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FRAMING TAX AUDIT RISKS: THE ROLE OF TEMPORAL FRAMING AND PERCEIVED FAIRNESS

Christie L. Comunale, Charles A. Barragato and Denise Buhrau

ABSTRACT

In this study, we examine the role of temporal framing in the context of tax audit risk. Using construal-level theory, we propose that compared with an every-year frame (e.g., 1.5 million returns are audited every year), framing audit risk in an everyday frame (e.g., 4,000 returns are audited every day) will make audit risk seem more likely and thus increase taxpayer compliance. We test whether perceived fairness of the tax system, an individual difference variable related to tax compliance, moderates the effect of temporal framing on behavioral intentions. The results show that communicating risk in a day frame rather than a year frame increases compliance for taxpayers who perceive the tax system as unfair but not for taxpayers who perceive the tax system as fair. Increasing compliance among taxpayers who perceive the tax system as unfair is crucial, as they are less likely to be compliant. Thus, framing audit risk can assist in increasing taxpayer compliance.

Keywords: Construal-level theory; framing; fairness; temporal; individual differences; tax compliance

INTRODUCTION

The estimated US tax gap — the difference between taxes owed and taxes paid — is approximately US$450 billion (Black et al., 2012). Narrowing the tax gap is

crucial for reducing the federal deficit and has been of interest to regulators for many years (Abrams, 2007; Morgan-Thomas & Levine, 2012). Next to greater enforcement, motivating tax compliance is one way to reduce the tax gap.

Research on motivating compliance (e.g., Block & Keller, 1995; Rogers, 1983) has outlined the critical role of risk perceptions. More specifically, increased risk perceptions can increase compliance. One way to change risk perceptions is through message framing (Rothman, Salovey, Antone, Keough, & Martin, 1993). Research in marketing and psychology establishes the effects of message framing across myriad areas (for a review, see Levin, Schneider, & Gaeth, 1998). Studies show that altering the time frame of the message (temporal framing) can affect an individual's behavioral intentions and expectations (Chandran & Menon, 2004; Lo, Smith, Taylor, Good, & Von Wagner, 2012).

Tax literature has documented that individuals are more likely to engage in tax-compliant behavior if audit and detection risks are emphasized (e.g., Hasseldine, Hite, James, & Toumi, 2007; Iyer, Reckers, & Sanders, 2010). This suggests that taxpayer compliance can be motivated through the framing of audit risk. However, up to this point, tax literature has not explored the effects of temporal framing on taxpayer compliance.

Temporal framing is rooted in construal-level theory (CLT), a prominent social psychology theory (Liberman & Trope, 1998; Trope & Liberman, 2003) that thus far accounting researchers have largely ignored (Weisner, 2015). CLT uses the concept of psychological distance to explain the mental representation of a situation or an object. The theory proposes that the more distant (close) a situation, the more abstract (detailed) the individual will evaluate it. CLT names temporal distance, or time, as one of the four dimensions of psychological distance (see Fig. 1).

In this study, we employ the temporal distance dimension of CLT in a taxpayer compliance scenario by varying the frame of actual audit rates in terms of days and years. We argue and find that the framing of audit risk will serve to increase the persuasiveness of the risk and thus increase compliance intentions for individuals who are less likely to be compliant – specifically, taxpayers who view the tax system as unfair. Conversely, we posit and find that individuals who view the tax system as fair and thus are typically compliant will not be influenced by the manipulation of audit frame.

Our results should be of interest to researchers and to policymakers who aim to improve tax compliance. It complements the work of Iyer et al. (2010), who find evidence that sending educational communications about penalties and enhancing awareness of the risk of detection result in significant increases in the reported tax base. By employing a temporal difference dimension, revenue authorities can serve to increase the persuasiveness of audit risk and associated tax compliance at the prefiling stage or at the time when choices are initiated, rather than after the fact.

In addition, we build on the work of Alm and Torgler (2011), who suggest that from a practical perspective, though it is not unreasonable for any government administrative body to initiate an approach based on detection and punishment as a starting point for tax administration, a more "multifaceted"
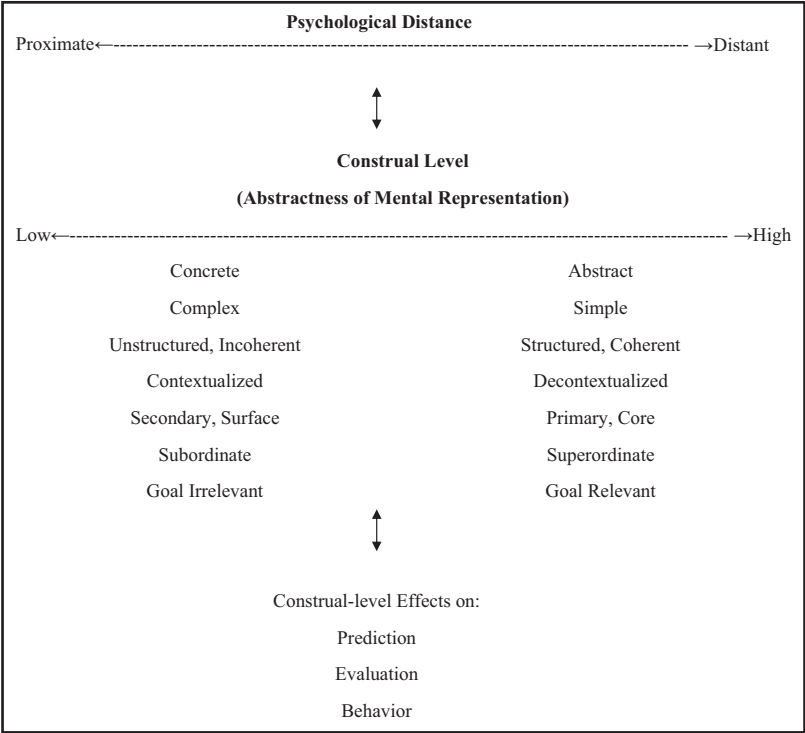
Psychological Distance

Proximate←-- →Distant

Construal Level

(Abstractness of Mental Representation)

Low←-- →High

Concrete	Abstract
Complex	Simple
Unstructured, Incoherent	Structured, Coherent
Contextualized	Decontextualized
Secondary, Surface	Primary, Core
Subordinate	Superordinate
Goal Irrelevant	Goal Relevant

Construal-level Effects on:

Prediction

Evaluation

Behavior

Fig. 1. CLT of Psychological Distance. *Source*: Adapted from Weisner (2015).

approach is warranted. Our study augments this multifaceted approach by introducing temporal framing and CLT to tax compliance research, which, to the best of our knowledge, has heretofore not been examined. Our results also show that perceived fairness is a moderator variable. This suggests that one simple step such as publicizing audit risk in a day frame rather than a year frame can increase tax-complaint behavior for those individuals who perceive the tax system as unfair.

We organize the remainder of this paper as follows: In the next section, we review the literature on taxpayer compliance as it relates to detection risk and perceived fairness of the tax system. We then introduce CLT and develop our hypotheses accordingly. We follow this with a discussion of our data, method, and results. We conclude with implications and future research suggestions.

REVIEW OF THE LITERATURE

Detection Risk and Taxpayer Compliance

The threat of detection is an important (and greatly studied) factor in increasing taxpayer compliance. Allingham and Sandmo (1972) were the first to explore

the theoretical relationship between the threat of detection and taxpayer compliance. Allingham and Sandmo model taxpayer compliance using Becker's (1968) economic approach to criminal behavior. They find that increases in the probability of detection lead to increases in taxpayer compliance. However, their model, which also includes income, tax rate, and penalty rate, does not fully explain taxpayer compliance. Indeed, literature suggests that detection risk is positively associated with compliance but finds that the relationship between detection risk and taxpayer compliance is weak and often yields ambiguous results (Alm, 1991; Alm, Jackson, & McKee, 1992; Alm, McClelland, & Schulze, 1992; Friedland, Maital, & Rutenberg, 1978; Roth, Scholz, & Witte, 1989; Slemrod, Blumenthal, & Christian, 2001; Webley, Robben, Elffers, & Hessing, 1991).

Fischer, Wartick, and Mark (1992) conduct a comprehensive review of the tax compliance literature. They suggest that one reason for these mixed results is the use of researcher-provided detection rates rather than the individual's own assessment of detection risk. They suggest that the actual construct that increases compliance is taxpayers' perceptions of detection risk. Roth et al. (1989) note that the measurement of the relationship between perceived detection risk and taxpayer compliance is still in its early stages.

Some studies agree that taxpayer compliance increases with a greater perceived probability of being audited (Carnes & Englebrecht, 1995; Kinsey, 1991; Klepper & Nagin, 1989; Sheffrin & Triest, 1992). Klepper and Nagin (1989) create several scenarios of a hypothetical taxpayer and his or her unreported income and overstated charitable contributions. Participants were asked to provide perceptions of detection risk, perceptions of criminal prosecution, and their likelihood of noncompliance. The authors find that perceived detection risk and perceived criminal prosecution are significant factors in taxpayer compliance. Similarly, Carnes and Englebrecht (1995) explore the relationship between perceived detection risk and levels of income visibility (i.e., low, medium, and high). They find that perceived detection risk is positively related to income visibility. Moreover, controlling for income visibility, they show that perceptions of detection risk increase taxpayer compliance.

Perceived Fairness of the Tax System and Taxpayer Compliance

In reality, taxpayers face a low probability of audits and small fines for detected tax noncompliance. Thus, Becker's (1968) economic model would predict that tax noncompliance is widespread. However, this is not the case; compliance is surprisingly high (Alm et al., 1992), suggesting that influences beyond economic factors are important in deterring noncompliance. Research finds that psychological factors such as attitudes, norms, and perceived fairness of the tax system are equally important to economic factors in increasing taxpayer compliance (Kirchler, 2007; Kirchler, Hoelzl, & Wahl, 2008).

Fairness is associated with the perceived balance of taxes paid and public goods received, and to the perceived justice of procedures and consequences of

breaking established norms (Hoffman, Huelzland, & Kircher, 2008). Types of fairness in the context of tax behavior include distributive justice, procedural justice, and retributive justice. For an extensive discussion of these various types of fairness constructs, see Wenzel (2003).

Other tax experimental literature suggests that the Bomb Crater Effect impacts compliance decisions. More specifically, the phenomenon that tax compliance drops immediately after a taxpayer is audited is explained either by the misperception of chance, consistent with the gambler's fallacy or by the loss of repair effect, whereby taxpayers evade more after audits where they pay a fine, which is consonant with the sunk cost fallacy (Mittone, Panebianco, & Santoro, 2017).

In their slippery-slope framework, Kirchler et al. (2008) suggest that taxpayer compliance depends on both economic and noneconomic factors. That is, taxpayers comply because they are fearful of the authorities or because they feel an obligation to do so. The fearful dimension relates to the perceived *power* or the enforced compliance of the authorities and includes economic factors such as penalties and audit rates. The sense of obligation relates to *trust* in the authorities and voluntary cooperation and includes noneconomic factors such as attitudes, norms, and perceived fairness of the tax system. In our study, we focus on both an economic (perceived detection risk) and a noneconomic (perceived fairness of the tax system) factor.

Individuals view fairness as a basic entitlement; perceived unfairness can lead to powerful emotions. Etzioni (1986) suggests that if individuals believe that taxes are unfairly imposed, they are more likely to evade paying taxes. Taxpayers are less likely to be compliant when they perceive the tax system as unfair (Falkinger, 1995; Kim, Evans, & Moser, 2000; Moser, Evans, & Kim, 1995; Richardson, 2008; Roberts & Hite, 1994). Jackson, Milliron, and Toy (1986) suggest that tax fairness relates to the equity of trade (i.e., the benefits received for the tax dollars given) and to the equity of the taxpayer's burden in relation to that of other individuals. That is, taxpayers who assess that they are paying more than their perceived benefit (i.e., exchange inequity) or who view that they are paying more than others pay (i.e., horizontal inequity) will evaluate the tax issue as less equitable. Such taxpayers will attempt to rectify this perceived inequity by reducing tax compliance (e.g., Maroney, Rupert, & Wartick, 2002; Moser et al., 1995; Van der Heijden, Nelissen, & Potters, 2007).

Extending Ajzen's (1991) Theory of Planned Behavior (TPB), Bobek and Hatfield (2003) argue that within the context of taxpayer compliance, perceived behavior control does not refer to an individual's belief about the ease or difficulty of cheating in general, but rather how much control an individual believes he or she has to carry out a particular behavior (e.g., underreporting wage income, taking an unauthorized deduction). Thus, TPB refers to specific behavior choices that include a person's beliefs about outcomes that will result from a specific behavior.

CLT and Taxpayer Compliance

As discussed previously, individuals are more likely to engage in tax-compliant behaviors when confronted with audit and detection risks (e.g., Hasseldine et al., 2007; Iyer et al., 2010). Indeed, detection rates are a major factor in taxpayer compliance (Park & Hyun, 2003; Porcano, 1988; Slemrod, 2007). Outside the tax compliance literature, research on motivating compliance has shown that increased perceptions of risk can increase compliance (Block & Keller, 1995; Rogers, 1983). Message framing is one way to change risk perceptions (e.g., Rothman et al., 1993).

Temporal framing is rooted in CLT (for a review, see Trope & Liberman, 2010), which posits that the same event can be construed at high or low levels. High-level construals are rather abstract mental representations; that is, they are likely to represent events in terms of general, superordinate, and decontextualized features of objects and events. Low-level construals are rather concrete mental representations; that is, they include specific, subordinate, and incidental features (Trope & Liberman, 2000). For example, eating an apple can be thought of as "getting nutrition" (a high-level construal) or as "taking a bite" (a low-level construal).

The theory equates a distant mind-set with a high level of construal and a proximate mind-set with a low level of construal. For example, Liberman and Trope (1998) manipulated the level of abstractness by asking participants to describe an event that is happening either tomorrow or next year. While participants described "cleaning the house" as "vacuuming the floor" (a low-level, concrete construal) in the "tomorrow-"frame condition, they described it as "showing one's cleanliness" (a high-level, abstract construct) in the year-frame condition. CLT contends that people use high-level construals to represent psychologically distant objects because those construals are more likely than low-level construals to remain unchanged as people get closer to an object or farther away from it. For example, the higher goal of having a clean house can be viewed as being more consistent and unchanged over time than the more concrete goal of vacuuming the floor.

An event is psychologically distant if it is not part of an individual's direct experience. CLT defines four dimensions of psychological distance: time (temporal distance), space (physical distance), social (interpersonal distance), and hypothetical (imagining that an event is likely or unlikely; Trope & Liberman, 2010). For temporal distance, future events are more distant in time than current events. An individual will evaluate future events in high-level, abstract terms. Similarly, for physical distance, the more space between the individual and the item, the more highly and abstract the individual will evaluate it. For interpersonal distance, the less similar others are to oneself, the more socially distant they tend to seem. Actions of dissimilar people are described on a more abstract level than actions of similar people. Finally, for hypothetical distance, people expect unlikely events, compared with likely events, to occur in situations that are relatively more distant in time, space, and social distance.

Construal level also impacts loss aversion.[1] More specifically, decision-makers are less loss averse making decisions for others versus making decisions for themselves (Beisswanger, Stone, Hipp, & Allgaier, 2003; Polman, 2012).

HYPOTHESES DEVELOPMENT

According to CLT, near temporal distance is something that is "near in time," whereas far temporal distance is something that is "far in time." For example, temporal distance is greater when considering a vacation that will occur in one year than a vacation that will occur in one week. Chandran and Menon (2004) discover a relationship between temporal distance and risk perceptions. They vary the rates of occurrence of health hazards by specifying risks as occurring every day or every year. They find that the everyday frame makes risks appear more proximal and concrete than risks provided in the every-year frame. More specifically, when given the risk of contracting mononucleosis, participants presented with their everyday risk indicated a higher perceived risk of contracting the disease than participants in the every-year frame.

Chandran and Menon (2004) also link temporal framing to CLT's temporal distance. They suggest that though there is no objective time difference between a day-frame risk and a year-frame risk, a day-frame risk triggers temporal frames associated with the near future and a year-frame risk triggers temporal frames associated with a distant future. They find that CLT's temporal distance translates into temporal framing and subsequently influences the perceived proximity of an event and the resulting evaluation, prediction, and behavior.

We use this finding in our study and apply it to Internal Revenue Service (IRS) audit risk scenario. We argue that these temporal difference effects will map to temporal framing, i.e., when audit risk is presented in a day frame, the risk will be interpreted as being more concrete as compared to the year frame, which in turn will enhance the efficacy of deterrence and lead to better tax compliance.

We examine the effect of framing in a tax audit scenario using two temporal frames. We vary audit risk in terms of days (the IRS audits × returns every day) and years (the IRS audits × returns every year) using actual 2014 audit rates (Alm, 1991). CLT suggests that individuals in the day frame will view the risk of audit more concretely and thus perceive a higher detection risk than individuals in the year frame. If so, this would lead to greater taxpayer compliance than that demonstrated in the year frame. We further argue that temporal framing will impact one's self-risk assessment as to audit probabilities such that these probability estimates will be higher in a day versus year frame. However, we posit that the perceived fairness of the tax system will moderate this effect. That is, we predict that temporal framing will interact with perceived fairness to effect compliance.

Prior research suggests that certain individual differences can moderate the effects of temporal framing (Bearden, Money, & Nevins, 2006; Joireman, Strathman, & Balliet, 2006; Kees, 2010; Lasane & Jones, 2000; Zimbardo & Boyd, 1999). For example, research demonstrates that individuals can be categorized into future or present orientations. Future-oriented individuals have a

chronic tendency to consider and protect themselves from risks that may not occur for many years, or that may never occur. This is inconsistent with CLT. Therefore, it is unclear whether CLT's temporal framing effects would be consistent across all individuals.

Since prior research demonstrates that the perceived fairness of the tax system is a critical element to taxpayer compliance (Braithwaite, 2003; Rawlings, 2003; Taylor, 2003), we argue that perceived fairness is an individual difference that will moderate the effect of temporal framing (Bobek & Hatfield, 2003). A tax system perceived as unfair is associated with increased noncompliance (e.g., Baldry, 1987; Cowell, 1992), whereas a system deemed fair is associated with increased voluntary compliance (Kirchler et al., 2008; Muehlbacher, Kirchler, & Schwarzenberger, 2011; Palil, Akir, & Ahmad, 2013). We argue that individuals who view the tax system as unfair (and more likely to be noncompliant) will be influenced by the manipulation of audit frame. Conversely, individuals who view the tax system as fair are more likely to be compliant and thus are less likely influenced by the manipulation of audit frame. That is, taxpayers who are typically noncompliant would be more sensitive to the temporal framing of the audit risk than compliant taxpayers. The framing of audit risk will serve to increase the persuasiveness of the risk and thus increase compliance intentions for those who are more likely to be noncompliant − that is, taxpayers who view the tax system as unfair. We do not expect to find this effect for taxpayers who view the tax system as fair, as they would already be compliant. Thus:

> H1: Individuals who view the tax system as unfair will possess higher compliance intentions when audit risk is framed in a day frame than a year frame.

> H2: Individuals who perceive the tax system as fair will report similar levels of compliance across temporal frame conditions.

METHOD

Respondents and Design

One hundred thirty-four US residents were recruited from Amazon Mechanical Turk (MTurk)[2] to participate in a study on perception of the federal income tax system. The study was a two-factor between-subjects design, with temporal frame (day vs year) as a manipulated variable and fairness perception as a measured individual difference (continuous) variable. Respondents were randomly assigned to the temporal frame conditions. Qualtrics.com hosted the questionnaire, and a Human Intelligence Task (HIT) was created on MTurk that directed workers to the site. All workers who agreed to complete the HIT were included in the study. The data were collected in February 2015, right in the middle of tax season.

Table 1 provides detailed demographic information about the respondents. Sixty-three percent of the respondents were male, and the median age was 30 years. Around half the respondents (47%) earned less than US$30,000 in 2014.