsibility affects commitment. However, the presence of competition has not previously been studied, and a public decision context has only been studied in a limited way. These are important factors in generating commitment to acquisitions. These results suggest that managers should recognize that overcommitment can and does occur during acquisitions. Further, the factors that cause overcommitment to targets have implications for managers who wish to avoid this commitment. Activities that should help avoid overcommitment problems include assigning target choice and due diligence activities to different individuals, and limiting news of impending acquisitions.

(*Mergers and Acquisitions*; *Commitment*; *Decision Making*)

During the 1980s, approximately 24,000 firms acquired or merged with other firms. However, research has shown that acquisitions are often problematic for both the acquiring and acquired firms. There is evidence that acquisitions are typically not successful at increasing the acquiring firm's profits or stock prices (e.g., Ravenscraft and Scherer 1987, Fowler and Schmidt 1988). Additionally, there is concern about the impact on managers, employees, stockholders and ultimately, society as a whole, from the 1980s acquisition boom.

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For example, *Fortune* estimated that the ten largest mergers in 1983 affected the lives of 220,000 employees through lost jobs, changes in status, benefits, etc. (Magnet 1984). Further, Walsh's research (e.g., Walsh 1991) demonstrated that top management turnover following mergers and acquisitions is higher than normal. Because mergers and acquisitions are so prevalent and have potentially widespread effects, it is important to understand the processes that lead to poor acquisition outcomes.

Although there has been a significant amount of research devoted to the financial and human consequences of acquisitions, there is a need for more research on the decision process surrounding acquisitions. One reason why it is important to study the acquisition decision process is that the process is a potentially important determinant of acquisition outcomes. For example, Jemison and his colleagues suggested that several aspects of the acquisition process may lead to limited consideration of issues to strategic and organizational fit (Jemison and Sitkin 1986a, 1985b; Haspeslagh and Jemison 1991). When these issues are not considered during the acquisition process, poor acquisition outcomes may result. Similarly, Lubatkin (1983) argued that one explanation for the poor financial performance of acquisitions is that during the acquisition process, managers make mistakes in selecting the proper acquisition target at the proper price.

This paper examines one problem that may occur during the acquisition process: managerial overcommitment to a specific acquisition target. During the acquisition process, managers may become committed to acquiring a specific target, regardless of benefit to the acquiring firm. Once committed, managers may continue to pursue the target, even in the face of negative information and opportunities for withdrawal. Continued pursuit of a target in the face of negative information increases the likelihood that an acquisition will turn out poorly. The purpose of this study is twofold:

(1) to examine whether commitment to acquisition targets occurs,

(2) to study the determinants of commitment to acquisition targets.

We chose to study the problem of overcommitment because evidence from field studies of acquisitions suggests that commitment to a specific target may occur during the acquisition process. For example, McCann and Gilkey (1988) conducted interviews with senior executives and investment bankers involved in acquisitions and found evidence that managers who make acquisition decisions develop a potentially problematic commitment to a particular target.

> (There is a) tendency for CEOs and management teams to deepen commitment, "up the ante" and even rationalize bad news in order to negotiate a deal. Assumptions made later and later in a deal that is encountering difficulties have a way of getting more and more suspect. The bearer of bad tidings in a hotly pursued deal has a chance of being executed. (McCann and Gilkey 1988; p. 123).

Similarly, the research of Jemison and his colleagues (Jemison and Sitkin 1986a, 1986b; Haspeslagh and Jemison 1991) supports the idea that overcommitment may occur during the acquisition process. For example, Haspeslagh and Jemison (1991) hypothesized that CEOs without acquisition experience feel inadequate because other CEOs have this experience. The desire for acquisition experience makes it difficult to walk away from a potential acquisition. Although there is strong theoretical evidence that overcommitment may be a problem during the acquisition process, to date, empirical research on overcommitment to acquisitions has been anecodatal. There are no systematic empirical studies of commitment in acquisition situations.

The overcommitment behavior described above was also apparent in a series of field interviews conducted by the first author. The interviews were conducted to gain additional insight into the variables that may be associated with overcommitment during the acquisition process. The interviews consisted of individual informal interviews with five executives, all with extensive merger and acquisition experience. The interview format was unstructured. Executives were asked to describe the events that occurred during the acquisitions that they had personally observed. Clarification questions were asked by the interviewer. Interviews took place at each executive's office and lasted approximately one hour.

As they described the acquisitions, all of the executives recounted examples of commitment problems they had observed. For instance, one executive provided the following description:

> There was this executive that had been working on a deal for about six months. His accountants told him about some major problems that clearly placed the acquisition return below his company's written guidelines. He told them that the guidelines were not hard and fast. This was the first time they (the accountants) had heard of this. He also told them that he thought the target's problems could be overcome and they were being too pessimistic in their estimates.

The type of behavior described above has been discussed in research on a phenomenon known as escalating commitment to a course of action (e.g., Staw 1976), the sunk cost effect (e.g., Northcraft and Wolf 1984), and entrapment (e.g., Brockner et al. 1981). The situations studied in this research have the following characteristics: they are "predicaments where costs are suffered in a course of action, where there is an opportunity to withdraw or persist and where the consequences of persistence and withdrawal are uncertain; (Staw and Ross 1987; p. 40). Research on escalating commitment and similar phenomena demonstrates that when faced with this type of situation, both individuals and organizations continue to invest resources, even in the face of significantly declining outcomes. For example, Ross and Staw (1986) discussed how a variety of pressures, including the existence of multiple and conflicting goals, led to the decision of the government of British Columbia to host Expo 86 despite a 52-fold increase in costs.

Acquisitions have all of the features discussed by Staw and Ross (1987): costs, opportunities for withdrawal, and uncertainty about the consequences of persistence and withdrawal. Therefore, it is possible that individuals will become committed and continue to pursue an acquisition target even when substantial negative information about the target is revealed. Although acquisition processes appear to have characteristics similar to other situations that generate overcommitment, it is by no means certain that the results of other research on commitment will transfer to an acquisition setting. Many business schools teach acquisition evaluation techniques that are relatively straightforward and "rational". So, it is possible that many managers have been specifically trained to guard against overcommitment and commitment to acquisition targets may not be inevitable.

Even if overcommitment to an acquisition does occur, it is not clear that the same factors that generate overcommitment in other settings also create overcommitment to acquisitions. We argue that personal responsibility, a factor that has been studied in other research on overcommitment, also affects commitment to acquisitions. However, we also argue that the presence of competition (which has not previously been studied) and a public decision context (which has only been studied in a limited way) are important factors in generating commitment to acquisitions.

The Acquisition Process

The acquisition process can be separated into two sets of activities: activities that occur before the acquisition is completed (i.e., before the deal is legally "closed"), and activities that occur afterward. This study is limited to an investigation of commitment before completion. Commitment before completion consists of continuing to pursue an acquisition target despite a decline in expected outcomes. Commitment before completion could occur during three phases of the acquisition process. First, while searching for acquisition candidates, an executive may become overcommitted to a particularly attractive target and make a bid for the target despite negative information about the target. Second, the bidding process may induce commitment so that executives bid well in excess of what they originally intended. A third possibility, commitment during the due diligence period, is the focus of our research.

During the period between the initial agreement to acquire a particular target and completion of the acquisition, due diligence activities are typically conducted. These activities consist of an in-depth investigation of the condition of the target. For example, financial records are verified, legal matters related to the target are investigated, and other potential problems with the target are explored. This investigation generally utilizes information that was not available to the acquirer prior to the initial agreement. Therefore, it is not unusual for new information to arise and for some of this information to be negative.

We focus on commitment during the due diligence period for two reasons. First, the consequences of overcommitment during the due diligence period are particularly severe. The due diligence period represents the acquirer's "last chance" to walk away from the acquisition. This means that overcommitment during this period can lead to the completion of a poor acquisition, a mistake that is difficult and costly to reverse. Second, commitment to the target is particularly likely to occur during the due diligence period for two reasons:

(1) Costs (both financial and psychological) involved in reaching an agreement have been incurred at this point, and commitment has had time to build,

(2) It is often difficult to determine the impact on acquisition outcomes of negative information during due diligence. Uncertainty about the importance of negative information may encourage commitment.

Determinants of Commitment During the Acquisition Process

If commitment does occur during the acquisition process, it is important to understand the determinants of this commitment. Three sources of commitment are suggested by the escalation and acquisition literatures.

They are a manager's personal responsibility for the decision to acquire a particular target, competition for the target, and public awareness of acquisition decisions.

Personal Responsibility

Both Hitt et al. (1990) and Jemison and Sitkin (1986a) have argued that managers spend considerable time and effort on the acquisition process. Data from 25 interviews conducted by Jemison and Sitkin suggested that this expenditure of time and effort makes an acquisition seem more important than it is, thus reducing the manager's willingness to walk away from it.

> The more managers identify with an acquisition, the less likely they will be able to consider it objectively and accept criticism that could slow it down. Feeling they have put their reputations for sound, decisive judgement on the line by initiating the process, (managers) may hurry to complete the deal in part to justify their earlier decision to pursue the target. (Jemison and Sitkin 1986a p. 110)

This observation is consistent with research by Staw (1976). In Staw's study, half of the subjects were responsible for allocating funds to one of two operating divisions of a company. The other half inherited the allocation decision from their predecessor. All subjects were given feedback on the performance of each division and then were given the opportunity to make an additional allocation to the same division. Staw found that more funds were allocated to a declining division when subjects were personally responsible for initial allocation decision. This suggests that decision makers may invest resources to justify their original decision. Thus, in an acquisition context, personal responsibility for the original decision may tie the executive involved to a particular acquisition and discourage withdrawal from the process. These arguments are consistent with Roll's (1986) hubris hypothesis, which suggests that managers overestimate their abilities to enhance the value of a target.This may lead to commitment to a target because since managers have made the decision to acquire a target, they may assume that they have some special capability of making the deal work that other manages don't have. The preceding arguments suggest that personal responsibility increases commitment to an acquisition target.

HYPOTHESIS 1. *Personal responsibility for the decision to pursue a particular acquisition target will create more commitment to that target.*

The acquisition and escalation literatures, as well as the field interviews, suggest that the context in which an acquisition decision occurs is important. For example, Ross and Staw (1986) found social and structural context to be key determinants of commitment to holding Expo 86 (e.g., the extensive media coverage of the provincial premier's support for Expo, the likely financial benefits to be obtained by many suppliers). The current study investigates the effects of two contextual variables: competition for an acquisition target and the public awareness of the acquisition decision. Previous research on escalation of commitment has examined the effects of one way of making decisions public, the need to justify decisions to superiors. However, the effects of having peers know about one's decisions has not been examined. Also, to date, the effects of competition on continued commitment to a course of action have not been examined empirically.

Competition

McCann and Gilkey (1988; p. 39) discussed the factors that drive acquisition activity and stated that "desire to ... beat an arch rival to a potential acquisition ... (is) always present (in the acquisition process) and, in some cases, (is a) major factor." Teger (1980) demonstrated that the desire to defeat an opponent plays an important role in creating commitment to a course of action. Our field interviews also indicated that competition may induce commitment to an acquisition target. Several of the executives interviewed mentioned that takeover battles may result in determination to win at almost any cost and deal with the consequences later.

Past research has focused on competition during the bidding process. However, the effects of competition may extend beyond bidding for a target into the due diligence part of the acquisition process. Competition during the bidding process may result in unwillingness to abandon the acquisition even after a preliminary formal agreement has been reached. Competition during bidding may cause managers to assume that, if the acquisition is abandoned during due diligence, others will still be interested in acquiring the target. In other words, competition may be seen as a signal that the target may be valuable. Managers may perceive abandoning a potentially valuable target to a competitor as "losing." Thus, managers may be reluctant to relinquish a target to a competitor even when faced with negative information about the target. The preceding arguments suggest that competition increases commitment to an acquisition target.

HYPOTHESIS 2. *Competition for an acquisition target will create more commitment to that target.*

Public or Private Decision Context

The desire not to expose errors to others may also create commitment in acquisition situations. Jemison and Sitkin (1986a) found that the parties involved in an acquisition often fail to resolve critical issues before the deal is completed because of a desire to "save face" (i.e., a desire not to back out of a deal once it becomes public). Several times during the field interviews, a desire to "save face" by continuing to pursue an acquisition target was mentioned. For example, one executive stated that "(Executives) feel pressure to look good in the eyes of their peers in the business community.... Once an acquisition decision becomes public, (the executive) who backs away from it is under pressure to explain why the acquisition was entered into in the first place." Fox and Staw (1979) attempted to manipulate motivation to prove to one's superiors that earlier decisions were not wrong. They found that policy resistance from a board of directors increased subjects' tendencies to escalate their commitment to a losing course of action. This suggests that public surveillance of one's decisions increases commitment.

HYPOTHESIS 3. *More commitment to an acquisition target will occur when the acquisition decision is public than when it is not.*

Method

To date, studies of acquisition processes have relied on an examination of acquisition dossiers or on retrospective amounts of acquisitions by the executives involved (e.g., Jemison and Sitkin 1986a, 1986b; Haspeslagh and Jemison 1991). However, it is difficult to establish the existence of overcommitment using these techniques in part because overcommitment is socially undesirable (and executives are thus unlikely to admit to overcommitment). Also, recall of factors such as the amount of personal responsibility for an acquisition may be biased by subsequent acquisition outcomes. As a result, establishing causality is almost impossible through the use of retrospective accounts. If organizations are going to attempt to prevent overcommitment to acquisition targets, then it is particularly important to understand the causal factors surrounding overcommitment. This study used graduate business students (many with acquisition experience) in a simulated acquisition. Use of a simulation allows us to systematically isolate and estimate the effects of various factors that may lead to overcommitment. It also allows us to establish causality. The value of simulations and scenarios for the study of strategic decision making has been discussed by Schwenk (1982). Schwenk called for the concurrent use of simulations and field studies when investigating strategic issues, because the results of each type of study can inform the other. Several pieces of research have established the value of using simulations and scenarios to study strategic decision processes (e.g., Fredrickson 1985, Hitt and Tyler 1991, Rentsch and Schneider 1991).

The simulation manipulated the three variables described in the preceding hypotheses. These variables were combined in a $2 \times 2 \times 2$ factorial design with personal responsibility (high/low), competition (present/absent) and decision context (public/private) as factors.

Participants

238 graduate business students (169 male, 69 female) at a major American business school participated in this research. Both day and evening (executive MBA) students participated. Of the 238 students, 22% had some type of acquisition experience. Work experience ranged from zero to 15 years, with a mean of 4.5 years. The simulation was administered as part of a class project. The participants were told that they would be participating in a decision-making exercise that would help illustrate some concepts to be covered in their next class. There was no scorekeeping system for the simulation, and performance did not affect course grades. Participants were randomly assigned to conditions.

Procedure

A computer simulation was used to manipulate variables and collect responses. Participants were run in groups of four to eleven, each on a separate personal computer. The simulation began by informing participants that they would be assuming the role of president of ABC company. ABC company is in the electronic equipment business. The manipulation of the independent variables was contained in the simulation. The simulation was divided into four periods.

(1) Pre-simulation period. Decision context was manipulated.

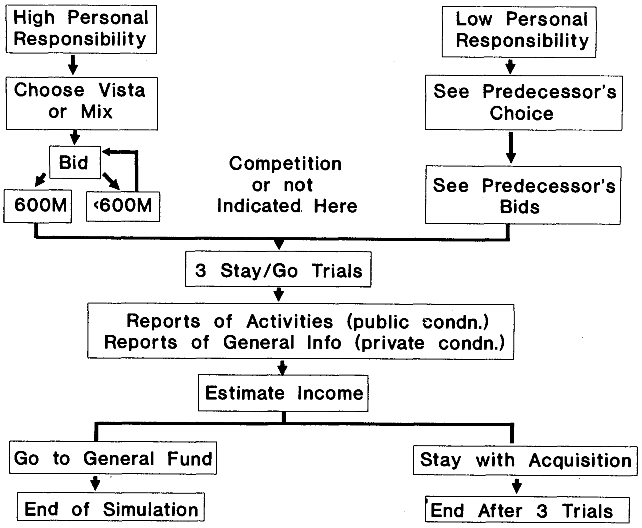
(2) Bidding period. Personal responsibility and competition were manipulated.

(3) Post-agreement period. The main dependent variables were measured and the decision context manipulation was repeated.

(4) Post-simulation period. The manipulation checks were administered and demographic variables measured.

A brief summary of each period follows. Figure 1 diagrams the overall structure of the simulation.

Figure 1



Pre-simulation and Bidding Periods[1]

Personal responsibility manipulation. We define personal responsibility as having personally made the decision to purchase an acquisition target. This definition is consistent with past research on overcommitment (Staw 1976). Therefore, participants in the high responsibility condition chose one of two acquisition targets, Vista Video or Mix Music. Vista and Mix were designed to be as similar as possible to each other and to be equal in potential return to ABC. They were also designed to be equally complemetary to ABC's existing electronic equipment business. High responsibility participants also decided on amount(s) to bid for the target. This bidding was designed to reinforce the responsibility manipulation. After choosing the target, high responsibility participants went through a minimum of one and a maximum of four negotiation periods where they bid on the target of their choice. Participants were also told that they had formed an acquisition team to investigate targets. They were told that the team estimated that the target firm could be purchased for $600,000 and would earn $100,000 a year for ABC. The only alternative to investing in the target was investing in a fund for general corporate purposes at a rate of 10%. Bids less than $600,000 were rejected. The six participants that failed to bid $600,000 within four periods were dropped from the simulation.

Low personal responsibility participants were yoked to high responsibility participants. They were told that, as the new president of ABC company, they had just taken over an acquisition from their predecessor. They then saw an outline of the target choice and the bidding process of their yoked high responsibility counterpart.

Competition manipulation. Competition is defined as whether other firms were interested in acquiring the target. Participants in the competition condition were told that there was someone else interested in acquiring the same target. Any bids rejected in this condition were said to have been rejected because the target was considering an alternative offer. Participants in the no competition condition were told that no one else was interested in acquiring the same target. Any bids rejected in this condition were said to have been rejected because the target considered the bid to be insufficient.

Public or private decision context manipulation. As previously discussed, the impact of having one's decisions be public probably varies according to who that "public" is. We define public decision context as having one's peers know about the decisions one makes. This could occur through many avenues including the business press and personal communication. We tried to provide participants with a realistic manipulation of public/private context within the simulation. Therefore, participants in the public decision context condition were told that reports of their decisions would be sent over the computer network to the other participants in the simulation. These reports were presented during the post-agreement period and are described more fully later. Participants in the private decision context condition were told that their decisions were private; no reports of their activities would be sent to the other participants.

Post-agreement period. After bidding $600,000 or more for a target, participants were told that their bid had been accepted and that they had completed a preliminary agreement to acquire Vista or Mix. All participants were told that their acquisition team would continue to investigate the financial aspects of acquisition. They had three periods to decide whether to continue with the acquisition or to withdraw and invest their money in the General Corporate Fund. At the beginning of each of the three periods, participants were given information regarding a potential problem with the acquisition target. These problems included; (1) a possible inventory problem, (2) a contractual dispute with a supplier, and (3) the potential departure of a valued employee if the acquisition is completed. They were informed that, for each potential problem, there was now some uncertainty about how much annual income the target would provide. They were told that if the problem turned out to be serious, that problem alone could mean that the target would provide as much as $50,000 less income per year. Participants were given the opportunity to review the returns available for each investment (target and General Fund). They were then asked to decide whether to continue or to withdraw. After deciding whether to continue or withdraw, participants were asked to estimate the annual income that the target would provide for ABC. This measure was administered after each period that the participant continued with the acquisition and also at the point where the participant decided to withdraw.

Decision context was again manipulated at this point. In the public condition, reports of each participant's activities were generated and participants were told that their report was being sent to the other participants in the simulation. The participant's own report was presented on his or her computer screen but was not actually sent to the other participants. The reports contained (1) statements about the participant's decision to continue or withdraw from the acquisition and (2) general economic information. In the private condition, no reports of participants' activities were generated. Each participant saw a report containing only the general economic information. The simulation ended either at the end of the third period, or when the participant decided to withdraw from the acquisition.

After three periods, the range of annual income available from the target was $-$50,000 to $100,000. This compares to a 10% return on the bid price available by investing in the General Fund. In most cases, participants bid $600,000. Thus, most participants should have been comparing the $-$50,000 to $100,000 range provided by the target with $60,000 provided by the General Fund.

Measures

Manipulation checks and measures of participant demographics were administered after the simulation was completed. The personal responsibility check asked "How responsible do you feel for the original decision to acquire either Vista or Mix?" (1) I felt responsible... (7) I did not feel at all responsible. The competition check asked "Was there anyone else interested in buying the same company that you were?" (1) Yes (2) No (3) Not Sure. The decision context check asked "To what extent did you feel others were aware of the decisions you made?" (1) Very aware... (7) Not at all aware.

The primary dependent variable is commitment to the acquisition target, measured by:

(1) The number of periods that participants continued with the acquisition. Participants had the option of staying from zero to three periods. Participants that stayed for fewer periods are less committed to the target than participants that stayed for more periods.

(2) Participant estimates of annual income that the target would provide for ABC. There is both laboratory and field evidence that individuals who are overcommitted distort information so that it supports their decision to remain committed (Ross and Staw 1986, Conlon and Parks 1987). Thus, participants that provide higher income estimates are likely to be more committed to acquiring the target than participants that provide lower estimates. Negative estimates were accepted.

After the simulation was completed, participants were asked several questions about their background: age ($\underline{M}$ = 27.4 years), gender (71% male, 29% female), years of full-time work experience ($\underline{M}$ = 4.5 years), and number of finance classes they had completed ($\underline{M}$ = 0.4). Participants also were asked to describe their most responsible job and their experience with acquisitions. Participants' experience with acquisitions ranged from none to significant responsibility for evaluating a target and making a decision about whether to proceed with the acquisition. Acquisition experience was coded two ways: (1) as a dummy variable, and (2) as a 5-point scale with higher numbers indicating greater responsibility for acquisitions.[2]

Results

Manipulation Checks

To determine the effectiveness of the personal responsibility and decision context manipulations, a one way analysis of variance (ANOVA) was conducted for each manipulation check. The analysis of the personal responsibility check showed that this manipulation was effective ($F(1,236) = 106.87$, $p < 0.001$). Participants in the high responsibility condition experienced more responsibility ($\underline{M}$ = 2.38) than participants in the low responsibility condition ($\underline{M}$ = 4.75). The analysis of the public or private decision context check show that this manipulation was effective, ($F(1,236) = 25.51$, $p < 0.001$). Participants in the public decision condition reported that their decisions were more public ($\underline{M}$ = 3.01) than participants in the private decision condition ($\underline{M}$ = 4.16). Seventy-seven percent of the participants in the competition condition correctly perceived the manipulation and 78% of the participants in the no competition condition correctly perceived the manipulation. A chi-square test of homogeneity indicated that the manipulation had a significant effect ($X^2(1) = 122.50$, $p < 0.001$).

Effects of Target Choice or Assignment

To determine whether the particular target (Vista or Mix) chosen or assigned to participants affected the dependent variables, two one way ANOVAs (one for high personal responsibility participants, who chose targets, and another for low personal responsibility participants, who were assigned targets) were estimated. For high responsibility participants, the independent variable was target chosen; for low responsibility participants, the independent variable was target assigned. Each ANOVA was estimated for all dependent variables (number of periods participants continued with the acquisition and estimates of income). Results showed that the target, Vista or Mix, did not have a significant effect on any of the dependent variables ($p > 0.19$ for all effects). Given that the target did not affect participant responses, data were collapsed across targets in all subsequent analyses.

Number of Periods

To estimate the effects of the independent variables on the number of periods participants stayed with the acquisition, a 2 (personal responsibility) $\times$ 2 (competition) $\times$ 2 (decision context) ANOVA was conducted with periods as the dependent variables.

Significant main effects were found for personal responsibility, ($F(3,234) = 25.43$, $p < 0.001$), competition, ($F(3,234) = 8.06$, $p < 0.01$), and decision context. $F(3,234) = 11.46$, $p < 0.001$). The means for all of these effects were in the predicted direction. Participants remained with the acquisition for more periods if they were personally responsible for the acquisition decision ($\underline{M} = 2.47$, $\underline{SD} = 0.86$) than if they were not personally responsible ($\underline{M} = 1.88$, $\underline{SD} = 0.92$). They also stayed for more periods if there was competition for the target ($\underline{M} = 2.34$, $\underline{SD} = 0.93$) than if there was no competition ($\underline{M} = 1.98$, $\underline{SD} = 0.92$). Finally, they stayed for more periods if they were in the public decision context ($\underline{M} = 2.35$, $\underline{SD} = 0.87$) than if they were in the private decision context ($\underline{M} = 1.99$, $\underline{SD} = 0.97$)[3]

Income Estimates

To investigate the effects of the independent variables on estimated income in each of the three periods, three separate 2 (personal responsibility) $\times$ 2 (competition) $\times$ 2 (decision context) ANOVAs were estimated (one for each period). Table 1 reports the mean income estimates by condition.

We conducted separate analyses for each period for two reasons. First, participants were exposed to negative information during each period. Income estimates during later periods reflect exposure to more negative information than income estimates made during earlier periods (the declining mean income estimates across periods reported in Table 1 reflect this effect). Thus, income estimates are not comparable across periods and cannot be collapsed across them. Second, since some participants decided to withdraw from the acquisition during each period, the number of participants providing income estimates is not the same in each period (see Table 1). As Table 1 indicates, all of the effects were in the predicted direction (i.e., personal responsibility, competition, and a public decision context all led to higher income estimates); however, not all of the effects were significant. Significant main effects for decision context were found in period one, ($F(3,234) = 4.56$, $p < 0.05$), period two, ($F(3,219) = 10.49$, $p < 0.001$) and period three, ($F(3,181) = 7.19$, $p < 0.01$). Participants estimated more income in all periods if their decisions were public. A significant main effect for competition was found in period two, ($F(3, 219) = 6.68$, $p < 0.01$) and period three, ($F(3,181) = 8.50$, $p < 0.01$). Participants estimated more income on periods two and three if there was competition for the target. A significant main effect for personal responsibility was found in period three, ($F(3,181) = 14.45$, $p < 0.001$). Participants estimated

Table 1 **Means by Experimental Condition for Estimated Income after Periods 1, 2, and 3**

		Period 1	Period 2	Period 3
Estimated Income (dollars)				
High Personal Responsibility	$\underline{M}$	79,658	68,257	61,887
	$\underline{SD}$	15,876	21,986	21,514
	n	117	113	97
Low Personal Responsibility	$\underline{M}$	77,645	64,809	48,341
	$\underline{SD}$	15,809	19,997	23,617
	n	121	110	88
Competition	$\underline{M}$	79,864	69,888	60,500
	$\underline{SD}$	15,786	19,716	23,392
	n	125	117	102
No Competition	$\underline{M}$	77,274	62,877	49,229
	$\underline{SD}$	15,860	21,924	22,181
	n	113	106	83
Public Decisions	$\underline{M}$	80,719	70,586	58,608
	$\underline{SD}$	14,187	17,752	23,460
	n	121	116	102
Private Decisions	$\underline{M}$	76,478	62,187	51,554
	$\underline{SD}$	17,182	23,419	23,048
	n	117	107	83

Table 2 Means by Experimental Condition for Number of Periods That Experienced Participants Stayed

		Participants with > 4 Years Work Experience	Participants with Acquisition Experience
High Personal Responsibility	M	2.48	2.43
	SD	0.88	1.01
	n	47	30
Low Personal Responsibility	M	1.78	1.87
	SD	1.01	0.97
	n	49	23
Competition	M	2.24	2.26
	SD	1.04	1.08
	n	50	30
No Competition	M	2.00	2.09
	SD	0.97	0.95
	n	46	23
Public Decisions	M	2.43	2.29
	SD	0.85	0.98
	n	52	28
Private Decisions	M	1.87	2.08
	SD	1.07	1.08
	n	44	25

more income in period three if they were personally responsible for the decision to acquire the target.

Effects of Acquisition Experience and Work Experience

It is possible that individual differences in work or acquisition experience might affect participant behavior (although the direction of the effect is difficult to predict). To determine whether work of acquisition experience affected participant behavior, four tests were performed. First, a regression model predicting the number of periods participants stayed with the acquisition was estimated. Independent variables were the main effects of personal responsibility, competition, decision context, work experience, acquisition experience,[4] and the interactions of work experience and acquisition experience with personal responsibility, competition, and decision context. No significant main or interaction effects for either work or acquisition experience were found ($p > 0.14$ for all effects).

Second, two ANOVAs using only those participants with significant work experience or acquisition experience were performed. Periods stayed was the dependent variable. High experience participants were those with over four years of work experience ($n = 96$). Acquisition experience participants were those with acquisition experience ($n = 53$). The smaller sample sizes used in these analyses reduced the power of the statistical tests. We performed these analyses primarily to determine if the magnitude and direction of the effects was preserved when we examined more experienced subsamples. Two 2 (personal responsibility) $\times$ 2 (competition) $\times$ 2 (decision context) ANOVAs were conducted, one for high experience participants and one for acquisition experience participants. Table 2 reports the means for the subsamples. All effect sizes are comparable to those reported for the full sample.

For the high experience participants, significant main effects were found for personal responsibility, ($F(3,92) = 15.71$, $p < 0.001$), and decision context, $F(3,92) = 11.65$, $p < 0.001$). As reported in Table 2, participants with significant work experience remained with the acquisition for more periods if they were personally responsibility for the acquisition decision and if they were in the public decision context. Although it failed to reach significance, the competition effect is in the predicted direction, ($F(3,92) = 0.82$, $p < 0.37$). Participants stayed for more periods if there was competition for the target. For the acquisition experience participants, a significant main effect was found for personal responsibility, ($F(3,49) = 5.24$, $p < 0.05$). As reported in Table 2, participants with acquisition experience remained with the acquisition for more periods if they were personally responsible for the acquisition decision. Although failing to reach significance, the competition effect, ($F(3,49) = 1.10$, $p < 0.30$), and the decision context effect, ($F(3,49) = 1.13$, $p < 0.29$), were in the predicted direction. Participants stayed for more periods if there was competition for the target and if they were in the public decision context.

Third, two regression models were run with estimated income as the dependent variable. Independent variables were the main effects of personal responsibility, competition, decision context, work experience or acquisition experience, and the interactions of work experience or acquisition experience with personal responsibility, competition, or decision context. No significant main or interaction effects with work experience were found for any income estimates ($p > 0.18$ for all effects). No significant main or interaction effects with acquisition experience were found for estimates in periods one and two. However, a positive and significant personal responsibility by acquisition experience interaction was found in period three ($F(7,177) = 1.97$, $p = 0.05$. Participants with acquisition experience who were in the high personal responsibility condition gave higher income estimates than other participants.

Fourth, two ANOVAs using only participants with significant work or acquisition experience were performed with income estimates as the dependent variable. Two 2 (personal responsibility) × 2 (competition) × 2 (decision context) ANOVAs were conducted with estimated income as the dependent variable, one for participants with significant work experience and one for participants with acquisition experience. Again, the primary purpose of these analyses was to determine whether the magnitude and direction of the effects were preserved. Table 3 reports the subsample means; the effect sizes are comparable to those reported in Table 1 for the full sample.

As Table 3 indicates, all of the effects for high experience participants were in the predicted direction (i.e., personal responsibility, competition, and a public decision context all led to higher income estimates); however, not all of the effects were significant. Significant main effects for decision context were found in period one, ($F(3,92) = 5.15$, $p < 0.05$), and period two, ($F(3,83) = 4.80$, $p < 0.05$). Participants estimated more income in periods one and two if their decisions were public. A significant main effect for competition was found in period two, ($F(3,83) = 4.97$, $p < 0.05$) and period three, ($F(3,67) = 8.28$, $p < 0.01$). Participants estimated more income on periods two and three if there was competition for the target. A significant main effect for personal responsibility was found in period three, ($F(3,67) = 6.07$, $p < 0.05$). Participants estimated more income in period three if they were personally responsible for the decision to acquire the target.

With one exception, (the nonsignificant effect of public/private context in period 3), all of the effects for participants with acquisition experience were in the predicted direction (i.e., personal responsibility, competition, and a public decision context all led to higher income estimates). However, not all of the effects were significant. A significant main effect for personal responsibility was found in period three, ($F(3,38) = 12.47$, $p < 0.01$). Participants gave higher income estimates if they were personally responsible for the decision to acquire the target. A significant main effect for competition was found in period three, ($F(3,38) = 3.98$, $p = 0.05$). Participants estimated more income if there was competition for the target.

Discussion

The acquisitions literature provides a fair amount of anecdotal evidence that overcommitment can occur during acquisitions and that there are negative consequences of overcommitment. However, there is a lack of empirical research investigating commitment and its

Table 3 Means by Experimental Condition for Experienced Participant's Income Estimates after Periods 1, 2, and 3

		Participants with > 4 Years Work Experience			Participants with Acquisition Experience		
		(1)	(2)	(3)	(1)	(2)	(3)
High Personal Responsibility	M	80,894	70,711	62,897	80,267	74,852	69,000
	SD	14,262	20,682	18,353	18,994	19,754	20,156
	n	47	45	39	30	27	25
Low Personal Responsibility	M	76,980	63,119	49,401	76,130	65,650	45,000
	SD	17,881	21,234	22,920	17,216	22,118	25,590
	n	49	42	32	23	20	17
Competition	M	81,140	71,622	63,763	79,200	75,578	64,917
	SD	17,115	20,115	18,208	17,928	19,688	24,489
	n	50	45	38	30	26	24
No Competition	M	76,457	62,143	48,818	77,522	65,190	51,778
	SD	15,049	21,416	22,412	18,887	21,760	24,837
	n	46	42	33	23	21	18
Public Decisions	M	82,545	71,071	58,237	79,500	76,040	57,625
	SD	13,259	16,937	22,174	17,195	16,762	26,469
	n	44	42	38	28	25	24
Private Decisions	M	75,808	63,289	55,182	77,320	65,137	61,500
	SD	17,949	24,066	20,862	19,536	24,180	23,996
	n	52	45	33	25	22	18

causes during acquisition processes. The results of the research presented here suggest that commitment to acquiring a particular target can occur in acquisition situations. Forty-seven percent of the participants in the simulation finalized the acquisition in spite of three pieces of negative information which, together, indicated that expected annual income from the acquisition could be as low as $-\$50,000$.

The results of this study also provide support for the idea that factors present during the acquisition process can affect the level of commitment to an acquisition target. Specifically, high personal responsibility, competition, and a public decision context resulted in greater commitment to acquiring the target. Participants in these conditions continued to pursue the target over several periods, even in the face of negative information and clear opportunities for withdrawal.

This study builds on the work of Teger (1980) and demonstrates that the effects of competition can extend beyond bidding for a target. In this study, the effects of competition during the bidding process persisted even after the bid was won and no competition was present. The competition effect may have two causes. First, competition indicates that others are interested in the target, and participants may be reluctant to "lose" the target to others. Second, competition may provide a signal to participants that the target is valuable. These two explanations cannot be disentangled in this study, and further research in this area is needed.

Although the effects of the independent variables on estimated income were always in the predicted direction, these effects were not always significant. However, high personal responsibility, competition and a public decision context resulted in higher estimates of the income that would be generated by the target. Participants may have used these higher income estimates to justify their decision to continue the acquisition.

The results of this study, combined with other research on overcommitment, suggest several courses of action for managers who wish to avoid overcommitment to an acquisition target. First, it may be useful to separate target evaluation and choice from due diligence activities. Individuals involved in target selection may be likely to distort or ignore negative information uncovered during due diligence and therefore should probably not be responsible for overseeing due diligence activities. Second, although there is often an incentive not to reveal news of potential acquisitions in order to avoid competition and price increases, managers should recognize that limiting news of impending acquisitions has another benefit. Keeping potential acquisitions private can limit commitment to inappropriate acquisitions. Finally, managers should recognize that overcommitment can and does occur during acquisitions. When overcommitment is present, momentum builds towards completion of the acquisition. Therefore, managers should consider using techniques such as second chance meetings (Janis 1972) which create opportunities to reduce inappropriate momentum.

Limitations of This Research and Directions for Future Research

A key limitation of this research comes from the simulation methodology. Although we attempted to simulate the essential features of acquisitions, it is possible that, in actual acquisitions, features not modeled here may lead to different outcomes than those we reported. Three features of acquisitions we did not model were group decision making, the need for acquisition approval from the board of directors, and significant personal consequences of the decision for the decision maker. Below, we discuss the implications of each of these features for the interpretation of our results.

Acquisition decisions are sometimes made by groups. However, a study by Bazerman et al. (1984) demonstrated that overcommitment occurs in groups as well as in individuals. Additionally, Ross and Staw's (1986) study of commitment to holding Expo 86 involved many decisions made by groups. Thus, the same factors that affect an individual manager could affect an entire group.

A board of directors might stop an overcommitted manager. However, there are three reasons why this is not likely to happen:

(1) The manager responsible for making the acquisition decision is a critical conduit of information to the board. The manager controls both the information the board receives and the way in which that information is framed. The manager making a case for an acquisition is trying to convince others of the reasonableness of his or her behavior. Individuals often slant data in a way that produces consistency with their beliefs (Lord, Ross and Lepper 1979). For example, Conlon and Parks (1987) found that decision makers responsible for a failing course of action make greater use of positive, exonerating information than of negative information.

(2) Being required to explain or justify one's decision to an external group may actually increase commitment to a failing course of action. This argument is consistent with Fox and Staw's (1979) finding that policy resistance from a board of directors increased commitment.

(3) There is some limited evidence that managerial self-interest can explain whether a firm pursues acquisitions. The fact that boards do not stop acquisitions which are based primarily on executive self-interest indicates that boards may be unwilling or unable to exert significant control over acquisitions. Empire building theories of acquisitions (e.g., Mueller 1969) support this view.

Still, there may be some situations where boards of directors will stop overcommitted managers from acquiring a target. (See Walsh and Seward (1990) for a discussion of situations where boards might have more or less effect on management practices.) For example, Kosnik (1987) found that boards with more outside directors were less likely to pay greenmail. It is possible that several independent outsiders on a board could help stop overcommitted managers from completing an acquisition. Whether the need to justify acquisition decisions to a board of directors prevents overcommitted managers from completing poor acquisitions or merely strengthens the zeal with which managers pursue a target is an important topic for future research.

It is possible that participants decided to complete the acquisition merely because there were no significant personal consequences for doing so (i.e., no effect on salaries, promotions, reputation, etc.). However, field research on overcommitment suggests that significant personal consequences of decisions actually increase individual commitment to failing courses of action. For example, Ross and Staw (1986) report that once the provincial premier's political future was tied to the success of Expo 86, his commitment to holding the fair increased even as the fair's financial projections soured. Thus, the significant personal consequences of actual acquisitions may actually generate greater levels of commitment than those reported here. However, the effect of incentives on commitment remains an important area for future research.

We should also note that none of the factors just discussed provides an alternative explanation for our results. For example, the fact that the consequences of continuing with the acquisition were relatively minor do not explain why participants in the high responsibility condition stayed with the acquisition through more periods and provided higher estimates of its potential income that participants in the low responsibility condition.

We found no effects of acquisition or work experience. This is consistent with Haspeslagh and Jemison's (1991) finding that many managers involved in acquisitions have no prior acquisition experience. Thus, in practice, if there is little variance on acquisition experience (most managers have none), then acquisition experience may not affect acquisition decision making. However, it is possible that some types of experience make more difference than others. A study looking at what types of experience affect acquisition commitment would be valuable.

Personal responsibility, competition, and decision context affected commitment to acquisition targets in this research; however, we don't know whether this commitment affects acquisition outcomes. Although difficult to do, research focusing on how commitment to an acquisition target affects acquisition outcomes would be valuable.

Several factors other than those studied here may also affect commitment to an acquisition target. These factors include things such as individual risk-propensity, or whether the manager involved in making the acquisition also has implementation responsibility. These personal and structural differences may moderate the basic effects reported here and thus their impact on commitment to acquisitions should be studied.

Finally, our research examined only one process variable: commitment to a target. Future research should focus on the determinants and consequences of other process variables (e.g., activity segmentation (Jemison and Sitkin 1986b)). Given that corporate acquisitions are very common and have important consequences for society, research on the effects of acquisition processes on acquisition success or failure is vital.

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Endnotes

[1] Sample bidding and post agreement periods are available from the *Organization Science* technical editor at the TIMS Office, 290 Westminster St., Providence, Rhode Island 02903.

[2] A table reporting descriptive statistics and correlations among key study variables is available from the *Organization Science* technical editor, TIMS Office, 290 Westminster St., Providence, Rhode Island 02903.

[3] Analyses were conducted to determine whether bidding behavior or participant group size affected any of the dependent variables measured in this study. No significant effects for either bidding behavior or group size were found (details of these analyses available from the first author).

[4]The results of this test did not vary by whether the scale or dummy variable for acquisition experience was used.

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