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When will Managers Lie? The Influence of Personality on Honest Budgetary Reporting
by Measure with HEXACO-PI

A Thesis Submitted to
The Faculty of the University of North Georgia
In Partial Fulfillment
Of the Requirements for the Degree
Bachelor of Business in Accounting and Bachelor of Science in Mathematics
With Honors

Claire Allinson

Spring 2020

Abstract

In management accounting, participatory budgets have become increasingly useful in decentralized companies. This type of budget allows managers to have more freedom to decide the allocation of resources and funds. However, this opens the door to dishonest behaviors among some managers and supervisors. This 2x2 quasi-experiment study uses the Honesty-Humility factor of the HEXACO personality inventory to measure self-reported honesty in business undergraduate students and to determine whether that measure correlates with dishonest reporting behavior. Participants played the role of managers of a division of a corporation and were asked to prepare a Direct Materials budget. Participants had the opportunity to maximize their personal profit by misreporting the actual unit price per product. Half of the participants were audited by a supervisor 5 out of the 10 experimental periods and the remaining subjects were not audited. The overarching hypothesis was that an individual's score in the H-H factor and the presence of an audit will affect the budgetary reporting behavior. The results showed no correlation between these variables; however, there were many external, uncontrollable variables that may have affected this result. Despite these challenges, this study has been able to provide additional insight into the relationship between personality factors and managerial dishonesty, and whether the possibility of audit changes the observed behavior.

When will Managers Lie? The Influence of Personality on Honest Budgetary Reporting by Measure with HEXACO-PI

Participatory budgeting is the act of giving lower-level managers more responsibility in the creation of the budget for their specific area (Young, 1985). However, if the values and objectives of the manager differs greatly from that of the firm, then there is a chance of misreporting (Rankin et al., 2008). Some managers may attempt to serve their own interests and create budgetary slack though over reporting costs or understating revenue (Evans et al., 2001). Behavioral studies in managerial accounting research have sought to better understand why budgetary misreporting occurs. The purpose of this study is to discover if there is any relation between an individual's score in the Honest-Humility factor of the HEXACO personality inventory and their decision to report budgetary slack.

The HEXACO-PI is a personality inventory that stems off from the Big Five Personality Inventory (Lee and Ashton, 2018). It modifies the existing factors and adds on a new factor called Honest-Humility. According to Lee and Ashton (2018), those who score high in the H-H factor “avoid manipulating others for personal gain” and “feel little temptation to break rules”, while those who score low in the H-H factor are “inclined to break rules for personal profit” and “are motivated by personal gain.” This personality inventory was used for this study since it was shown by Lee and Ashton (2008) to accurately predict integrity.

I conducted a 2x2 quasi-experiment that employed a modified HEXACO-PI test and a task. Participants assumed the role of managers in a division of a corporation, and

made decisions related to a Direct Materials Budget for ten periods. This study also employed the use of an audit condition in which half of the participants received a message stating that they could be audited in five out of the ten periods. The dependent variable of interest is total slack produced, and if any correlation exists between that slack and to the audit condition and/or level of Honesty-Humility factor of the HEXACO-PI test. After analyzing the results, it was found that there was no correlation between the dependent and independent variable, but that may have been due to uncontrollable external factors.

One unforeseen variable that affected the results was the COVID-19 pandemic that began in March 2020. This caused changes in the experiment that could have skewed the results. The first effect was the small sample size of this experiment, which could be due to the transition to an online survey as the experiment. Another unexpected effect was the probable lack of understanding of the task by the participants. Some participants chose to underreport when that action would cause them to lose their payouts. One cause of this could be the lack of in-person discussions on the directions and lack of opportunity for the participants to ask questions. Because of these effects and the results of this study, future research is warranted to fully understand the relation between personality and managerial reporting behavior with respect to honesty. With this information, companies can better understand why managers might behave in a certain way, and how to encourage honest behavior.

Literature Review

The research on the topic of participatory budgeting encompasses the cause of budgetary slack and why it occurs. This helps researchers understand participatory budgeting and how to effectively manage employees while mitigating potential issues. Academic accounting research frequently involves other fields of studies to support or enhance the research findings. This research falls into the category of behavioral accounting literature, which heavily relies on information from the field of psychology. Some of the major trends or findings in the literature that this paper focuses on is personality trait effects on behavior, managerial honesty in the workplace, and auditing or monitoring variables.

Personality and Psychology in Accounting:

In this study, one topic of interest is how personality traits relate to the occurrence of budgetary slack. Literature relating to this focus includes studies that use a personality/personal values inventory to see if budgetary decision making was affected. Davidson (2019) studied social value orientation and its effect on honest reporting. He theorized that if a participant had a high score on the social value orientation assessment, then they would be more likely to have honest reporting behaviors. The social value orientation (SVO) assessment is a test that measures people's consistent preferences toward outcomes for themselves and others. People can be categorized as pro-social (focus on the group) or pro-self (focus on the self). The results found that there was a positive correlation between pro-social personality traits and honest reporting behavior. Additionally, research done by Hobson et al. (2011) tested

participants on their personal values and found that those with high scores of empathy and traditional values tended to uphold honest behavior and view budget slack as a form of unethical behavior. Hartmann and Maas's (2010) completed research on budgetary slack and how a person's score on the Machiavellianism scale affects their responses. They specifically focused on when a superior manager pressures a controller to create budgetary slack. The results were that controllers scoring high on the scale were more likely to give into that pressure and create budgetary slack.

Another topic of interest found in the literature was using Kohlberg's (1958) model of moral development to measure participants' honesty. Kohlberg argued that the moral development stages started with morality in an individual being controlled by external factors and ended with control lying in internal factors. For example, Chung and Hsu's (2017) research studied cognitive moral development and its effects on honesty in managerial reporting. They used an experiment adapted from Evans et al. and found that there was a positive and linear relation between cognitive moral development and honest reporting. An interesting aspect of this research is that they found this honesty occurred when there was no monitoring or audit aspect.

Another important topic in this field of research is that relating to social norms and how that can correlate to honest behavior. One example was a study by Altenburger (2017). He studied the effects of injunctive social norms and how it related to budget reporting. Injunctive social norms are those that one ought to do, while descriptive social norms are those that one does. They found that injunctive social norms influenced managers' behavior because people conform to preferences of the group. However, Altenburger also found the effect of injunctive social norms decreased if there were

minorities in the group who preferred alternative preferences. This relates to my study because the participants are from the same academic class, and there may be different social norms within this group.

HEXACO Personality Inventory

There is significant literature that directly relates to the different psychological factors that can cause someone to act dishonestly in a business setting. This study adds to the literature by using the HEXACO-PI, a variation of the Big Five Assessment, in order to operationalize honest personality and examine the effect it has on budgetary behavior.

The Big Five, or the Five Factor Model of personality structure, organizes all personality traits into five large facets called Extraversion, Conscientiousness, Openness to Experience, Agreeableness, and Neuroticism (Costa and McCrae, 1992). This model helped to standardize all personality traits into organized groups, but research by Lee and Ashton (2018) expanded upon this model and modified it in order to accurately measure honesty and humility in an individual's personality. The cause behind this modification is due to these traits being previously grouped into the Agreeableness factor. In order to remedy this, they created a variation of the Five Factor Model to include Honesty-Humility as a sixth factor as well as modifying the existing factors (Lee, 2018). An important distinction to note is that the HEXACO model did not simply add the Honesty-Humility factor; they edited the other factors as well so that the measure of personality was evenly spread between the factors. This variation is called the HEXACO Personality Inventory and it includes Honesty-Humility, Emotionality, Extraversion, Agreeableness, Conscientiousness, and Openness to Experience. Lee et al. (2018) went on to test the

validity of the sixth factor by comparing the two models against an integrity test delivered to participants. Their results showed that the HEXACO model outperformed the Five Factor model in predicting the integrity scores of the participants. This study is one of the first to use the HEXACO model and its relationship with budgetary slack.

Managerial Honesty

Participatory budgeting is one of the most studied subjects in the field of managerial accounting (Brown et al., 2009). Evans et al.'s (2001) research on honesty in managerial accounting can be considered one of the founding studies on this specific topic. In their study, the authors examined managers' preferences for honesty and wealth, and whether that affects managerial reporting behavior, specifically in participatory budget decisions. They conducted a series of experiments that targeted the factors that may cause honest or dishonest reporting, as well as providing evidence of how managerial honesty can affect the firm's profits. They found that most participants exhibited honest behavior, even when they lost wealth by doing so. The researchers also found that managers generally do not lie more as the payoff for lying increases. However, there is a disagreement in the literature, as the studies previously mentioned show that this is not always the case, and individuals will sometimes take advantage of a situation where they can reap personal benefits.

Audits and Monitoring

An additional area in the budgetary reporting literature that is important to examine is the discussion of audits and internal control systems, and how they can affect honest behavior in managerial reporting. First, Hannan et al. (2006) studied the effects of

information systems on honest behavior of managers and found that the existence of these systems can generally increase manager honesty. However, under more precise information systems, managers tended to forego the benefits of appearing honest in favor of the benefits of misrepresentation.

Rankin et al. (2008) studied managerial honesty by requiring managers to use factual assertion on their budget requests and found that less slack was created with this requirement. The factual assertion was that the managers were required to supply their budget request with support for their budget request. However, they also found that if the subordinate does not have final authority on the budget, meaning that the superior has the authority, then the slack increased. Their conclusion on the potential cause of this was that subordinates viewed the process as a negotiation, where self-interests reign, instead of an ethical dilemma.

Cardinaels and Jia (2016) studied how audits affect incentives and peer behavior on misreporting. They found that when reports were audited, the social norms of their peers had a strong effect on whether truthful reporting would occur or not. My study is unique in this aspect because it focuses solely on the individual rather than social norms that could normally affect it.

Overall, this study fits into the literature by providing more insight on how personality traits can correlate to managerial reporting behavior. Next, I will examine psychology theory in order to formulate hypotheses for this study.

Theory and Hypothesis Formulation

When examining the reasons why an individual will behave in a certain way, different psychology theories can be used. My hypothesis states the relationship between an individual's score in the Honesty-Humility factor of the HEXACO-PI, and the amount of budgetary slack created. Scoring high in the HH factor means that the individual can be described as honest in personality, and the opposite is true for scoring low in the HH factor. I employ an audit condition in this study, where roughly one half of the group will not be audited, while the other half will have a chance of being audited.

The first theory to discuss would be the agency theory, which states that people are willing to lie in order to increase their personal payoffs (Young, 1985). Moreover, the theory states that if there exists any sort of incentive to misreport, then people will. Therefore, if there is no chance of any repercussions, then classical agency theory states that individuals will take advantage of that (Cardinaels, 2016). In my study, I hypothesize that those with low scores of H-H will follow the agency theory.

Azjen (1991) founded the Theory of Planned Behavior, which states that a person will perform a behavior based on their intention to engage in such behavior, and the belief that they have complete control over their behavior. Fishbein and Azjen (1991) describe intention as the measure of the probability that a person will perform a behavior. This intention is also influenced by what value the individual places in the behavior. My interpretation of this theory as it relates to this study is that if someone believes that being honest is the right thing to be and they have control over this aspect, then they will

perform honest behavior. Therefore, this theory is hypothesized to predict the behavior of participants who score high in the H-H factor.

Lastly, our research uses the Theory of Reasoned Action, which was created by Fishbein and Azjen (1980) through scenarios observed by peers in their study. This theory states that behavioral intentions are affected by the social norms surrounding a behavior, an individual's attitude toward the behavior, and the perceived outcomes of the behavior. In Fleischman and Valentine's (2019) research on outcome information and its effects on managerial honesty, they found that outcome information was positively related to behavior intention. Outcome information can be described as the information of the consequences of an individual's actions, whether they be positive or negative. In our task experiment in the audit condition, the participants are told what their consequences will be if caught overreporting. My study uses this theory to hypothesize how participants will behave under the audit condition.

This leads to our hypothesis formulation of the overarching H1 and the two sub-hypotheses under H1 called H1a and H1b:

H1: An individual's score in the H-H factor and the presence of an audit will affect the budgetary reporting behavior.

H1a: If individuals score high in the H-H factor, then the amount of budgetary slack will not be affected by the threat of an audit

H1b: If individuals score low in the H-H factor, then the amount of budgetary slack will be affected by the threat of an audit.

Experiment Design and Procedures

This research was a 2x2 quasi-experiment on 46 undergraduate university students enrolled in Principles of Accounting 2. The participants were asked to complete a thirty-five question personality test, complete a budget task, and give demographic information. The original procedure of the experiment had to be modified due to effects of the COVID-19 pandemic. In early March, universities across the country moved to fully online classes due to the pandemic, and all campus events were cancelled. Our original experiment was to be conducted in person, but I was required to convert this experiment into a Qualtrics survey due to university restrictions.

The personality test used was shortened from the 60-item HEXACO-PI for survey brevity. The modified test became 35-item, and all ten statements from the factors Honesty-Humility, Conscientiousness, and Agreeableness were used. The remaining five questions were taken randomly from the other three factors. Two pilot studies were conducted in order to find if there was an acceptable variance between responses in the H-H factor. I found that most participants tended to respond with Neutral for the statements belonging to Honesty-Humility, so I changed the 7 point Likert scale to a 6 point Likert scale, omitting the Neutral choice. Participants could answer with Strongly Disagree, Disagree, Slightly Disagree, Slightly Agree, Agree, or Strongly Agree.

For the task instrument, I adapted the task from one of Evans et al.'s (2001) experiments that involved a direct trade-off between lying to maximize wealth, and reporting honestly. Participants received an online link to a Qualtrics survey that

contained the personality test and the task, with the order of these being randomized. For the task, the participants became the divisional manager of a manufacturing company. Their objective was to prepare the Direct Materials Budget for 10 periods with 100 units using a placeholder currency called Lira. The currency was used to set up a realistic scenario and dollar signs were used for simplicity. Before the survey was sent out, I used a computer simulator to roll 2 dice and the roll amount corresponded to a certain unit cost for the period between \$5 and \$6. The conversion chart can be found in the appendix. This unit cost will be the actual unit cost for the upcoming period. Therefore, the participant will know for certain what the unit cost will be for the period before they make their budget report. After reading the instructions, participants were given an example to show how they are reporting and how their earnings would be calculated. Participants would then report an estimated per-unit cost between \$4.90 and \$6.10 for their reported budget for each period. The estimated per-unit cost was multiplied by the 100 units to be produced to obtain the estimated direct materials cost for the period. Similarly, the actual per-unit cost was multiplied by the 100 units to be produced to obtain the actual direct materials cost. The actual cost was subtracted from the estimated cost to find the budget slack. Any positive slack that was created was converted into dollars and given to the participant as part of their salary. I used a random number generator to pick Period 6 to calculate payouts by converting each participant's excess funds and salary into real dollars. See the results and Figure 5 for the results of this calculation.

There were two different variations of the task given. One variation did not have an audit conducted, while the other had an audit conducted on five out of the ten periods.

Periods 2, 3, 4, 8, and 9 were decided randomly after the experiment. The consequence for misreporting in the audit periods was given in the task instructions. If a participant was caught misreporting in the audit, they would not receive any of the positive slack, and their salary would be cut in half. The condition of audit and no audit were set up to be split evenly between participants.

Participants' anonymity was treated with care in regards to payouts. The original procedure was to assign participants ID numbers and run the payout calculations with the IDs. Then, a graduate assistant to the College of Business would be given this list of ID numbers and payouts and disburse funds. The graduate assistant would have no background on the research. However, this procedure had to be modified due to the transition to the online survey. I created two surveys where one survey had the task, while the other was used to collect the emails of the participants. I coded the first survey to assign each participant a random Response ID, and then I coded the second survey to pull the Response ID from the first survey. Therefore the first survey responses only contained the Response ID and the participant's responses, and the second survey only contained the Response ID and participant's email. After calculating the payouts for each participant, the graduate assistant was given the first survey's Response IDs and correlating payouts, and the second survey's results showing the connection between Response ID and emails. Then the graduate assistant connected the payouts and emails so that they could appropriately pay participants via email. Therefore, I would not be able to identify participants by their email and connect them to their payout amount.

Results

Post-Survey General Results

The actual sample size for this experiment was 46 participants. 24 participants completed the No-Audit task and 21 participants completed the Audit-Task. One outlier was removed because they underreported each period, so I made the assumption that the participant did not fully understand the instructions.

Measuring H-H

Refer to Figure 1 in the appendix for the H-H factor questions mean responses by facet table. The questions relating to the H-H factor were organized by the underlying four facets: Sincerity, Fairness, and Greed Avoidance. All scores that required reverse scoring were modified in the data. Participants' scores on the Honesty-Humility test were compared against each questions' score mean and categorized into two groups: Low H-H and High H-H. 20 participants fell into the Low H-H category and 25 participants into the High H-H category.

Measuring Slack

Refer to Figure 2 in the Appendix for reporting frequencies by period. Each period had an average of 7 budgets that were under-reported. However, as the actual cost increased, the amount of negative slack increased. After reviewing each participant's response, there were 19 people who did not lie, 11 people who overreported, and 15 people who under and over reported across the periods. I am unsure of why these participants chose to under-report, but one possible cause was that the participants may

not have fully read the instructions or did not fully understand the instructions. When the responses were modified to not include participants who under reported, it was found that 36.7% strictly over reported and 63.3% reported honestly. One trend found by reviewing each individual response is that out of the group who strictly overreported, there was a wide variance in how much slack was produced. Some individuals would report on 5 cents over, while others would report as high as they could.

Figure 5 shows the payout frequencies of the participants. Since the payout period was #6, and the audited periods were 2, 3, 4, 8, and 9, then none of the participants were caught cheating. Thus, those who chose to report dishonestly were able to reap the benefits. Any negative slack was removed, so those who under reported only received the base salary. The conversion from Lira to Dollars was done by a .15 conversion factor. Therefore, if someone reported honestly and did not have any budgetary slack, then they would receive the base salary of 40 Lira. $40L * .15 = \$8.00$. Thirty participants received only the base salary, while 15 were able to receive more than the base salary. The highest payout was \$24.00

Testing Hypotheses

To test the hypotheses, I used the Factorial ANOVA test. Refer to Figure 4 in the Appendix for that data. In the factorial ANOVA test, the Total Slack across the 10 periods was set as the dependent variable, while the Audit Condition and H-H Category were set as the two independent categorical variables. The test produces a low R-squared value of .027, meaning that this model is not a good fit and does not explain the variation of the dependent variable of Total Slack. The audit condition variable had a significance

value of .782 and the H-H Score had a significance value of .969. The 2x2 interaction between HH-Category and Audit Condition had a significance value of .299. The interaction value can explain if the audit condition had different effects on the H-H category responses. With a set alpha-value of .05, it can easily be said that there is no correlation between Total Slack and the independent variables of Audit Condition and H-H Score in this test.

Discussion and Conclusions

This research's goal was to determine if there was any correlation or relationship between the Honesty-Humility factor and reporting behavior. It can be gleaned from this data that there is no correlation between the two. However, this could have been due to some external variables that were unexpected and uncontrollable. I believe that these were caused by the changes made due to the COVID-19 pandemic.

One effect of these external variables was that the sample size of this experiment was smaller than expected, which may be attributed to the conversion from in-person to online. The expected sample size was between 58 and 60 participants, but only 46 were obtained. Another major effect is that the task instructions could have been unclear for some of the participants. In the original procedure, there would have been an opportunity for a Q&A discussion in order to increase participant understanding of the task. However, in the online procedure, the participants would have to email one of the researchers in order to ask a question. For similar experiments in the future, there should be a section of questions that gauges the participants' understanding of the task. Because of this

confusion, some participants chose to both under and over report in the experiment. This means that any slack they gained in one period could have been cancelled out by a negative slack in another period, thus skewing the TotalSlack variable.

One assumption of this study to consider is that the audit condition only had a chance of the audit being performed. This variable may have influenced behavior outside of what the research's goal was. For example, a participant may have a high risk aversion and therefore may act in a different way than if the risk was eliminated. One assumption made in this study is that budgetary slack will always directly benefit the manager. In real life, budgetary slack may or may not directly affect the manager. The manager may be able to gain the excess slack by the form of embezzlement, or the slack may be used as a budget cushion and eventually be used for expenditures not related to business. This study solely focuses on if the manager were able to directly gain the budgetary slack.

Future research on this topic is certainly warranted as there is still much to be found about personality and its relation to managerial budgeting. One topic of research would be to replicate the current study with the addition of gathering data on social norms and how they affect behavior in the workplace. If this study were repeated, some recommendations would include obtaining a larger sample size and define the audit to be certain. Overall, future research is warranted to continue to understand the relation between personality and honesty in the managerial accounting field.

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Appendix: Tables

Figure 1

H-H Factor Questions Mean Responses by Facet

Measure	Mean	Std Deviation	Grouped Mean
Sincerity			
HH1	4.16	1.331	4.33
HH5	4.07	1.268	4.20
HH8	4.53	1.140	4.67
Fairness			
HH2	4.71	1.471	5.10
HH6	4.00	1.508	4.18
HH9	5.11	1.191	5.36
Greed Avoidance			
HH3	3.44	1.358	3.54
HH10	3.16	1.186	3.04
Modesty			
HH4	2.82	1.512	2.55
HH7	4.09	1.221	4.09

Figure 2

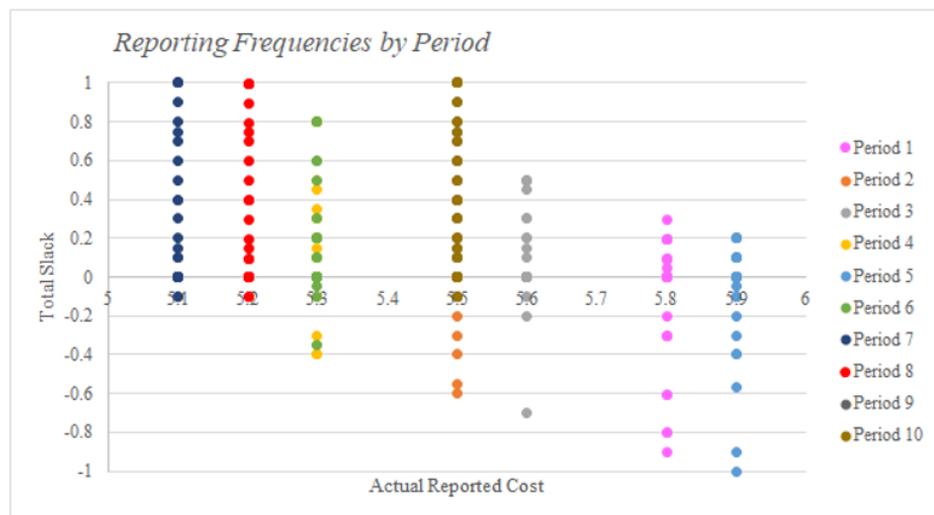


Figure 3

<i>Demographic Frequencies</i>			
Baseline Characteristic	n	%	cumulative %
Gender			
Female	27	60.0	60.0
Male	18	40.0	100.0
Age			
18-19	14	31.1	31.1
20-21	28	62.2	93.3
22 or >	3	6.6	100.0
Classification			
Freshman	1	2.2	2.2
Sophomore	26	57.8	60.0
Junior	15	33.3	93.3
Senior	3	6.7	100.0
Undergraduate GPA			
2.40-2.70	6	13.3	13.3
2.71-3.00	6	13.3	26.6
3.01-3.30	6	13.3	39.9
3.31-3.60	11	34.4	64.3
3.61-3.9	12	26.7	91.0
3.9 or >	4	8.9	100.0
Professional Work Experience			
none	23	51.1	51.1
1 to 3 years	17	37.8	88.9
4 to 6 years	5	11.1	100.0

Figure 4

<i>Factorial Anova with Total Budgetary Slack as Dependent Variable</i>					
Measure	df	MS	F	p	Effect Size
HH Category(A)	1	0.141	0.078	0.782	0
Audit Condition(B)	1	0.003	0.002	0.969	0.007
A x B	1	2.002	1.106	0.299	0.059
Error	41	1.81			

Figure 5

Frequencies Summary of Payouts to Participants

<i>Payouts</i>	<i>n</i>	<i>%</i>
Base Salary		
\$8.00	30	66.7
Base Salary + Slack		
\$10.00	2	6.7
\$12.00	6	13.3
\$14.00	1	2.2
\$18.00	1	2.2
\$20.00	2	4.4
\$24.00	3	6.7

*Note: Any negative slack was removed and the participant was just given the base salary

Appendix: Experiment Materials

Audit Condition Task

This experiment involves decision making in an organizational setting. Please read the instructions carefully because the amount of money you earn will depend upon the decisions you make. Your monetary payoff is not affected by the decisions of any other participants in this experiment.

During the experiment, it is important that you keep your decisions private. If you have any questions, please save your work and email the researchers before continuing on. During the experiment we will use an experimental currency called "Lira." The Lira you earn will be converted into dollars and you will be paid in cash at the end of the experiment. For the sake of simplicity, we will use dollar signs in the task.

You are the manager of a division of a manufacturing corporation. You make a salary of 40 Lira every period. Every period you must submit a budget request for direct materials of the products being produced in that period. This is called the Direct Materials Purchases Budget. Direct Materials to be purchased will always be 100 units.

The researchers have electronically rolled two dice in order to determine the unit price for direct materials. The actual unit price for each period ranges between \$5.00 to \$6.00

After this has been determined, you will report the Total Direct Materials Purchases. As the manager, you have the power to manipulate the unit price that you report on the budget. This means you can alter the unit price so that it can be above, below, or equal to the actual unit price. If there is any excess of Direct Material Purchases funds at the end of the period, then that excess will be kept by you as an addition to your salary. For this experiment, you can report as low as \$4.90 per unit or as high as \$6.10 per unit.

Please note that the corporate supervisor will implement an internal audit on the budget you submit. This will be done on 5 out of the 10 periods. If your reported per unit cost does not match the actual per unit cost, you will not receive any of the difference, and your salary will be cut in half. The researchers will randomize which 5 periods are chosen.

As a reminder, below is the calculation of the Total DM Purchases:

Direct Materials to be Purchased x Unit Price = Total Direct Materials Purchases

You will repeat this budget preparation 10 times. We will then pick one period randomly, and whatever excess profit was made by the manager will be converted to actual dollar amounts and will be awarded to you.

No Audit Condition Task

This experiment involves decision making in an organizational setting. Please read the instructions carefully because the amount of money you earn will depend upon the decisions you make. Your monetary payoff is not affected by the decisions of any other participants in this experiment.

During the experiment, it is important that you keep your decisions private. If you have any questions, please save your work and email the researchers before continuing on. During the experiment we will use an experimental currency called "Lira." The Lira you earn will be converted into dollars and you will be paid in cash at the end of the experiment. For the sake of simplicity, we will use dollar signs in the task.

You are the manager of a division of a manufacturing corporation. You make a salary of 40 Lira every period. Every period you must submit a budget request for direct materials of the products being produced in that period. This is called the Direct Materials Purchases Budget. Direct Materials to be purchased will always be 100 units.

The researchers have electronically rolled two dice in order to determine the unit price for direct materials. The actual unit price for each period ranges between \$5.00 to \$6.00

After this has been determined, you will report the Total Direct Materials Purchases. As the manager, you have the power to manipulate the unit price that you report on the budget. This means you can alter the unit price so that it can be above, below, or equal to the actual unit price. If there is any excess of Direct Material Purchases funds at the end of the period, then that excess will be kept by you as an addition to your salary. For this experiment, you can report as low as \$4.90 per unit or as high as \$6.10 per unit.

Please note that the corporate headquarters will not know the actual unit price for the period, but only what you report on the Direct Materials Budget.

As a reminder, below is the calculation of the Total DM Purchases:

Direct Materials to be Purchased x Unit Price = Total Direct Materials Purchases

You will repeat this budget preparation 10 times. Then you will turn your documents into the researchers. We will then pick one period randomly, and whatever excess profit was made by the manager will be converted to actual dollar amounts and will be awarded to you.

Task Example Problem:

Here is an example problem to demonstrate the instructions. Numbers in bold are those that you must complete yourself. The following is an example problem to how you may determine the profit received by the manager. In this situation, the actual unit price was \$5.50. As the manager, you decided to report that the estimated unit price was \$6.10.

Period: 1

Direct Materials to be Purchased	100 units
X Unit Price determined by dice	\$5.50 by roll of 7
= Total Actual Direct Material Purchases	100 units x \$5.50 = \$550

What unit price will you report on the Direct Materials budget report? \$6.10

Direct Materials to be Purchased	100 units
X Unit Price Reported	\$6.10
= Total Reported Direct Material Purchases	100 x \$6.10 = \$610

Profit to Manager = Total Reported DM Purchases - Total Actual DM Purchases
 = **\$610 - \$550**
 = **\$60**

Reporting Questions:

Q1: The actual per unit cost for Period 1 is \$5.80. The estimated per unit cost that you will submit to your supervisor must be between \$4.90 and \$6.10. The number of units this period is 100 units. What per unit cost will you report in your budget?

Q2: The actual per unit cost for Period 2 is \$5.50. The estimated per unit cost that you will submit to your supervisor must be between \$4.90 and \$6.10. The number of units this period is 100 units. What per unit cost will you report in your budget?

Q3: The actual per unit cost for Period 3 is \$5.60. The estimated per unit cost that you will submit to your supervisor must be between \$4.90 and \$6.10. The number of units this period is 100 units. What per unit cost will you report in your budget?

Q4: The actual per unit cost for Period 4 is \$5.30. The estimated per unit cost that you will submit to your supervisor must be between \$4.90 and \$6.10. The number of units this period is 100 units. What per unit cost will you report in your budget?

Q5: The actual per unit cost for Period 5 is \$5.90. The estimated per unit cost that you will submit to your supervisor must be between \$4.90 and \$6.10. The number of units this period is 100 units. What per unit cost will you report in your budget?

Q6: The actual per unit cost for Period 6 is \$5.30. The estimated per unit cost that you will submit to your supervisor must be between \$4.90 and \$6.10. The number of units this period is 100 units. What per unit cost will you report in your budget?

Q7: The actual per unit cost for Period 7 is \$5.10. The estimated per unit cost that you will submit to your supervisor must be between \$4.90 and \$6.10. The number of units this period is 100 units. What per unit cost will you report in your budget?

Q8: The actual per unit cost for Period 8 is \$5.20. The estimated per unit cost that you will submit to your supervisor must be between \$4.90 and \$6.10. The number of units this period is 100 units. What per unit cost will you report in your budget?

Q9: The actual per unit cost for Period 9 is \$5.50. The estimated per unit cost that you will submit to your supervisor must be between \$4.90 and \$6.10. The number of units this period is 100 units. What per unit cost will you report in your budget?

Q10: The actual per unit cost for Period 10 is \$5.50. The estimated per unit cost that you will submit to your supervisor must be between \$4.90 and \$6.10. The number of units this period is 100 units. What per unit cost will you report in your budget?

Demographic Questions

Q1: What gender do you identify as?

- Male
- Female
- Nonbinary/Genderfluid
- Prefer not to say

Q2: What is your age?

Q3: Classification

- Freshman
- Sophomore
- Junior
- Senior

Q4 Undergraduate GPA (enter best estimate if unsure)

Q5 Years of professional work experience (give as a whole number)

Personality Statements, Organized by Factor:

Honesty-Humility

Sincerity:

- I wouldn't use flattery to get a raise or promotion at work, even if it thought it would succeed (HH1)
- If I want something from someone, I will laugh at that person's worst jokes (HH5)
- I wouldn't pretend to like someone just to get that person to do favors for me (HH8)

Fairness:

- If I knew that I would never get caught, I would be willing to steal a million dollars (HH2)
- I would never accept a bribe, even if it were very large (HH6)
- I'd be tempted to use counterfeit money, if I were sure I could get away with it (HH9)

Greed Avoidance

- Having a lot of money is not especially important to me (HH3)
- I would get a lot of pleasure from owning expensive luxury goods (HH10)

Modesty

- I think that I am entitled to more respect than the average (HH4)
- I want people to know that I am an important person of high status (HH7)

Agreeableness

Forgiveness

- I rarely hold a grudge, even against people who have badly wronged me
- My attitude toward people who have treated me badly is "forgive and forget"

Gentleness

- People sometimes tell me that I am too critical of others

- I tend to be lenient in judging other people
- Even when people make a lot of mistakes, I rarely say anything negative

Flexibility

- People sometimes tell me I'm too stubborn
- I am usually quite flexible in my opinions when people disagree with me
- When people tell me that I'm wrong, my first reaction is to argue with them

Patience

- People think of me as someone who has a quick temper
- Most people tend to get angry more quickly than I do

Conscientiousness

Organization

- I plan ahead and organize things, to avoid scrambling at the last minute
- When working, I sometimes have difficulties due to being disorganized

Diligence

- I often push myself very hard when trying to achieve a goal
- I do only the minimum amount of work needed to get by

Perfectionism

- When working on something, I don't pay much attention to small details
- I always try to be accurate in my work, even at the expense of time
- People often call me a perfectionist

Prudence

- I make decisions based on the feeling of the moment rather than on careful thought
- I make a lot of mistakes because I don't think before I act
- I prefer to do whatever comes to mind, rather than stick to a plan

Other Factors

Emotionality

Dependence

- I can handle difficult situations without needing emotional support from anyone else

Openness to Experience

Aesthetic Appreciation

- I would be quite bored by a visit to an art gallery

Extraversion

Social Boldness

- I rarely express my opinion in group meetings

Sociability

- The first thing that I always do in a new place is to make friends

Liveliness

- On most days, I feel cheerful and optimistic