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Languages and earnings management☆

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ABSTRACT

We predict that managers of firms in countries where languages do not require speakers to grammatically mark future events perceive future consequences of earnings management to be more imminent, and therefore they are less likely to engage in earnings management. Using data from 38 countries, we find that accrual-based earnings management and real earnings management are less prevalent where there is weaker time disassociation in the language. Our study is the first to examine the relation between the grammatical structure of languages and financial reporting characteristics, and it extends the literature on the effect of informal institutions on corporate actions.

1. Introduction

In this paper, we investigate how languages are associated with earnings management in different countries. Languages differ in the way they encode time.[1] Following the linguistics literature, we separate languages into two types based on the way they encode time: strong future-time reference (FTR) languages, such as English, and weak FTR languages, such as German. Strong FTR languages require speakers to mark the timing of events in a distinct way, whereas weak FTR languages do not. In a weak FTR language, future events are talked about in the present tense. This may lead these speakers to perceive future events to be relatively less distant. According to Dahl (2000) and Thieroff (2000), marking future events mandatorily through future tense, for example, by using the verb "will" in English,

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[1] The following example is from Chen (2013). "For example, a German speaker predicting rain can naturally do so in the present tense, saying: Morgen regnet es which translates to 'It rains tomorrow'. In contrast, English would require the use of a future marker like 'will' or 'is going to', as in: 'It will rain tomorrow'." German is denoted as a weak future-time reference (FTR) language, because it does not require speakers to encode a distinction between present and future events.

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reduces a person's concern about the future, because it increases the psychological distance from and reduces the psychological importance of the future.

Consistent with this argument, Chen (2013) finds that when the grammatical structure of a language disassociates the future from the present, speakers of the language also disassociate the future from the present in their behavior. Specifically, Chen (2013) shows that people whose language does not require them to grammatically mark future events (weak FTR languages) save more than those whose language requires them to grammatically mark future events (strong FTR languages). He also shows that people speaking weak FTR languages engage in more future-oriented behavior, such as more exercise and less smoking, than those speaking strong FTR languages. Given that weak FTR languages reduce psychological distance from the future (Dahl, 2000; Thieroff, 2000), managers in countries with weak FTR languages are likely to perceive future consequences of earnings management, such as possible restatements, enforcement actions, litigations, and dismissals, to be more imminent. Thus, we argue that firms in countries with weak FTR languages are likely to engage in less earnings management than firms in countries with strong FTR languages.

Using a large sample of firms from 38 countries, we examine whether accrual-based and real earnings management are less prevalent in countries with weak FTR languages than in countries with strong FTR languages. After controlling for various properties of formal institutions (legal origin, economic growth, ownership concentration, and creditor rights) and country-specific cultural characteristics (uncertainty avoidance, masculinity, individualism, and power distance), we show that firms associated with weak FTR languages engage in less accrual-based and real earnings management than firms in countries with strong FTR languages. Through country-level regressions, we also show that weak FTR languages are associated with more extensive external equity markets and less earnings management aggregated at the country level.

Although we control for various country-specific characteristics, our regressions are fundamentally cross-country and may omit important differences between countries not captured by these controls. To further isolate linguistic effects from confounds that vary on the country level, such as taxes, institutions, and capital markets, we also conduct a within-country analysis based on the birthplace information of U.S. firms' CEOs. We code the languages by CEOs' countries of origin. Because we focus on U.S. firms only, we are able to control for the effects of formal institutions that differ across countries. Fernández (2011) suggests that when individuals emigrate from their native country to a new country, their cultural beliefs and values travel with them, but their external economic and institutional environments are left behind. We find that CEOs born in countries with weak FTR languages engage in less earnings management than CEOs born in countries with strong FTR languages, confirming our results in cross-country regressions.

Our results are robust to excluding U.S. firms and to excluding firms in Belgium and Singapore, where a significant percentage of population uses different languages. Our results are also robust when we replace a dichotomous classification of FTR in languages with continuous measures based on a word-frequency analysis of online texts. Additional controls for cross-country differences in insider trading restrictions and compliance between financial and tax reporting do not change the tenor of the results. We further find that the negative relation between weak FTR languages and accrual-based earnings management is less pronounced for firms that issue American Depository Receipts (ADRs), suggesting that international exposure attenuates the relation between languages and earnings management.

Linguistically induced bias in time perception and lower precision of beliefs about time can lead weak FTR speakers to apply lower discount rates (Chen, 2013), making future cash flows and earnings relatively more valuable to weak FTR speakers than to strong FTR speakers. Under this scenario, weak FTR speakers are less likely to undertake income-increasing earnings management that shifts earnings from the future to the present, but could engage in more earnings management that shifts earnings from present to future periods. Concerns about the future negative consequences of earnings management, however, encourage weak FTR speakers to avoid both income-creasing and income-decreasing earnings management. Our evidence shows that both income-increasing and income-decreasing earnings management are negatively associated with weak FTR languages, suggesting that concerns about future negative consequences of earnings management dominate the discount rate effect.

Our study makes several important contributions to the literature. First, we contribute to the emerging literature that examines the effects of informal institutions on corporate behavior. Although studies that examine the effects of formal institutions on corporate policies are abundant, evidence on the effects of informal institutions, such as culture, values, and religion, is relatively scarce. Prior studies that investigate the effects of informal institutions focus on religion (e.g., McGuire et al., 2012) and culture (e.g., Han et al., 2010). Our study is the first to show the systematic relation between languages and earnings management.

Second, our study is the first to combine accounting and the grammatical structure of languages, more specifically, how languages mark time, and attempts to build a link between languages and cross-country variances in earnings management. A few recent studies examine the relation between linguistic complexity and disclosure. Lundholm et al. (2014), for example, find that foreign firms listed on U.S. stock exchanges write clearer text in the Management Discussion and Analysis section of their 10-Ks and write more readable text in their earnings press releases than do comparable U.S. firms. Brochet et al. (2016) find a negative relation between linguistic opacity and the investor reaction to conference calls. While these studies focus on how linguistic complexity associates managerial choice of and investors' reactions to disclosure, we add to the literature by examining how the grammatical structure of languages relates to financial reporting characteristics.