

From Bored to Board: How Humor Leads the Way

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Abstract

Humor is a common feature of workplace interaction, yet its role in formal governance settings such as boardroom meetings remains poorly understood. While governance research has increasingly focused on interactional dynamics, little is known about how humor shapes collective engagement during formal decision making. This study examines how different humor styles, affiliative and aggressive humor, relate to director engagement in boardroom meetings. Drawing on video recordings of 25 board meetings from two Dutch water authorities, the study analyzes humor as it naturally occurs in a public governance context. Director engagement is operationalized as the number of unique speakers per agenda item, and humor instances are systematically coded as affiliative or aggressive. Hierarchical regression analyses, robustness checks, and a negative binomial regression are used to test the hypotheses. The findings show that affiliative humor consistently and positively relates to director engagement by encouraging a larger number of board members to contribute to the discussion. In contrast, aggressive humor does not show the expected negative relationship with engagement. Instead, its effects are weaker and inconsistent, and in some robustness models even slightly positive, indicating that its influence depends on context. Overall, the findings indicate that inclusive, relationship oriented humor plays an important role in promoting engagement in highly structured governance settings.

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Introduction

Humor is a common part of everyday workplace interaction and plays an important role in shaping relationships and interpersonal dynamics at work (Cooper, 2008). Research has shown that humor can influence both vertical relationships between leaders and subordinates and horizontal relationships among colleagues (Cooper, 2004). In recent years, Governance research has increasingly moved inside the boardroom by examining how interactional behaviors, such as emotional displays during boardroom meetings, influence strategic decision-making (Van den Oever & Shropshire, 2024). This shift highlights the importance of studying board meetings as interactional settings rather than purely formal decision-making arenas. However, while emotions have started to receive scholarly attention in this context, humor as a distinct form of communication in boardroom meetings remains largely understudied.

Although humor has been widely studied in leadership and organizational contexts, most research has focused on informal workplace environments and on relational or perceptual outcomes, such as trust, leadership support or relationship quality (Pundt & Herrmann, 2015). Far less attention has been given to how humor relates to engagement, particularly in settings where engagement is collective and highly structured, such as a boardroom meeting. As a result, it remains unclear how humor shapes engagement during formal decision-making processes. This leaves an important gap in understanding whether and how humor influences who contributes, how broadly engagement is distributed, and how interaction unfolds in formal organizational settings.

This thesis addresses this knowledge gap by examining humor as an interactional behavior that may influence director engagement during boardroom meetings. A board is made up of board members, such as the board of directors, and a board meeting is led on by a board chair (Krause et al., 2016; Krause et al., 2024) . Humor is treated as a communicative act that occurs naturally during an interaction. Director engagement is defined as the extent to which individual board of directors actively participate in and take responsibility for each phase of the board's decision-making process: discovery, deliberation, and decision (Krause et al., 2024). Previous research shows that humor can shape social interaction and interpersonal dynamics in organizational settings (Romero & Cruthirds, 2006). By studying humor as it naturally occurs during boardroom

meetings, this research explores how humor relates to engagement within a highly structure governance context.

Understanding how humor relates to engagement is particularly important in boardroom settings, where interaction is shaped by hierarchy and formal procedures (Boivie et al., 2021). Board meetings do not automatically encourage equal engagement, making them a valuable context for studying engagement dynamics. This thesis focuses on Dutch water authority boards, a public governance setting that is often assumed to differ fundamentally from private organizations. However, prior research shows that differences between public and private organizations are frequently overstated and that their governance structures are comparable in many ways (Van den Oever & Shropshire, 2024). The boards of Dutch water authorities share key responsibilities with corporate boards, including oversight, deliberation and strategic decision-making. Studying humor in this context therefore offers the potential to generate insights that are relevant to the academic literature.

Although humor plays an important role in leadership, little is known about its impact in boardroom settings, which represent some of the most formal and important workplace environments. This study addresses this literature gap by examining how affiliative humor and aggressive humor relate to director engagement during boardroom meetings. Accordingly, the following research question guides this study: ***How does board members' use of Affiliative and Aggressive humor influence Director Engagement in boardroom meetings?*** These two humor styles are examined as distinct forms of interactional behavior, allowing this study to assess how different uses of humor are associated with engagement among board members.

This thesis contributes to research on governance and organizational communication in several ways. First, it advances boardroom research by examining engagement as an outcome of humor. Second, it extends humor research by examining humor in a formal governance context rather than in informal workplace settings (Pundt & Venz, 2017). Finally, by relying on observations in a real boardroom setting, this study provides direct evidence of how humor relates to engagement in boardroom interaction. Together, these contributions offer a clearer understanding of how everyday communication shapes engagement in formal decision-making settings.

Theoretical Framework

Board of Directors

According to Krause et al. (2024), the board of directors is the highest decision-making body in the organizational hierarchy. The board of directors is the highest legal authority for public corporations, allowing the board of directors to have substantial influence due to their unique position working with and being part of the upper echelon (Boivie et al., 2021). According to Molz (1985), the board of directors is a body that has been given the authority to make financial decisions that impact the security of workers, the wealth of communities, the power and benefits of executives, and the capital of investors. Moreover, according to Dalton et al. (2007), the main responsibility of the board of directors is to supervise in order to guarantee that management and shareholder interests are aligned. Researchers have also argued that the role of the board of directors is to provide critical resources to the organization (Boivie et al., 2021). In addition, the strategic role of the boardroom has also become an important focus for governance advisors (Boivie et al., 2021). With that being said, the board of directors fulfil the following three primary roles: the monitoring function, the resource provision function and the strategic function. Each function will be discussed one by one.

Monitoring Function

The monitoring role entails exercising control over the decisions made by top management regarding the operation of the company (Jensen & Meckling, 2019). This is typically accomplished by directly approving decisions (Baysinger & Hoskisson, 1990) or by aligning executive interests (Brickley et al., 1985). Furthermore, the monitoring role involves supervising executive decisions on behalf of shareholders in order to reduce the possibility of managerial opportunism, which may result due to the separation of principals, who own the company, and agents, who manage it on their behalf (Dalton et al., 2007; Fama & Jensen, 1983). According to Baysinger & Hokisson (1990), the board of directors can monitor the executives through two processes: “decision control” and “outcome control”. Outcome control allows the board of directors to review agency concerns by evaluating organizational performance, whereas decision control ensures that the board of directors have the final say in decision ratification (Boivie et al., 2021).

Resource Provision Function

The second responsibility of the board of directors, known as resource provision, entails “*providing access to resources like advice, counsel, knowledge of external events, and/or influence with external stakeholders*” (Boivie et al., 2016, p. 9). The resource provision role refers directly to the ability of the board of directors to bring resources to the organization, resources being defined as anything that can either be beneficial or a weakness towards a given organization (Hillman & Dalziel, 2003). According to (Boivie et al, 2016), a large portion of this resource provision takes place outside of the official board meeting setting and can include giving unofficial advice and counsel, directing strategic change, elevating the firm's standing and reputation, improving communication with the firm's surroundings, and granting access to outside resources (Withers et al., 2018).

Strategic Function

Lastly, the strategic function argues that the role of the board of directors should evolve to include taking a more active part in the strategic decision making of the firm (Boivie et al., 2021; Krause et al., 2024). The shifting institutional landscape and a renewed emphasis on director involvement are reflected in this emphasis on the board’s strategic influence (Boivie et al., 2021).

Important topics are discussed at board meetings in order for the board to fulfill their duties. There is a lot to get done at each board meeting because the board of directors meet four to ten times a year on average (Dalton & Dalton, 2005). Managers and directors use a decision-making process to discuss information and reach a consensus during board meetings (Bezemer et al., 2018). According to Krause et al. (2024), the board decision-making process consists of three stages. The first is discovery, in which the board obtains pertinent data for a proposal. In the second phase, known as deliberation, board members discuss the idea from their respective points of view. Finally, there comes the decision phase, where the board decides whether or not to take action on the proposal. Reducing biases in decision-making is one of the boardrooms difficult responsibilities (Krause et al., 2024). Decision results could be distorted if board of directors are swayed by the CEO's or their own prejudices. Mechanisms to reduce these biases and guarantee unbiased, knowledgeable decision-making are necessary for effective governance.

Director Engagement

Although there is not yet a wide agreed upon definition or conceptualization of director engagement, the work of Krause et al. (2024) concerning director empowerment, refers to director engagement as the extent to which individual board of directors actively participate in and take responsibility for each phase of the board's decision-making process: discovery, deliberation, and decision.

Krause et al. (2024, p. 794) describes director empowerment as the following in his work: “*the extent to which the board leader shares power with the other directors, encouraging them to take individual or collective responsibility for each respective phase of board decision-making*”. With that being said, director empowerment is therefore the enabling condition for director engagement (Krause et al., 2024). Director engagement is expressed behaviorally, through directors gathering information, contributing perspectives, debating alternatives, and participating in final choices (Krause et al., 2024). According to Krause et al. (2024), director engagement involves 3 pivotal steps: 1) active information gather (discovery phase), 2) open contribution and discussion (deliberation phase), and 3) collective responsibility and resolution (decision phase).

In the discovery phase, the board of directors seek unique or additional information beyond what the CEO provides. Empowered directors are “*free and even encouraged to pursue lines of inquiry with the CEO... and relevant outside contractors*” (Krause et al., 2024, p. 797). As for the deliberation phase, director engagement involves sharing and elaborating on information, especially unique perspectives. According to Krause et al. (2024), director engagement depends on “participative leadership”, where the board chair ensures that every board of director has the opportunity and psychological safety to speak. Regarding the last phase, which is the decision phase, director engagement culminates in board of directors working toward choice consensus, not silence or deference (Krause et al., 2024). In fact, disengagement leads to outcomes such as “silent disagreement” or “illusory oversight”, where boardrooms appear active but fail to challenge bias (Krause et al., 2024).

It is important to realize that it is the responsibility of the board chair to manage the boardrooms discovery, deliberation, and decision activities (Krause et al., 2019; Krause et al., 2024). An empowering board chair will lead to an increase in director engagement; encouraging initiatives, psychological safety, and information sharing (Krause et al., 2024). On the contrary, a directive chair (expecting board members to follow instructions) will lead to a decrease in engagement; centralizing control and discouraging participation (Krause et al., 2024).

Moreover, according to Veltrop et al. (2021), board chair empowerment is necessary for board of directors to feel psychologically safe enough to question the CEO. In fact, previous research has demonstrated that minority directors face many barriers to engagement, and they are likely to engagement more when exposed to a psychologically safe and empowered environment by the board chair (Krause et al. 2024). Thus, the board chair acts as both a facilitator and protector of director engagement.

The importance of the role of the board chair on director engagement is also emphasized in the work of Bezemer et al. (2018), indicating that the board chair can play a particularly pivotal role in facilitating director engagement. Research suggests that correctly facilitating a boardroom meeting by the board chair is very important to director engagement in the decision process (Bezemer et al., 2018). A board chair that manages to facilitate a meeting well has shown to create a predictable and safe arena in which board of directors can participate freely, by removing uncertainties and ambiguities that surround the boardroom processes and dynamics (Bezemer et al., 2018). In addition, by guaranteeing that board of directors are able to participate meaningfully, board chairs create the stage for an effective meeting by directing and facilitating the sharing and clarification of information (Bezemer et al., 2018).

Humor

The sharing of humor within the workplace is a common and widespread phenomenon (Cooper, 2008). Humor is considered a social activity that affects relationships and interpersonal dynamics within the workplace (Cooper, 2008). According to Cooper (2005), humor can be utilized as a powerful tool to address the cognitive and emotional challenges related with the workplace, given the fact that humor is proven to promote a positive workplace environment (Cooper & Sosik, 2012). Humor can be defined as “*any event shared by an agent (e.g., an employee) with another individual (i.e., a target) that is intended to be amusing to the target and that the target perceives as an intentional act*” (Cooper, 2005, p. 767).

In relation to this thesis, given that the goal is to study the influence of humor within a boardroom, which is led by the board chair, the use of humor by leaders with their subordinates is of significant importance. This is owing to the fact that a leader such as a board chair possesses power, therefore enabling the board chair to set the tone for humor expression at work (Cooper, 2005). Specifically, “*leader humor refers to the extent to which a leader uses humor with each subordinate*” (Cooper et al., 2018, p. 2). Cooper et al. (2018) have proposed the following three mechanisms that can transmit the effects of leader humor: “social exchange”, “stress relief”, and the “induction of positive emotion”.

The social exchange perspective of humor was initially introduced in a leader-member exchange study, wherein leader humor was presented as an un-tested antecedent of leader-member exchange (Cooper, 2004; Cooper et al., 2018). According to the social exchange theory, one of the key functions of humor is building relationships (Cooper, 2008; Cooper et al., 2018). The study conducted by Cooper et al. (2018) found that leader humor indeed enhances social exchange. Leader humor can act as a socioemotional resource that facilitates social exchange by improving trust, respect, and support between leaders and subordinates (Cooper et al., 2018).

Furthermore, leader humor can also be considered an interpersonal resource for stress relief (Cooper et al., 2018). With that being said, the stress relief mechanism of leader humor can be supported by the conservation of resources theory, which explains how individuals strive to acquire, maintain, and protect valuable resources in order to cope with stress and prevent burnout

(Hobfoll, 1989, 2002). It is considered that employees are driven to develop, preserve, and safeguard their own stress-reduction tools (Cooper et al., 2018). According to Hobfoll (2002), employees who receive resources are more equipped to handle stressful events, less prone to experience stress that could impair their mental and physical health, and less vulnerable to resource draining or losses in stressful situations (Cooper et al., 2018). As a result, leader humor can be utilized as a interpersonal resource to assist a subordinate in reducing stress (Cooper et al., 2018).

Lastly, the findings of Cooper et al. (2018) suggest that leader humor also induces positive emotion, enhancing social exchange and reducing burnout. Subordinates being exposed to leader humor can enable them to broaden their thought-action repertoires, allowing the subordinates to build their personal resources, such as psychological resources, social resources and cognitive resources (Cooper et al., 2018).

At the interpersonal level, Cooper et al. (2018) connected the use of humor by leaders with a positive effect and enhanced leader-member exchange (LMX) that enhances organizational citizenship behavior (OCBs). *“Leader-member exchange is defined as the quality of the professional relationship between leader and a follower”* (Pundt & Herrmann, 2015, p. 109).

In an approach-evidence framework, Carnevale et al. (2022) discovered that affiliative humor positively affects workplace status and follower empowerment, whereas aggressive humor results in disengagement. In fact, according to Pundt & Herrmann (2015), affiliative humor is associated with enhanced leader-member exchange connections, but aggressive humor tends to diminish them. As a result, leader-member exchange may act as a mediating factor in the relationship between humor and director engagement, especially in the official leadership contexts like board meetings.

Affiliative humor and leadership

Individuals that employ affiliative humor engage in lighthearted jokes with others as a way to draw them in with humor, with a focus on enhancing social interaction (Romero & Cruthirds, 2006). Funny anecdotal stories particular to a group, inside jokes, and good-natured easy going jokes that are usually also used during a social event with friends or family are all examples of affiliative

humor (Romero & Cruthirds, 2006). People that behave in such a manner are often regarded as non-threatening and fun to be around by others (Romero & Cruthirds, 2006). One can reduce interpersonal tensions and promote relationship development by employing this kind of non-hostile and affirming humor (Martin et al., 2003). Affiliative humor can be considered a social lubricant that can help promote beneficial interactions and create a positive and safe atmosphere (Romero & Cruthirds, 2006). It can be assumed that the initiators goal when using affiliative humor within an organization is to usually unite people (Romero & Cruthirds, 2006). In fact, affiliative humor is a tool that can be used to enhance the perception employees may have of leadership support, which will, in turn, strengthen leader-team relationships and ultimately lead to a greater workplace engagement (Pundt & Herrmann, 2015).

With that being said, building on the literature, affiliative humor can be expected to increase director engagement by shaping the interpersonal conditions that support active engagement during boardroom meetings. This form of humor is friendly, inclusive, and non-threatening, and is used to strengthen social interaction and reduce interpersonal tension (Romero & Cruthirds, 2006). Prior research shows that affiliative humor enhances perceptions of leadership support and promotes trust and mutual respect, which facilitate open interaction (Cooper et al., 2018; Pundt & Herrmann, 2015). In boardroom settings, where engagement depends on board of directors feeling comfortable to speak up during deliberation, these relational effects are particularly important (Krause et al., 2024). By lowering social barriers and signaling openness, affiliative humor makes participation feel less risky and encourages a broader range of board members to contribute to the discussion.

Hence, the following hypothesis was established:

Hypothesis 1: The use of Affiliative humor positively influences Director Engagement among board members.

Aggressive humor and leadership

People that use aggressive humor frequently use the implied threat of ridicule as a manner to try to control or manipulate others (Janes & Olsen, 2000). It is also possible to victimize, degrade, and belittle others through the use of aggressive humor (Romero & Cruthirds, 2006). This type of humor is in alignment with superiority theory, which argues that people elevate themselves at the expense of others in an effort to attain or believe they have attained a higher position or status (de Koning & Weiss, 2002). Moreover, aggressive humor tends to have a positive correlation with neuroticism and a negative correlation with conscientiousness and agreeableness (Romero & Cruthirds, 2006).

According to Pundt & Hermann (2015), the use of aggressive humor by a leader will negatively impact LMX because of the fact that aggressive humor is intended to mock or ridicule other individuals, criticize or tease them for mistakes they have made, or put employees down in a more general way. Moreover, aggressive humor is considered hurtful and offensive to other individuals, and leaders that use aggressive humor often do not take into consideration that their use of aggressive humor hurts others (Pundt & Hermann, 2015). With that being said, it is clear that aggressive humor is a counterproductive tool for maintaining positive relationship with other people such as colleagues, indicating that followers of leaders that make use of aggressive humor will less likely choose to engage in a safe and positive relationship with their leader (Pundt & Hermann, 2015).

Thus, building upon the literature, aggressive humor can be expected to reduce director engagement by undermining the interpersonal conditions that support open participation during boardroom meetings. This form of humor relies on sarcasm, teasing, or ridicule and is often used to assert dominance or emphasize status differences (Romero & Cruthirds, 2006). Prior research suggests that aggressive humor can damage trust, increase social distance, and reinforce hierarchical boundaries, thereby discouraging open communication (Pundt & Herrmann, 2015). In boardroom settings, where board members are expected to voice critical opinions and contribute actively to deliberation, such effects can make participation feel risky, particularly for members in less powerful positions (Krause et al., 2024). As a result, aggressive humor may suppress

engagement by narrowing participation discouraging board members from speaking up during meetings.

Hence, the following hypothesis was established:

Hypothesis 2: *The use of Aggressive humor negatively influences Director Engagement among board members.*

Conceptual Model

Figure 1 depicts the conceptual model guiding this study, which outlines the expected relationships between Affiliative Humor and Aggressive humor and Director Engagement in boardroom meetings.

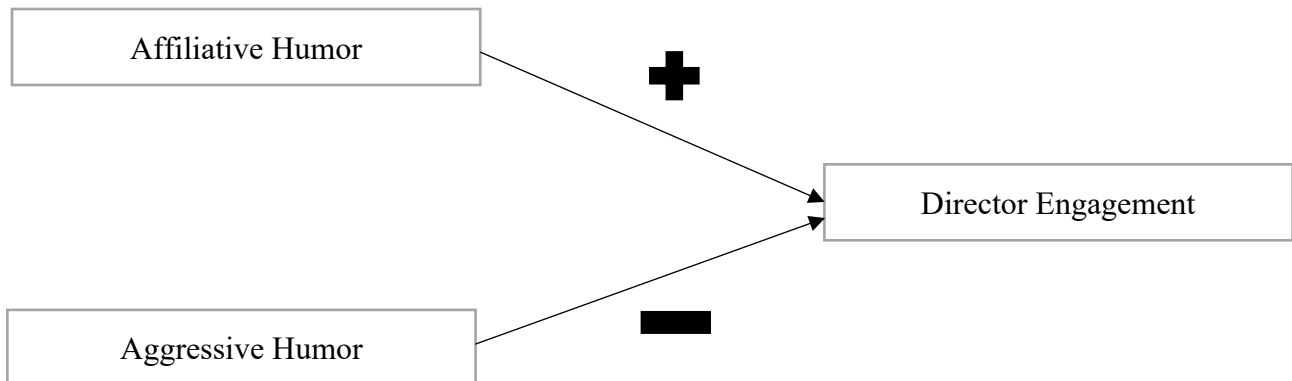


Figure 1: Conceptual model

Methodology

This chapter discussed the researcher's methodology and discussed in detail the research paradigm, research setting, sample size, unit of analysis, data collection, variables, data analysis, and ethical considerations.

Research Paradigm

The research adopted a positivist epistemological framework because it examines observable, objective, and quantifiable phenomena. This mirrors the approach used by Pundt and Herrmann (2015), who relied on measurable behavioral constructs such as affiliative and aggressive humor to conduct their research. Likewise, this study follows a deductive logic by beginning with established theory, as outlined in the theoretical framework, and formulating a priori hypotheses based on existing literature. Furthermore, the qualitative data collected by Dr. Koen van den Oever was also transformed by Dr. Koen van den Oever into quantitative indicators to allow for statistical analysis, a process that will be described in more detail in the Data Collection section.

Research Setting

The hypotheses of this study were tested in the context of the Dutch water authority sector, not to be mistaken with water utilities (Van den Oever & Martin, 2015). The Dutch water authorities, who oversee all aspects of water management in the Netherlands, serve as the framework of this study. The Dutch water authorities, referred to as *water boards*, are in charge of sewage treatment in their respective regions, water barrier management, and preserving the quantity and quality of water in waterways. Given the Netherlands' susceptible geography—a significant portion of its land area is below sea level—managing the canals and barriers has long been one of their top priorities. Water authorities have existed since the twelfth century and are among the oldest types of municipal government in the Netherlands, having been enshrined in the Dutch constitution since 1848. This aligns with the country's unique flooding sensitivity and dense population. Due to its geographic location, the Netherlands needs significant and ongoing public water management (Van den Oever, 2017).

By 2025, there were 21 water authorities in the Netherlands (Kiesraad, n.d.). A central characteristic of the Dutch water authorities is that their top management is elected through public election every four years. Along with the Dutch national government, province, and municipality administrations, the Dutch water authorities also represent a distinct level of public governance because they have the authority to impose their taxes; nevertheless, in contrast to those public organizations, the Dutch water authorities are regarded as functional bodies with sole responsibility for managing public water resources rather than as general government agencies (Van den Oever, 2017).

It was important to note that the Dutch water authorities are not the same as the water utilities often found in other nations. Water utilities supply drinking water services to the economy's commercial, industrial, and residential sectors. In contrast, the Dutch water authorities maintain the levels of waterways in the hinterland so that farmers can pump water out of them for irrigation at no cost to them, rather than providing water to households and businesses, which is the responsibility of separate water utilities. Furthermore, the sanitation duties of the Dutch water authorities only include cleaning wastewater of garbage and contaminants to make it suitable for pumping into rivers. As a result, the water utilities downstream can then pump the water back into their water treatment facilities, allowing the water utilities to purify it for usage by households and businesses (Van den Oever, 2017).

Despite being public organizations, water authorities are governed very similarly to businesses. The size of the water authority determined the precise number of members on each board of directors (Van den Oever, 2017), which consists of about 30 directors (Van den Oever & Martin, 2019). The Dutch water authorities were elected to four-year terms and meet roughly every two months. The top management team was usually composed of five of these directors and meets roughly every two weeks. The Crown, or national government, appoints the chair of the top management team, usually for six years (Van den Oever, 2017).

Sample Size

The research data consisted of video recordings from 25 different board meetings obtained from 2 Dutch Water Authorities: HAGV and HD. The decision to opt for video recordings from 25 these board meetings and not more was supported by the resulting sample size obtained after cleaning the data. After SPSS removed all cases with missing values, the dataset contained 176 valid participants. Moreover, as mentioned earlier, these recordings came from 2 Dutch Water Authorities, ensuring that there is variation within the dataset. In addition, according to Field (2018), a sample size of 176 is considered good to excellent in relation to performing a multiple regression analysis, especially since the common rule of thumb is to have at least 50 cases in order to be able to perform a multiple regression analysis. With that being said, the video recordings from the 25 different board meetings provided sufficient data to achieve a strong and reliable sample size for the planned statistical analyses.

Unit of Analysis

The unit of analysis in this research was the individual agenda-item that was discussed during each boardroom meeting. This level was chosen because of the fact that the dataset was built at the agenda-item level, which allows for a detailed analysis of the variation within boardroom meetings. Moreover, having all the data at the agenda-item level allows for the inclusion of more control variables, thereby improving the accuracy and explanatory power of the regression analysis, by providing more information that was already included in the dataset. Lastly, using the individual agenda-item as the unit of analysis also facilitates a clear representation of how many unique speakers participated in each boardroom meeting and the number of times humor was used during a specific period.

Data Collection

As mentioned in the Sample Size section, 2 Dutch Water Authorities served as the context of this study. To obtain the required data, the researcher relied on a novel sample set of 73 board meetings collected by Dr. Koen van den Oever. As explained earlier, for the purpose of this research, 25 board meetings were used. A key advantage of using Dutch Water Authorities as a research sample is the public accessibility of their boardroom meetings, unlike the restricted access typical of private corporations. Dr. Koen van den Oever collected the data by downloading the boardroom

meeting videos from the organizations public websites. These recordings, produced by the Dutch water authorities, capture each speaker as they contribute to the discussion (Van den Oever & Shropshire, 2024).

Each researcher in Dr. Koen van den Oever's thesis circle received a designated subset of audio fragments from the board meeting recordings, along with instructions on how to identify and register laughter instances. Following the provided coding protocol, researchers listened to each audio fragment, verified whether laughter took place, and recorded these observations in an Excel sheet. After this initial coding process, all identified laughter instances were combined by Dr. Koen van den Oever into a single dataset.

For the context of this study, it is important to emphasize that laughter is not the same as humor. The researchers used laughter as a tool to signal humor instances, but laughter can also reflect discomfort or serve as a social cue unrelated to humor. As a result, after the laughter identification stage, Dr. Koen van den Oever advised his thesis circle researchers to examine the spoken content that preceded each instance of laughter to determine whether humor was actually used, and if so, by whom. In many cases, the humorous remark and the subsequent laughter happened in the same audio fragment, however, in other cases, the humor originated from a different speaker than the one who actually laughed. Moreover, in some cases, laughter occurred but there was no instance of a humorous remark or speech. This validation step ensured that humor usage was attributed to the correct speaker and corresponding utterance. Following this step, it was then possible to categorize each instance of identified humor into one of the humor styles used in this study, specifically affiliative Humor and aggressive Humor. This classification formed the independent variables that were used for the data analyses. The coding of humor type (will be further elaborated on in the variables section) was performed by a fellow thesis circle member as an extension of the original dataset. The dataset used in this study was originally provided by the supervisor, Dr. Koen van den Oever. For the purpose of this research, an extended version of the dataset containing affiliative and aggressive humor instances created by a fellow student was used with their permission.

Variables

Dependent variable: Director Engagement

The dependent variable of this study was Director Engagement. Director engagement in this study was measured using the variable *OMDUnique Speakers* which was included in the dataset compiled by Dr. Koen van den Oever. This variable records how many different board of directors contribute verbally within each agenda item, allowing engagement to be captured in a straightforward and comparable manner. A higher count of unique speakers is interpreted as an indication for greater engagement among boardroom members. In order to support the robustness of this measure, two additional variables from the same dataset were included as control variables: the *total number of words* spoken and the *number of utterances* within each agenda item. These variables served as alternative ways of representing director engagement, and their inclusion helped ensure that the results are not dependent on a single operationalization of the concept.

Independent variables: Affiliative Humor and Aggressive Humor

The independent variables in this study were Affiliative Humor and Aggressive Humor. The identification between affiliative humor and aggressive humor in this study were based on the framework developed by Martin et al. (2003), known as the Humor Styles Questionnaire. This framework differentiates between humor styles that promote social connection and humor styles that may assert dominance or create tension. In the context of this study, affiliative humor refers to friendly or relationship building jokes or remarks, while aggressive humor involves teasing, sarcasm or comments that may be at someone else's expense. With that being said, after all instances of laughter had been identified, the corresponding dialogue was then examined in order to determine whether actual use of humor was present. The Humor Styles Questionnaire served as the basis for operationalizing what type of humor style was used. Laughter instances that did not result from humor were excluded from further analysis. Afterwards, each remaining humor use moment was then classified as either affiliative humor or aggressive humor. The total number of affiliative humor or aggressive humor instances were then added to Dr. Koen van den Oever's original dataset for further analysis as explained earlier in the data collection section.

Control Variables

The following variables below were all included and obtained from the dataset provided by Dr. Koen van den Oever, and were used as control variables for the purpose of this study.

First, this study controlled for *number of motions*. The dataset recorded how many motions were tied to each agenda item. Items involving more motions will most likely require additional discussion, which as a result can draw more board of directors into the conversation. Therefore, this variable is used as a control variable to adjust for differences in how complex an agenda item might be.

Second, this study controlled for *number of amendments*. Amendments refer to suggest changes to proposals. Agenda items with several amendments may naturally lead to longer discussions and more involvement by the board of directors. The inclusion of this control variable helps ensure that higher levels of engagement are not simply a result of proposal refinements.

Third, this study controlled for *number of promises*. Promises may reflect commitments or future actions and often appear in more sensitive discussions. This variable is included to control for variation in director engagement that may be driven by the nature of the discussion.

Fourth, this study controlled for *number of words*. Agenda items with higher words counts may reflect more active or lengthy discussions. Controlling for this variable helps separate speech volume from genuine director engagement.

Fifth, this study controlled for *number of utterances*. This measure offers another way to understand how interactive an agenda item was. Controlling for this variable helps account for differences in conversational dynamics that might otherwise influence engagement levels.

Sixth, this study controlled for *number of words per proposal*. This variable gives an indication of how detailed or complex a proposal was. Longer proposal may indicate that more complex topics are being discussed, which can stimulate additional discussion between board members. Controlling for this variable helps prevent complexity from being mistaken for higher engagement.

Seventh, this study controlled for *number of topics*. Agenda items covering multiple topics may prompt broader participation. This variable controls for differences in engagement linked to topic diversity.

Eight, this study controlled for *length of the board meeting*. Longer meetings may naturally lead to more opportunities to speak. Including meeting length as a control helps account for time-based variation.

Ninth, since the dataset provided by Dr. Koen van den Oever included multiple Dutch water authorities, *organizational dummy variables* were used to adjust for differences between them. Two Dutch Water Authorities, HAGV and HD, were used for this study. HAGV being the dummy variable and HD serving as the reference category.

Tenth, *topic categories* were also controlled for. Some topics may naturally spark more discussion than others. Including topic categories as controls allowed the analysis to separate influence of subject matter from the effects of humor.

Data Analysis

The main goal of this research was to examine how different humor styles, specifically affiliative and aggressive humor, influence the engagement levels of board of directors during boardroom meetings. In order to do so, a multiple regression analysis was conducted using the statistical software SPSS to analyze the data. A multiple regression analysis is a statistical tool that is used to study the relationship between two or more independent variables and a single dependent variable (Field, 2018). In the context of this study, the relationship between the independent variables aggressive humor and affiliative humor and the dependent variable director engagement was studied. All statistical results were interpreted at a 5% significance level ($\alpha = 0.05$). The results were interpreted as significant when $p < 0.05$.

Ethical Considerations

Since the board meetings were publicly recorded, it became simpler to handle informed consent issues since these sessions have never operated under confidentiality restrictions. However, the researcher still ensured that the personal identities of participants remained anonymous.

Results

This chapter presented the results of the empirical analysis on how different humor styles, specifically affiliative and aggressive humor, influenced director engagement during boardroom meetings. The hypotheses (H1 and H2) were tested using hierarchical regression analyses and a series of robustness checks that controlled for the relevant meeting-level variables. The analyses were conducted in three steps: the hierarchical models (Table 2) assessed the added effect of each humor style on director engagement; the post-humor models (Table 3) examined whether these effects remained after the humor occurred; and the robustness analyses (Table 4 and 5) evaluated whether the findings remained consistent across different modeling approaches. These results provided a clearer understanding of how humor styles shaped director engagement and overall boardroom dynamics.

Assumptions of Multiple Regression

All the assumptions of the multiple regression analysis were thoroughly reviewed before carrying out the regression analysis to guarantee validity and reliability of the findings. This is a fundamental procedure since failure to uphold these assumptions may result in biased estimates, misplaced inferences, or diminished predictive precision.

First, the *assumption of linearity* has been verified to ensure that the relationships between the independent variables such as affiliative humor, aggressive humor, and other OMD indicators and the dependent variable (OMDUnique speakers) were linear. This assumption was supported by scatterplots and residual-versus-predicted value plots that demonstrated approximate linearity of the relationships (See Appendix A).

Secondly, in the case of a regression analysis, the residuals are not to be correlated with each other. *Independence of errors* was determined based on the Durbin-Watson statistic which tests the autocorrelation between residuals. According to Field (2018), values near 2 suggest no autocorrelation. The outcome of the Durbin-Watson statistic in all of the models displayed values near 2 (see Appendix C), indicating that the residuals are not correlated with each other and that the assumption of independence of errors is met.

Third, the *assumption of homoscedasticity* was checked. The assumption of homoscedasticity assumes that the variance of errors is constant across all levels of an independent variable. According to Field (2018), this assumption can be checked by examining the residual-versus-predicted value plots (see Appendix A). Analysis of the residual plots did not indicate any funneling or non-uniform variance, thus demonstrating that the assumption of homoscedasticity was met.

Fourth, the *assumption of normality of residuals* was also checked. The normality of residuals assumes that the differences between observed and predicted values are approximately normally distributed. According to Field (2018), this assumption can be checked via P-P plots. P-P plot of standardized residuals (see Appendix A) were used to evaluate whether the residuals are normally distributed. Residuals were observed to be largely normally distributed, which validates the adoption of standard tests of significance and confidence intervals in the regression analyses. Since the sample size is large enough ($N = 176$), the residuals can be regarded as approximately normal, which according to Field (2018), the assumption is then met.

Lastly, the assumption of no multicollinearity was also checked. This assumption entails that independent variables should not be high correlated. According to Field (2018), this assumption can be checked by examining whether the Variance Inflation Factor (VIF) is below the threshold value of 10. The VIF values of all variables (see Appendix C) were less than the threshold of 10, indicating that multicollinearity was not an issue and that the regression coefficients could be interpreted reliably. The control variable *OMDWords* was removed from Table 1 and Table 2 due to a VIF value greater than 10.

After confirming that all regression assumptions were sufficiently met, the analysis began with a brief examination of the descriptive statistics to provide a general understanding of the data. This was followed by hierarchical regression models, post-humor interaction analyses, and robustness checks. These results are given in a series in Tables 2-5, and provide a complete picture of how different humor styles influence engagement dynamics within boardroom meetings.

Descriptive Analysis

Table 1 presented the descriptive statistics and correlations between all the study variables, including the independent variables, the dependent variable and the control variables. The results showed substantial variation in how boardroom meetings unfolded. The dependent variable *OMDUnique speakers* ($M = 4.44$, $SD = 4.90$) suggested that meetings typically involved four to five speakers, however, the high standard deviation showed this varied widely. *OMDUtterances* ($M = 19.71$, $SD = 37.55$) and *OMDProposal* words ($M = 2268.02$, $SD = 2397.03$) also showed large differences across meetings in both exchange frequency and proposal length. Regarding the topic distribution, *OMDGovernance* ($M = 0.40$) and *OMDTaxes and finance* ($M = 0.39$) appeared most often, while *OMDClimate* ($M = 0.02$), *OMDDigitalization* ($M = 0.05$), and *OMDWater safety* ($M = 0.02$) are represented relatively rarely. Overall, the boardroom meetings tended to focus more on administrative and financial matters than on environmental or technological matters.

Moreover, a number of meaningful correlations were observed among the variables. *OMDUnique speakers* was strongly correlated with *OMDUtterances* ($r = 0.817$) and moderately with *OMDMotions* ($r = 0.458$), indicating that broader engagement was associated with more conversational activity and more motions. *OMDMotions* also showed a strong positive correlation with *OMDPromise* ($r = 0.819$), suggesting that meetings in which more motions were proposed coincided with a greater number of commitments. *OMDProposal* words was moderately correlated with both *OMDUtterances* ($r = 0.463$) and *OMDAmendments* ($r = 0.496$), indicating that longer proposals were linked to more amendments and higher overall engagement. Negative correlations between *OMDGovernance* and topics such as *OMDTaxes and finance* ($r = -0.534$) and *OMDWater quantity* ($r = -0.358$) suggested that discussions about governance tended to take place separately from other topics.

Additionally, the correlation results (Table 1) revealed several significant relationships between affiliative humor and aggressive humor, and director engagement. Affiliative humor showed a strong positive correlation with *OMDUnique speakers* ($r = .502, p < 0.05$ [see Appendix B]), indicating that more frequent instances of Affiliative Humor were associated with increased director engagement. Aggressive humor displayed a significant moderate correlation with *OMDUnique speakers* ($r = .415, p < 0.05$ [see Appendix B]), suggesting that although less strong, can also increase director engagement. Furthermore, *OMDUtterances* was positively correlated with both affiliative humor ($r = .338, p < 0.05$ [see Appendix B]) and aggressive humor ($r = .436, p < 0.05$ [see Appendix B]), implying that both humor styles were linked to more verbal exchanges. Notably, the correlation with aggressive Humor was stronger than with affiliative Humor, suggesting that in some situations aggressive humor may prompt even more interaction among board of directors.

Overall, the correlation trends showed that higher interaction levels, as measured by *OMDUnique speakers* and *OMDUtterances*, were associated with both affiliative and aggressive humor, highlighting the role of humor as an important factor in director engagement.

Table 1: Descriptive Statistics and Correlations of Variables

Variables	Mean	Std. Deviation	Min	Max	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. OMD_Unique speakers	4.4432	4.90215	0	20	1																		
2. OMD_Motions	0.1761	0.78391	0	8	0.458	1																	
3. OMD_Amendments	0.0795	0.44649	0	5	0.292	0.254	1																
4. OMD_Promises	0.2784	1.1597	0	13	0.449	0.819	0.145	1															
5. OMD_Utterances	19.7102	37.55242	0	291	0.817	0.708	0.561	0.605	1														
6. OMD_Proposal words	2268.0227	2397.03264	11	19466	0.388	0.28	0.496	0.196	0.463	1													
7. OMD_Governance	0.4034	0.49198	0	1	-0.108	-0.111	0.035	-0.148	-0.046	-0.28	1												
8. OMD_Taxes and finance	0.3864	0.4883	0	1	0.069	0.15	-0.011	0.162	0.087	0.164	-0.534	1											
9. OMD_Water quality	0.125	0.33166	0	1	0.173	-0.063	0.048	0.072	0.04	0.168	-0.311	-0.053	1										
10. OMD_Water quantity	0.1591	0.3668	0	1	-0.059	-0.038	-0.078	-0.038	-0.106	0.077	-0.358	-0.09	0.117	1									
11. OMD_Water safety	0.0227	0.14946	0	1	-0.014	-0.034	-0.027	-0.004	-0.042	0.022	-0.125	-0.121	-0.058	-0.066	1								
12. OMD_Sustainability	0.0511	0.2209	0	1	0.09	0.014	-0.041	-0.011	0.05	0.236	-0.191	0.187	0.068	0.252	-0.035	1							
13. OMD_Climate	0.0227	0.14946	0	1	0.072	0.112	-0.027	-0.004	0.009	0.141	-0.125	0.036	-0.058	0.351	-0.023	0.311	1						
14. OMD_Digitalization	0.0455	0.20889	0	1	-0.143	-0.049	-0.039	-0.053	-0.105	-0.116	-0.068	-0.173	-0.082	-0.095	-0.033	-0.051	-0.033	1					
15. OMD_Notopics	0.5341	0.50026	0	1	0.028	-0.022	-0.047	0.004	-0.038	0.141	-0.174	0.302	0.319	0.476	-0.06	0.656	0.492	0.013	1				
16. O_HAGV	0.532	0.35203	0	3.12	0.18	0.05	0.039	-0.051	0.118	0.103	-0.137	0.156	0.146	0.126	0.066	0.217	0.066	-0.07	0.282	1			
17. Relative time meeting	0.3239	0.81605	0	6	0.212	0.01	0.079	0.047	0.146	0.196	-0.055	0.042	0.157	-0.103	-0.019	-0.072	-0.075	-0.163	-0.101	-0.007	1		
18. Affiliative humor	0.0739	0.32107	0	3	0.502	0.187	0.133	0.273	0.338	0.055	-0.014	0.028	0.103	-0.02	-0.061	0.003	0.08	-0.087	0.034	-0.006	0.044	1	
19. Aggressive humor	4.4432	4.90215	0	20	0.415	0.334	0.158	0.221	0.436	0.063	-0.045	0.145	-0.087	-0.1	-0.035	-0.054	-0.035	-0.05	-0.09	0.109	-0.006	0.257	1

Regression Analysis

Table 2 presented the results of the hierarchical regression analysis predicting director engagement, operationalized as *OMDUnique speakers*. Four models were estimated: Model 1 included only control variables; Model 2 added affiliative humor (H1); Model 3 added aggressive humor (H2); and Model 4 included both humor variables.

The baseline model (Model 1) captured a significant share of variance in director engagement ($R^2 = 0.795$, Adjusted $R^2 = 0.775$; $F = 38.623$, $p < 0.05$). Among the control variables, *OMDUtterances* ($b = 1.061$, $p < 0.05$) was the strongest positive predictor, indicating that meetings with more utterances tended to involve more speaker engagement. In contrast, *OMDMotions* ($b = -0.387$, $p < 0.05$) and *OMDAmendments* ($b = -0.308$, $p < 0.05$) were negatively associated with *OMDUnique speakers*, suggesting that meetings with many motions or amendments had less engagement. Interestingly, *OMDClimate* ($b = 0.112$, $p < 0.05$) also proved to be a positive indicator, indicating that climate-related discussions were linked to higher engagement.

In model 2, affiliative humor was added to test Hypothesis 1. Including this variable improved the model fit ($R^2 = 0.832$, Adjusted $R^2 = 0.813$; $F = 45.894$, $p < 0.05$). The standardized coefficient for affiliative humor ($b = 0.220$, $p < 0.05$) was positive and significant, supporting Hypothesis 1 that affiliative humor increased director engagement. The unstandardized coefficient ($B = 1.323$) indicated that each instance of affiliative humor was associated with roughly 1.323 additional unique speakers.

In model 3, aggressive humor was added to test Hypothesis 2. Although the model was statistically significant overall ($F = 37.153$, $p < 0.05$), its explanatory power ($R^2 = .800$, Adjusted $R^2 = .778$) remained similar to Model 1. The coefficient for aggressive humor ($B = 1.210$, $p = .060$) was positive but not significant at the 5% level, and the standardized effect was small ($b = .079$). Interestingly, the positive direction of the coefficient contradicted the expectation that aggressive humor would reduce director engagement, suggesting that mild forms of aggressive humor may stimulate engagement in some situations. Based on these results, Hypothesis 2 was not supported.

Lastly, Model 4 included both affiliative and aggressive humor to assess their combined effects on director engagement. This model demonstrated the strongest explanatory power ($R^2 = .833$, Adjusted $R^2 = .814$; $F = 43.629$, $p < 0.05$). The positive effect of affiliative humor remained strong and significant ($B = 1.283$, $b = .214$, $p < 0.05$), reinforcing its consistent role in promoting engagement. However, aggressive humor remained non-significant ($B = .769$, $p = .195$), indicating that it did not contribute meaningfully to explaining engagement, either on its own or when combined with affiliative humor.

Overall, the hierarchical regression results demonstrated that affiliative humor had a robust positive effect on director engagement across all models, while aggressive humor did not. These findings supported Hypothesis 1 and indicated that Hypothesis 2 was not supported by the data.

Table 2: Hierarchical Regression Models Predicting Director Engagement (DV = Unique Speakers, N = 176)

Predictor	Model 1 (Controls only)	Model 2 Affiliative (H1)	Model 3 Aggressive (H2)	Model 4 Both (H1 & H2)
Constant	1.788 ($p = .016$)	1.279 ($p = .059$)	1.688 ($p = .022$)	1.231 ($p = .069$)
OMD_Motions	-2.420 ($\beta = -.387$) ($p = .000$)	-1.897 ($\beta = -.303$) ($p = .000$)	-2.497 ($\beta = -.399$) ($p = .000$)	-1.961 ($\beta = -.314$) ($p = .000$)
OMD_Amendments	-3.381 ($\beta = -.308$) ($p = .000$)	-3.384 ($\beta = -.308$) ($p = .000$)	-3.302 ($\beta = -.301$) ($p = .000$)	-3.334 ($\beta = -.304$) ($p = .000$)
OMD_Promises	0.308 ($\beta = .073$) ($p = .302$)	0.095 ($\beta = .022$) ($p = .728$)	0.398 ($\beta = .094$) ($p = .185$)	0.159 ($\beta = .038$) ($p = .568$)
OMD_Utterances	0.139 ($\beta = 1.061$) ($p = .000$)	0.144 ($\beta = 1.100$) ($p = .000$)	0.135 ($\beta = 1.035$) ($p = .000$)	0.141 ($\beta = 1.083$) ($p = .000$)
OMD_Proposal words	0.000094 ($\beta = .046$) ($p = .341$)	0.000 ($\beta = .077$) ($p = .084$)	0.000 ($\beta = .058$) ($p = .231$)	0.000 ($\beta = .083$) ($p = .062$)
OMD_Governance	-0.799 ($\beta = -.080$) ($p = .217$)	-0.665 ($\beta = -.067$) ($p = .259$)	-0.721 ($\beta = -.072$) ($p = .263$)	-0.619 ($\beta = -.062$) ($p = .293$)
OMD_Taxes and finance	-0.676 ($\beta = -.067$)	-0.548 ($\beta = -.055$)	-0.728 ($\beta = -.073$) ($p = .217$)	-0.585 ($\beta = -.058$)

	(<i>p</i> = .254)	(<i>p</i> = .310)		(<i>p</i> = .278)
OMD_Water quality	1.028 (β = .070) (<i>p</i> = .122)	0.854 (β = .058) (<i>p</i> = .159)	1.115 (β = .075) (<i>p</i> = .092)	0.914 (β = .062) (<i>p</i> = .132)
OMD_Water quantity	-0.792 (β = -.059) (<i>p</i> = .239)	-0.611 (β = -.046) (<i>p</i> = .319)	-0.742 (β = -.056) (<i>p</i> = .267)	-0.584 (β = -.044) (<i>p</i> = .340)
OMD_Water safety	-0.308 (β = -.009) (<i>p</i> = .819)	0.152 (β = .005) (<i>p</i> = .901)	-0.239 (β = -.007) (<i>p</i> = .858)	0.182 (β = .006) (<i>p</i> = .882)
OMD_Sustainability	-0.533 (β = -.024) (<i>p</i> = .564)	-0.542 (β = -.024) (<i>p</i> = .519)	-0.411 (β = -.019) (<i>p</i> = .655)	-0.464 (β = -.021) (<i>p</i> = .581)
OMD_Climate	3.671 (β = .112) (<i>p</i> = .007)	2.531 (β = .077) (<i>p</i> = .042)	3.745 (β = .114) (<i>p</i> = .006)	2.612 (β = .080) (<i>p</i> = .036)
OMD_Digitalization	-1.082 (β = -.046) (<i>p</i> = .270)	-0.690 (β = -.029) (<i>p</i> = .440)	-1.019 (β = -.043) (<i>p</i> = .295)	-0.662 (β = -.028) (<i>p</i> = .458)
O_HAGV	0.707 (β = .072) (<i>p</i> = .073)	0.680 (β = .069) (<i>p</i> = .059)	0.658 (β = .067) (<i>p</i> = .093)	0.650 (β = .066) (<i>p</i> = .071)
Relative_time_meeting	0.486 (β = .035) (<i>p</i> = .367)	0.622 (β = .045) (<i>p</i> = .205)	0.558 (β = .040) (<i>p</i> = .297)	0.664 (β = .048) (<i>p</i> = .176)
Affiliative humor		1.323 (β = .220) (<i>p</i> = .000)		1.283 (β = .214) (<i>p</i> = .000)
Aggressive humor			1.210 (β = .079) (<i>p</i> = .060)	0.769 (β = .050) (<i>p</i> = .195)
F value	38.623 <i>p</i> < 0.05	45.894 <i>p</i> < 0.05	37.153 <i>p</i> < 0.05	43.629 <i>p</i> < 0.05
R square	0.795	0.832	0.800	0.833
Adj R square	0.775	0.813	0.778	0.814

Robustness Analysis

To assess the stability and direction of the observed effects, several robustness analyses were carried out. In these models, engagement was redefined as the number of unique speakers appearing after a humor instance within the same agenda item. This alternative measure made it possible to examine whether humor influenced the discussion that followed it. As shown in Table 3, affiliative and aggressive humor were analyzed individually and together in Models 5-7, alongside the control variables.

Model 5 showed that affiliative humor had a strong, positive and significant effect on post-humor engagement ($b = .671, p < 0.05$), supporting Hypothesis 1. This indicated that when board of directors use affiliative humor, more board members engaged in the discussion that followed, reflecting greater involvement and inclusion in a boardroom meeting.

Model 6 showed that aggressive humor also had a significant and positive effect on post-humor engagement ($b = .416, p < 0.05$). This outcome was consistent with the earlier findings in Model 3, indicating that aggressive humor could stimulate rather than suppress director engagement.

Model 7, which included both humor styles simultaneously, showed that affiliative humor ($b = .628, p < 0.05$) and aggressive humor ($b = .330, p < 0.05$) continued to positively predict post-humor engagement. As expected, affiliative Humor remained the stronger predictor, suggesting that relational and inclusive humor had a more consistent influence on director engagement when both forms of humor were present.

Several control variables, including *OMDAmendments*, *OMDPromises* and *OMDTaxes and finance*, showed some significant effects, indicating that meeting content and topics also played a role in influencing engagement, although these influences were weaker than those of humor. Other control variables, such as *OMDUtterances*, *OMDGovernance*, *OMDClimate*, and meeting duration, were not significant in the post-humor models.

Overall, the findings suggested that both humor styles increased director engagement immediately after humor took place, with affiliative humor being the more effective and consistent driver of engagement. These findings highlight the importance of positive, relationship-based humor in promoting interactive and participatory boardroom dynamics.

Table 3: Regression Models Predicting Post-Humor Director Engagement (DV = Unique Speakers After Humor, N = 176)

Predictor	Model 5 Affiliative (H1)	Model 6 Aggressive (H2)	Model 7 Both (H1 & H2)
Constant	-1.055 (<i>p</i> = .323)	0.526 (<i>p</i> = .749)	-1.589 (<i>p</i> = .039)
Affiliative humor	5.693 (β = .671) (<i>p</i> = .000)		5.330 (β = .628) (<i>p</i> = .000)
Aggressive humor		8.874 (β = .416) (<i>p</i> = .000)	7.029 (β = .330) (<i>p</i> = .000)
OMD_Motions	0.809 (β = .093) (<i>p</i> = .230)	-1.753 (β = -.201) (<i>p</i> = .089)	0.286 (β = .033) (<i>p</i> = .554)
OMD_Amendments	-1.685 (β = -.110) (<i>p</i> = .026)	-1.004 (β = -.066) (<i>p</i> = .390)	-1.289 (β = -.084) (<i>p</i> = .018)
OMD_Promises	0.252 (β = .043) (<i>p</i> = .539)	1.777 (β = .301) (<i>p</i> = .006)	0.822 (β = .139) (<i>p</i> = .007)
OMD_Words	0.000 (β = .219) (<i>p</i> = .054)	0.001 (β = .593) (<i>p</i> = .001)	0.0 (β = .155) 1.0 (<i>p</i> = .057)
OMD_Utterances	0.033 (β = .177) (<i>p</i> = .137)	-0.021 (β = -.111) (<i>p</i> = .550)	0.011 (β = .059) (<i>p</i> = .492)
OMD_Proposal words	0.000 (β = -.096) (<i>p</i> = .049)	0.000 (β = -.125) (<i>p</i> = .099)	0.000 (β = -.043) (<i>p</i> = .214)
OMD_Governance	0.176 (β = .011) (<i>p</i> = .854)	0.465 (β = .030) (<i>p</i> = .754)	0.818 (β = .053) (<i>p</i> = .234)
OMD_Taxes and finance	1.717 (β = .112) (<i>p</i> = .044)	0.741 (β = .048) (<i>p</i> = .573)	1.299 (β = .085) (<i>p</i> = .034)
OMD_Water quality	0.458 (β = .021) (<i>p</i> = .628)	1.978 (β = .091) (<i>p</i> = .180)	1.133 (β = .052) (<i>p</i> = .098)
OMD_Water quantity	0.805 (β = .042) (<i>p</i> = .395)	0.285 (β = .015) (<i>p</i> = .846)	1.092 (β = .057) (<i>p</i> = .109)
OMD_Water safety	1.085 (β = .024) (<i>p</i> = .558)	-0.478 (β = -.010) (<i>p</i> = .867)	1.434 (β = .031) (<i>p</i> = .281)
OMD_Sustainability	-1.482 (β = -.048)	-0.392 (β = -.013) (<i>p</i> = .842)	-0.686 (β = -.022)

	<i>(p = .243)</i>		<i>(p = .451)</i>
OMD_Climate	-3.500 ($\beta = -.077$) <i>(p = .061)</i>	1.858 ($\beta = .041$) <i>(p = .513)</i>	-2.807 ($\beta = -.062$) <i>(p = .036)</i>
OMD_Digitalization	1.078 ($\beta = .029$) <i>(p = .469)</i>	-0.283 ($\beta = -.008$) <i>(p = .902)</i>	1.429 ($\beta = .038$) <i>(p = .181)</i>
O_HAGV	0.242 ($\beta = .016$) <i>(p = .679)</i>	-0.272 ($\beta = -.018$) <i>(p = .766)</i>	-0.158 ($\beta = -.010$) <i>(p = .708)</i>
Relative_time_meeting	-.311 ($\beta = -0.15$) <i>(p = .694)</i>	0.110 ($\beta = .005$) <i>(p = .929)</i>	0.174 ($\beta = .009$) <i>(p = .759)</i>

Table 4 presented the results of additional robustness analyses using alternative indicators of director engagement. All three models (8-10) were statistically significant, with Models 8 and 9 explaining over 90% of the variance and Model 10 explaining over 75%. These results confirmed that the main findings were stable across different ways of operationalizing engagement.

In model 8, where director engagement was operationalized as the total word count spoken by board of directors, affiliative humor once again had a significant and positive effect ($B = 441.984$, $b = 0.095$, $p < 0.05$). Nevertheless, even though the standardized coefficient was relatively modest, the result still reinforced the robustness of H1, demonstrating that affiliative humor continued to enhance the level of director engagement even when engagement was operationalized using an alternative indicator. On the other hand, the findings showed that aggressive humor did not produce a statistically meaningful effect ($B = 315.993$, $b = .027$, $p = .356$).

Model 9 operationalized director engagement using the number of utterances, with unique speakers included as a covariate. Affiliative humor showed a small but significant and negative effect ($B = -3.427$, $b = -.074$, $p < 0.05$). Rather than indicating reduced engagement, this outcome suggested that affiliative humor tended to draw more people into the discussion, which in turn meant that individual board of directors contributed fewer utterances on average. Aggressive humor once again remained non-significant ($B = 4.70$, $b = .040$, $p = .168$).

In model 10, where *OMDUnique speakers* was no longer included as a covariate, affiliative humor once again demonstrated a significant and positive relationship with director engagement ($B = 5.845$, $b = .127$, $p < 0.05$). Surprisingly, aggressive humor also reached significance in this model ($B = 20.945$, $\beta = .179$, $p < 0.05$), indicating that under certain conditions, aggressive humor may contribute to increased vocal activity among board of directors.

As a result, these robustness checks reinforced the findings that affiliative humor consistently enhanced director engagement, particularly by promoting participation and greater verbal involvement. While aggressive humor demonstrated less consistent effects across models, its significance in Model 10 indicated that its effects may depend on context specific situations. Overall, the findings strengthened the evidence that humor plays a meaningful and context dependent role in enhancing engagement during boardroom meetings.

Table 4: Robustness Models with Alternative Engagement Measures (N = 176)

Predictor	Model 8 DV = words	Model 9 DV = Utterances (unique speakers included as covariate)	Model 10 DV = Utterances (without unique speakers)
Constant	-584.783 ($p = .134$)	-5.246 ($p = .178$)	1.366 ($p = .825$)
Affiliative humor	441.984 ($\beta = .095$) ($p = .002$)	-3.427 ($\beta = -.074$) ($p = .014$)	5.845 ($\beta = .127$) ($p = .004$)
Aggressive humor	315.993 ($\beta = .027$) ($p = .356$)	4.704 ($\beta = .040$) ($p = .168$)	20.945 ($\beta = .179$) ($p = .000$)
OMD_Unique speakers	-23.243 ($\beta = -.030$) ($p = .614$)	4.534 ($\beta = .592$) ($p = .000$)	
OMD_Motions	-31.213 ($\beta = -.006$) ($p = .909$)	16.129 ($\beta = .337$) ($p = .000$)	18.711 ($\beta = .391$) ($p = .000$)
OMD_Amendments	-324.832 ($\beta = -.038$) ($p = .316$)	25.193 ($\beta = .300$) ($p = .000$)	26.279 ($\beta = .312$) ($p = .000$)
OMD_Promises	323.045 ($\beta = .099$) ($p = .042$)	1.265 ($\beta = .039$) ($p = .423$)	4.869 ($\beta = .150$) ($p = .053$)
OMD_Proposal words	0.023 ($\beta = .014$) ($p = .669$)	0.000066 ($\beta = .004$) ($p = .902$)	0.002 ($\beta = .137$) ($p = .010$)

OMD_Governance	370.452 ($\beta = .048$) ($p = .275$)	2.967 ($\beta = .039$) ($p = .382$)	0.094 ($\beta = .001$) ($p = .986$)
OMD_Taxes and finance	476.565 ($\beta = .062$) ($p = .125$)	0.280 ($\beta = .004$) ($p = .928$)	-6.543 ($\beta = -.085$) ($p = .185$)
OMD_Water quality	168.096 ($\beta = .015$) ($p = .632$)	-4.626 ($\beta = -.041$) ($p = .187$)	-1.362 ($\beta = -.012$) ($p = .808$)
OMD_Water quantity	364.837 ($\beta = .035$) ($p = .301$)	0.199 ($\beta = .002$) ($p = .955$)	-6.651 ($\beta = -.065$) ($p = .237$)
OMD_Water safety	547.667 ($\beta = .022$) ($p = .436$)	-3.201 ($\beta = -.013$) ($p = .650$)	-6.599 ($\beta = -.026$) ($p = .559$)
OMD_Sustainability	-665.802 ($\beta = -.039$) ($p = .168$)	6.556 ($\beta = .039$) ($p = .173$)	12.059 ($\beta = .071$) ($p = .118$)
OMD_Climate	-189.685 ($\beta = -.007$) ($p = .793$)	-16.420 ($\beta = -.065$) ($p = .022$)	-11.636 ($\beta = -.046$) ($p = .309$)
OMD_Digitalization	465.401 ($\beta = .026$) ($p = .365$)	0.856 ($\beta = .005$) ($p = .868$)	-5.943 ($\beta = -.033$) ($p = .470$)
O_HAGV	-361.109 ($\beta = -.048$) ($p = .081$)	-0.981 ($\beta = -.013$) ($p = .634$)	5.391 ($\beta = .072$) ($p = .098$)
Relative_time_meeting	315.494 ($\beta = .029$) ($p = .265$)	0.123 ($\beta = .001$) ($p = .965$)	7.865 ($\beta = .074$) ($p = .080$)
OMD_Utterances	89.285 ($\beta = .886$) ($p = .000$)		
F value	85.153 $p < 0.05$	88.245 $p < 0.05$	30.370 $p < 0.05$
R square	0.907	0.905	0.753
Adj R square	0.896	0.894	0.729

Finally, a Negative Binomial Regression was conducted as an additional robustness check. Since the dependent variable *OMDUnique speakers* was count-based and demonstrated some levels of overdispersion, this method was more appropriate than a standard multiple regression analysis. This analysis made it possible to test whether the relationships between affiliative and aggressive humor and director engagement remained when using a model suited for overdispersed output. The findings, presented in Table 5, provided additional support for the conclusions drawn regarding Hypotheses 1 and 2, and further strengthened the robustness of the overall findings.

Table 5 showed a significant and positive relationship between affiliative humor and the number of unique speakers ($B = 0.317$, 95% CI [0.087, 0.548], $p < 0.05$). This indicated that affiliative humor was associated with more board of directors contributing to the discussion, reflecting higher engagement levels. Aggressive humor did not significantly predict unique speakers ($B = -0.121$, 95% CI [-0.701, 0.458], $p = .681$), suggesting that it did not meaningfully influence engagement when modeled with a count-appropriate approach. As a result, Hypothesis 2 remained unsupported. Overall, the Negative Binomial Regression findings reinforced Hypothesis 1, confirming that affiliative humor positively predicted director engagement. These results highlight the importance of positive, relationship-oriented humor in facilitating interactive and participatory discussions during boardroom meetings.

Table 5: Negative Binomial Regression Model Predicting Director Engagement (DV = Unique Speakers, N = 176)

Predictor	B	95% CI	Wald χ^2	p
Affiliative Humor	0.317	[0.087, 0.548]	7.29	0.007
Aggressive Humor	-0.121	[-0.701, 0.458]	0.17	0.681

Discussion

Overall, this study set out to examine how humor styles used by boardroom members influences director engagement, focusing specifically on affiliative and aggressive humor. Across all major regression models (Tables 2-4), affiliative humor consistently demonstrated a significant positive relationship with engagement, reflected in higher numbers of unique speakers and more active participation in boardroom meetings. These results align with existing humor literature (Pundt & Herrmann, 2015) and provide strong support for Hypothesis 1 (H1), indicating that affiliative humor functions as a relational tool that promotes openness, psychological safety, and a collaborative meeting environment. In contrast, aggressive humor did not exhibit the expected negative association with director engagement. Instead, its effects were weaker and inconsistent, and in some robustness models even slightly positive, suggesting that its effects are likely context dependent. Overall, the results support Hypothesis 1 and suggest that affiliative humor is the more reliable and influential driver of director engagement, whereas Hypothesis 2 is not confirmed.

Theoretical Contribution

This thesis contributed to theory by displaying how humor shaped engagement within the formal and hierarchical context of boardroom meetings, a context that has received little attention in existing humor literature. Earlier studies suggested that affiliative humor helped reduce tension, promote positive social connections, and soften hierarchical boundaries (Romero & Cruthirds, 2006; Pundt & Herrmann, 2015). The findings of this thesis provided behavioral support for these relational ideas: affiliative humor was consistently linked to higher director engagement and encouraged a wider range of board of directors to speak. This aligned with the relational process view of humor (Cooper, 2008), which proposed that humor strengthened interpersonal connections and supported more open communication.

This thesis also added to theoretical perspectives on aggressive humor. While often associated with negative relational outcomes (Romero & Cruthirds, 2006), aggressive humor did not reduce engagement among board of directors in this boardroom setting and was at times even positively associated with increased boardroom interaction. In contrast to Pundt & Herrmann (2015), who found that aggressive humor negatively impacted leader-member exchange in hierarchical leader-follower relationships, the findings of this study indicated that these negative effects did not carry over to boardroom governance context, where power dynamics and interaction norms differ.

Finally, this thesis contributed to theory by linking humor literature to behavioral measures of engagement observed in real boardroom meetings. The findings of this thesis strengthened theoretical claims that humor can shape actual interaction patterns (Cooper, 2008; Pundt & Herrmann, 2015; Pundt & Venz, 2017). The findings highlighted humor, particularly affiliative humor, as an informal tool that helped lower hierarchical boundaries and supported more inclusive participation in boardroom discussions.

Practical Implications

The findings of this thesis offered several practical implications for individuals in governance and organizational leadership roles. The consistent and positive effects of affiliative humor indicated that inclusive and relationship-oriented humor can encourage greater levels of engagement during boardroom discussions. Training programs aimed at improving board governance may therefore benefit from including greater attention to interpersonal communication styles, including the appropriate use of humor, to support more open and engaged discussions. Additionally, when mentoring or assessing current and future boardroom members, organizations may consider humor as a relevant interpersonal skill that can help promote engagement. Overall, the findings highlighted humor as a subtle but influential tool for promoting inclusive and effective boardroom interactions.

Limitations

The limitations of this thesis mainly resulted from the research design choices made to examine humor and engagement in real boardroom settings. First, the analysis focused on board meetings from Dutch water authorities, a setting chosen because of its formal governance structure and data availability. Although these boards are comparable to corporate boards in terms of structure and responsibilities, they represent a specific governance context. Caution is therefore required when generalizing the findings to boards operating in different corporate and institutional settings (Van den Oever & Shropshire, 2024). Second, the study relied on observable behavior during formal meetings to measure engagement. While the identification of affiliative and aggressive humor was based on the widely accepted framework developed by Martin et al. (2003), some degree of subjectivity was unavoidable when determining whether an interaction was classified as affiliative humor, aggressive humor, or humor at all. Finally, because engagement was measured at the agenda-item level, the effects of humor were inherently context-dependent and shaped by meeting structure and procedures. As a result, the

findings should therefore be interpreted as reflecting engagement dynamics within formal governance settings and should not be assumed to apply across all boards and organizations.

Future Research

Future research could build on this study by examining how humor influences engagement across different types of boards and organizational contexts. Applying a similar behavioral approach to boards of private corporations, non-profit organizations, or multinational corporations would allow for comparisons of whether humor plays a different role under varying governance structures, ownership models, or strategic goals. In addition, future studies could explore how contextual factors such as board culture, leadership style, or power distribution moderate the effects of affiliative and aggressive humor on engagement. By extending the analysis beyond a single governance setting, future research can develop a more comprehensive understanding of when and how humor influences engagement in boardroom interactions.

Conclusion

This thesis explored how different styles of humor are related to engagement in boardroom meetings. Using behavioral observations from real board discussions, the study found that affiliative humor was consistently linked to higher engagement, mainly by encouraging more board members to take part in the discussion. In contrast, aggressive humor did not consistently reduce engagement and in some situations was associated with increased interaction, indicating that its effects depend on the context in which it is used. Overall, the findings show that humor is not just a social element of board meetings but can meaningfully shape how board of directors interact and participate. By focusing on actual behavior in formal governance settings, this study adds to existing research by demonstrating how interpersonal communication influences boardroom dynamics.

Reflection

Writing this thesis was a challenging but valuable experience that required a high level of independence, persistence, and self-reflection. Working with complex behavioral data and translating empirical findings into a coherent academic argument proved to be demanding, especially when trying to make sense of the writing process and apply the feedback I received. At times, this was mentally exhausting, but through repeated revision and reflection, I gradually learned how to engage with feedback more constructively and improve the clarity and structure of my work. The pressure associated with completing and passing this thesis had a significant personal impact, forcing me to confront my fear of failure. Despite this, I remained committed to the project and did everything I could to persevere. Ultimately, the process strengthened my confidence, resilience, and research skills, and marked an important step in my academic and personal development.

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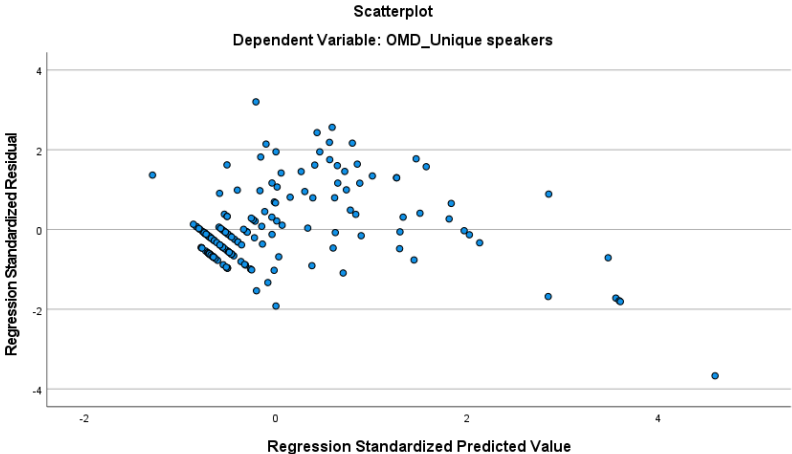
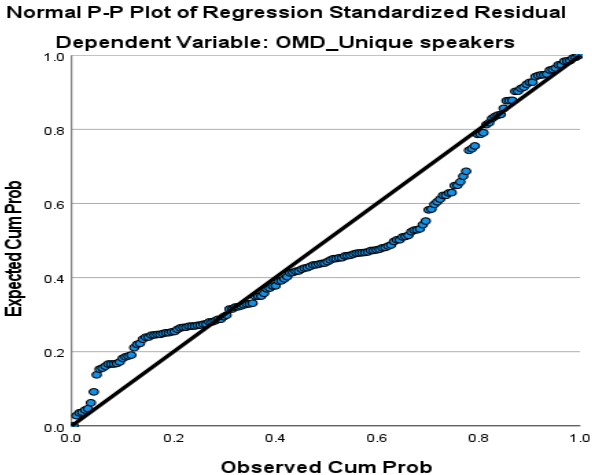
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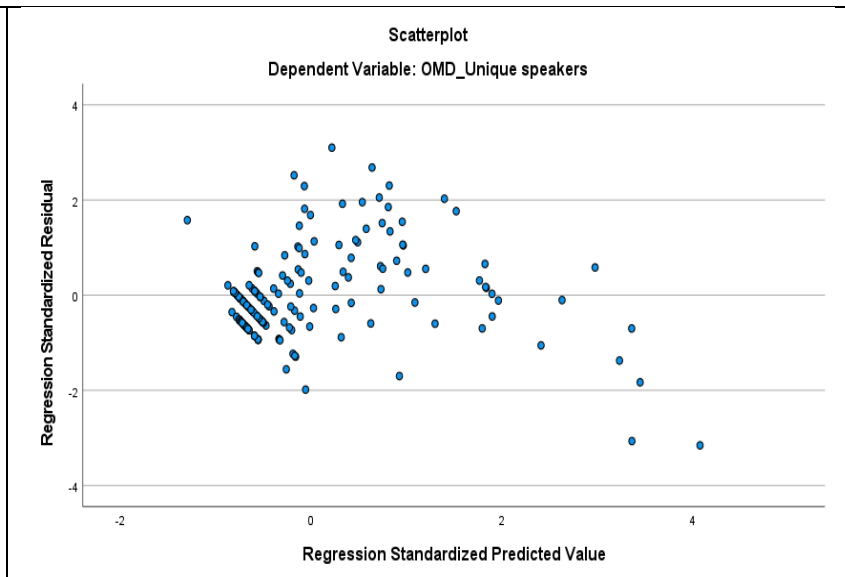
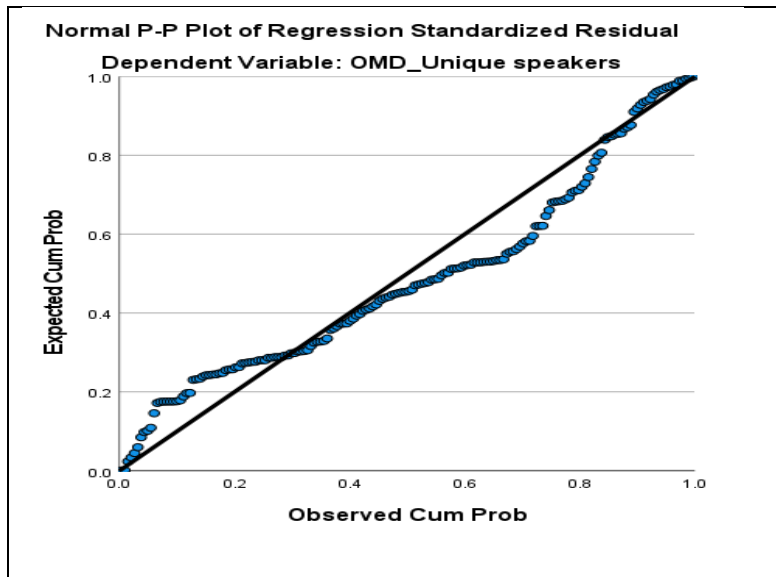
Appendix

Appendix A: Assumption Checks – Plots

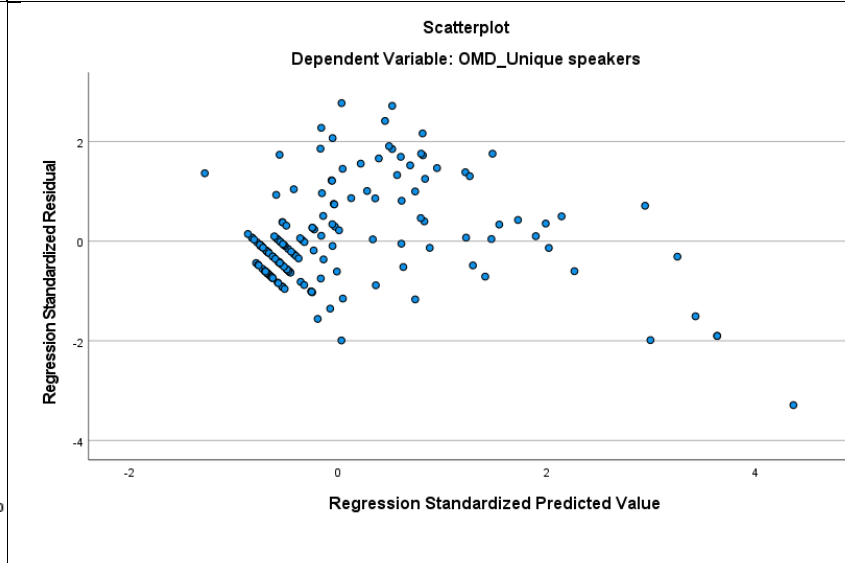
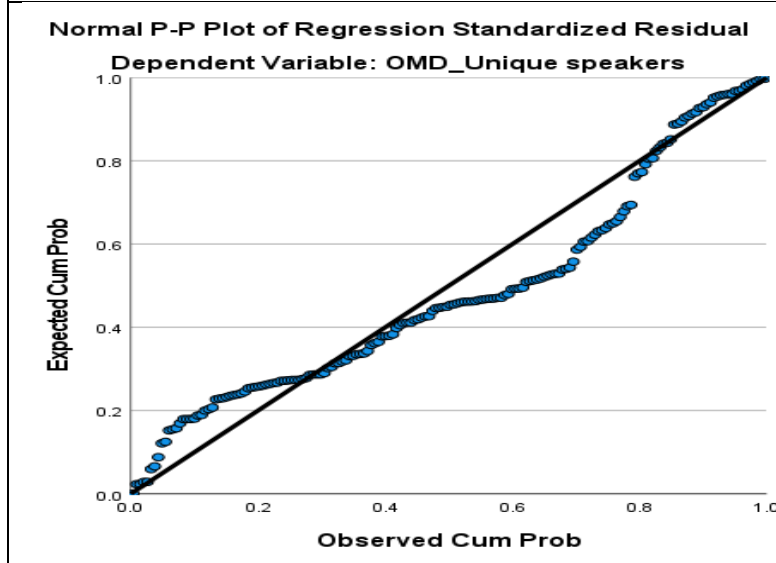
Model 1



Model 2

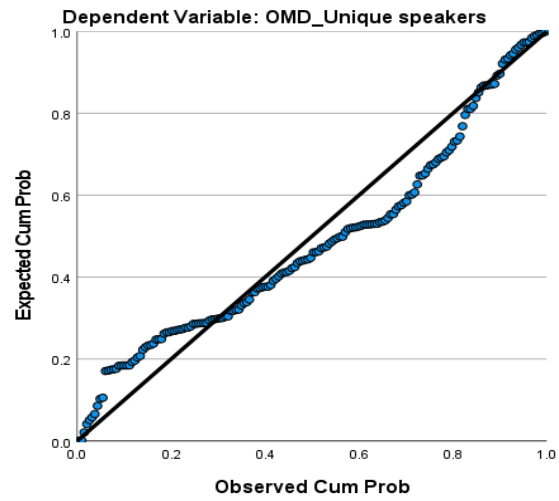


Model 3

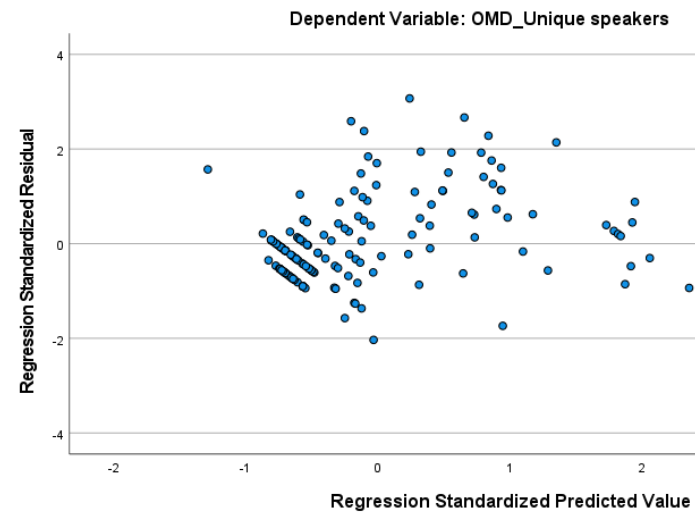


Model 4

Normal P-P Plot of Regression Standardized Residual



Scatterplot



Appendix B: Descriptive Statistics

Descriptive Statistics

	Mean	Std. Deviation	N
OMD_Unique speakers	4.4432	4.90215	176
OMD_Motions	.1761	.78391	176
OMD_Amendments	.0795	.44649	176
OMD_Promises	.2784	1.15970	176
OMD_Utterances	19.7102	37.55242	176
OMD_Proposal words	2268.0227	2397.03264	176
OMD_Governance	.4034	.49198	176
OMD_Taxes and finance	.3864	.48830	176
OMD_Water quality	.1250	.33166	176
OMD_Water quantity	.1591	.36680	176
OMD_Water safety	.0227	.14946	176
OMD_Sustainability	.0511	.22090	176
OMD_Climate	.0227	.14946	176
OMD_Digitalization	.0455	.20889	176
OMD_Notopics	1.2159	.55444	176
O_HAGV	.5341	.50026	176
Relative_time_meeting	.5320	.35203	176
Affiliative humor	.3239	.81605	176
Aggressive humor	.0739	.32107	176

Correlations

	OMD_Unique speakers	OMD_Motions	OMD_Amendments	OMD_Promises	OMD_Utterances	OMD_Proposal words	OMD_Governance	OMD_Taxes and finance	OMD_Water quality	OMD_Water quantity	OMD_Water safety	OMD_Sustainability	OMD_Climate	OMD_Digitalization	OMD_Notopics	O_HAGV	Relative_time_meeting	Affiliative humor	Aggressive humor
Pearson Correlation	1.000	.458	.292	.449	.817	.388	-.108	.069	.173	-.059	-.014	.090	.072	-.143	.028	.180	.212	.502	.415
	.458	1.000	.254	.819	.708	.280	-.111	.150	-.063	-.038	-.034	.014	.112	-.049	-.022	.050	.010	.187	.334
	.292	.254	1.000	.145	.561	.496	.035	-.011	.048	-.078	-.027	-.041	-.027	-.039	-.047	.039	.079	.133	.158
	.449	.819	.145	1.000	.605	.196	-.148	.162	.072	-.038	-.004	-.011	-.004	-.053	.004	-.051	.047	.273	.221
	.817	.708	.561	.605	1.000	.463	-.046	.087	.040	-.106	-.042	.050	.009	-.105	-.038	.118	.146	.338	.436
	.388	.280	.496	.196	.463	1.000	-.280	.164	.168	.077	.022	.236	.141	-.116	.141	.103	.196	.055	.063
	-.108	-.111	.035	-.148	-.046	-.280	1.000	-.534	-.311	-.358	-.125	-.191	-.125	-.068	-.174	-.137	-.055	-.014	-.045
	.069	.150	-.011	.162	.087	.164	-.534	1.000	-.053	-.090	-.121	.187	.036	-.173	.302	.156	.042	.028	.145
	.173	-.063	.048	.072	.040	.168	-.311	-.053	1.000	.117	-.058	.068	-.058	-.082	.319	.146	.157	.103	-.087
	-.059	-.038	-.078	-.038	-.106	.077	-.358	-.090	.117	1.000	-.066	.252	.251	-.095	.476	.126	-.103	-.020	-.100
	-.014	-.034	-.027	-.004	-.042	.022	-.125	-.121	-.058	-.066	1.000	-.035	-.023	-.033	-.060	.066	-.019	-.061	-.035
	.090	.014	-.041	-.011	.050	.236	-.191	.187	.068	.252	-.035	1.000	.311	-.051	.856	.217	-.072	.003	-.054
	.072	.112	-.027	-.004	.009	.141	-.125	.036	-.058	.351	-.023	.311	1.000	-.033	.492	.066	-.075	.080	-.035
	-.143	-.049	-.039	-.053	-.068	-.116	-.068	-.173	-.082	-.095	-.033	-.051	-.033	1.000	.013	-.070	-.163	-.087	-.050
	.028	-.022	-.047	-.004	-.038	.141	-.174	.302	.319	.476	-.060	.856	.492	.013	1.000	.282	-.101	.034	-.090
	.180	.050	.039	-.051	.118	.103	-.137	.156	.146	.126	.066	.217	.066	-.070	.282	1.000	-.007	-.006	.109
	.212	.010	.079	.047	.146	.196	-.055	.042	.157	-.103	-.019	-.072	-.075	-.163	-.101	-.007	1.000	.044	-.006
	.502	.187	.133	.273	.338	.055	-.014	.028	.103	-.020	-.061	.003	.080	-.087	.034	-.006	.044	1.000	.257
	.415	.334	.158	.221	.436	.063	-.045	.145	-.087	-.100	-.035	-.054	-.035	-.050	-.090	.109	-.006	.257	1.000
Sig. (1-tailed)		<.001	<.001	<.001	<.001	<.001	.077	.182	.011	.220	.428	.118	.171	.030	.358	.008	.002	<.001	<.001
	.000		.000	.000	.000	.071	.024	.202	.306	.325	.428	.070	.259	.385	.254	.450	.006	.000	.000
	.000	.000		.028	.000	.000	.322	.444	.262	.153	.360	.292	.360	.304	.269	.304	.148	.039	.018
	.000	.000	.028		.000	.005	.025	.016	.170	.310	.480	.441	.480	.244	.480	.251	.266	.000	.002
	.000	.000	.000	.000		.000	.274	.125	.299	.080	.292	.255	.451	.083	.308	.060	.027	.000	.000
	.000	.000	.000	.005	.000		.000	.015	.013	.155	.386	.001	.031	.063	.031	.086	.004	.235	.202
	.077	.071	.322	.025	.274	.000		.000	.000	.000	.049	.006	.049	.184	.010	.034	.234	.426	.277
	.182	.024	.444	.016	.125	.015	.000		.243	.118	.055	.007	.320	.011	.000	.019	.288	.354	.027
	.011	.202	.262	.170	.299	.013	.000	.243		.060	.224	.184	.224	.138	.000	.026	.019	.087	.125
	.220	.306	.153	.310	.080	.155	.000	.118	.060		.191	.000	.000	.105	.000	.048	.086	.394	.093
	.428	.325	.360	.480	.292	.386	.049	.055	.224	.191		.320	.380	.331	.216	.192	.403	.212	.321
	.118	.428	.292	.441	.255	.001	.006	.007	.184	.000	.320		.000	.252	.000	.002	.171	.486	.240
	.171	.070	.360	.480	.451	.031	.049	.320	.224	.000	.380	.000		.331	.000	.192	.161	.146	.321
	.030	.258	.304	.244	.083	.063	.184	.011	.138	.105	.331	.252	.331		.430	.179	.015	.126	.253
	.358	.385	.269	.480	.308	.031	.010	.000	.000	.000	.216	.000	.000	.430		.000	.090	.327	.117
	.008	.254	.304	.251	.060	.086	.034	.019	.026	.048	.192	.002	.192	.179	.000		.464	.467	.075
	.002	.450	.148	.266	.027	.004	.234	.288	.019	.086	.403	.171	.161	.015	.090	.464		.281	.466
	.000	.006	.039	.000	.000	.235	.426	.354	.087	.394	.212	.486	.146	.126	.327	.467	.281		.000
	.000	.000	.018	.002	.000	.202	.277	.027	.125	.093	.321	.240	.321	.117	.075	.466	.000		
N	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176
	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176
	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176
	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176
	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176
	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176
	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176
	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176
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	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176
	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176
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	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176
	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176
	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176
	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176
	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176
	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176
	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176
	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176
	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176
	176	176	176	176															

Appendix C: SPSS Output – Regression Models 1–4, Including Durbin-Watson, and VIF Statistics

Model 1

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.892 ^a	.795	.775	2.32649	1.913

a. Predictors: (Constant), Relative_time_meeting, O_HAGV, OMD_Motions, OMD_Water safety, OMD_Climate, OMD_Digitalization, OMD_Water quality, OMD_Amendments, OMD_Taxes and finance, OMD_Sustainability, OMD_Water quantity, OMD_Proposal words, OMD_Words, OMD_Governance, OMD_Promises, OMD_Utterances

b. Dependent Variable: OMD_Unique speakers

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3344.832	16	209.052	38.623	.000 ^b
	Residual	860.600	159	5.413		
	Total	4205.432	175			

a. Dependent Variable: OMD_Unique speakers

b. Predictors: (Constant), Relative_time_meeting, O_HAGV, OMD_Motions, OMD_Water safety, OMD_Climate, OMD_Digitalization, OMD_Water quality, OMD_Amendments, OMD_Taxes and finance, OMD_Sustainability, OMD_Water quantity, OMD_Proposal words, OMD_Governance, OMD_Promises, OMD_Utterances

Coefficients^a

Model		Unstandardized Coefficients		Standardized	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.788	.733		2.439	.016		
	OMD_Motions	-2.420	.477	-.387	-5.071	.000	.221	4.525
	OMD_Amendments	-3.381	.544	-.308	-6.211	.000	.524	1.910
	OMD_Promises	.308	.297	.073	1.036	.302	.260	3.843
	OMD_Utterances	.139	.016	1.061	8.647	.000	.085	9.701
	OMD_Proposal words	9.396E-5	.000	.046	.955	.341	.556	1.800
	OMD_Governance	-.799	.645	-.080	-1.239	.217	.307	3.257
	OMD_Taxes and finance	-.676	.591	-.067	-1.144	.254	.371	2.693
	OMD_Water quality	1.028	.662	.070	1.553	.122	.641	1.560
	OMD_Water quantity	-.792	.671	-.059	-1.181	.239	.511	1.957
	OMD_Water safety	-.308	1.341	-.009	-.229	.819	.770	1.299
	OMD_Sustainability	-.533	.922	-.024	-.579	.564	.746	1.341
	OMD_Climate	3.671	1.342	.112	2.736	.007	.769	1.301
	OMD_Digitalization	-1.082	.977	-.046	-1.107	.270	.743	1.346
	O_HAGV	.707	.392	.072	1.803	.073	.804	1.243
	Relative_time_meeting	.486	.537	.035	.905	.367	.867	1.153

a. Dependent Variable: OMD_Unique speakers

Model 2

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.912 ^a	.832	.813	2.11718	1.940

a. Predictors: (Constant), Affiliative humor, OMD_Sustainability, OMD_Water safety, Relative_time_meeting, OMD_Amendments, OMD_Digitalization, OMD_Water quality, O_HAGV, OMD_Promises, OMD_Water quantity, OMD_Taxes and finance, OMD_Climate, OMD_Proposal words, OMD_Words, OMD_Governance, OMD_Motions, OMD_Utterances

b. Dependent Variable: OMD_Unique speakers

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3497.205	17	205.718	45.894	.000 ^b
	Residual	708.226	158	4.482		
	Total	4205.432	175			

a. Dependent Variable: OMD_Unique speakers

b. Predictors: (Constant), Affiliative humor, OMD_Sustainability, OMD_Water safety, Relative_time_meeting, OMD_Amendments, OMD_Digitalization, OMD_Water quality, O_HAGV, OMD_Promises, OMD_Water quantity, OMD_Taxes and finance, OMD_Climate, OMD_Proposal words, OMD_Words, OMD_Governance, OMD_Motions, OMD_Utterances

Coefficients^a

Model		Unstandardized Coefficients		Standardized	t	Sig.	Collinearity Statistics	
		B	Std. Error	Coefficients Beta			Tolerance	VIF
1	(Constant)	1.279	.673		1.901	.059		
	OMD_Motions	-1.897	.443	-.303	-4.278	.000	.212	4.718
	OMD_Amendments	-3.384	.495	-.308	-6.831	.000	.524	1.910
	OMD_Promises	.095	.273	.022	.348	.728	.256	3.913
	OMD_Words	-5.741E-5	.000	-.044	-.415	.679	.094	9.693
	OMD_Utterances	.144	.015	1.100	9.836	.000	.085	9.743
	OMD_Proposal words	.000	.000	.077	1.737	.084	.548	1.826
	OMD_Governance	-.665	.588	-.067	-1.132	.259	.307	3.262
	OMD_Taxes and finance	-.548	.538	-.055	-1.019	.310	.371	2.697
	OMD_Water quality	.854	.603	.058	1.415	.159	.640	1.563
	OMD_Water quantity	-.611	.611	-.046	-.999	.319	.510	1.962
	OMD_Water safety	.152	1.223	.005	.124	.901	.767	1.305
	OMD_Sustainability	-.542	.839	-.024	-.646	.519	.746	1.341
	OMD_Climate	2.531	1.237	.077	2.047	.042	.750	1.334
	OMD_Digitalization	-.690	.891	-.029	-.774	.440	.739	1.354
	O_HAGV	.680	.357	.069	1.906	.059	.804	1.243
	Relative_time_meeting	.622	.489	.045	1.273	.205	.865	1.156
	Affiliative humor	1.323	.227	.220	5.830	.000	.747	1.338

a. Dependent Variable: OMD_Unique speakers

Model 3

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.894 ^a	.800	.778	2.30782	1.905

- a. Predictors: (Constant), Aggressive humor, Relative_time_meeting, OMD_Water safety, OMD_Climate, O_HAGV, OMD_Amendments, OMD_Digitalization, OMD_Governance, OMD_Promises, OMD_Sustainability, OMD_Water quality, OMD_Water quantity, OMD_Proposal words, OMD_Taxes and finance, OMD_Words, OMD_Motions, OMD_Utterances
- b. Dependent Variable: OMD_Unique speakers

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3363.917	17	197.877	37.153	.000 ^b
	Residual	841.515	158	5.326		
	Total	4205.432	175			

- a. Dependent Variable: OMD_Unique speakers
- b. Predictors: (Constant), Aggressive humor, Relative_time_meeting, OMD_Water safety, OMD_Climate, O_HAGV, OMD_Amendments, OMD_Digitalization, OMD_Governance, OMD_Promises, OMD_Sustainability, OMD_Water quality, OMD_Water quantity, OMD_Proposal words, OMD_Taxes and finance, OMD_Words, OMD_Motions, OMD_Utterances

Coefficients^a

Model		Unstandardized Coefficients		Standardized	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.688	.729		2.315	.022		
	OMD_Motions	-2.497	.475	-.399	-5.255	.000	.219	4.558
	OMD_Amendments	-3.302	.542	-.301	-6.098	.000	.521	1.921
	OMD_Promises	.398	.299	.094	1.332	.185	.254	3.943
	OMD_Words	.000	.000	.096	.851	.396	.099	9.073
	OMD_Utterances	.135	.016	1.035	8.451	.000	.084	9.849
	OMD_Proposal words	.000	.000	.058	1.204	.231	.546	1.831
	OMD_Governance	-.721	.641	-.072	-1.124	.263	.306	3.271
	OMD_Taxes and finance	-.728	.587	-.073	-1.240	.217	.371	2.699
	OMD_Water quality	1.115	.658	.075	1.694	.092	.638	1.567
	OMD_Water quantity	-.742	.666	-.056	-1.114	.267	.510	1.960
	OMD_Water safety	-.239	1.331	-.007	-.180	.858	.769	1.300
	OMD_Sustainability	-.411	.917	-.019	-.448	.655	.742	1.348
	OMD_Climate	3.745	1.332	.114	2.812	.006	.768	1.302
	OMD_Digitalization	-1.019	.969	-.043	-1.051	.295	.742	1.347
	O_HAGV	.658	.390	.067	1.688	.093	.801	1.249
	Relative_time_meeting	.558	.534	.040	1.046	.297	.863	1.159
	Aggressive humor	1.210	.639	.079	1.893	.060	.722	1.385

a. Dependent Variable: OMD_Unique speakers

Model 4

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.913 ^a	.833	.814	2.11254	1.927

a. Predictors: (Constant), Affiliative humor, OMD_Sustainability, OMD_Water safety, Relative_time_meeting, OMD_Amendments, OMD_Digitalization, OMD_Water quality, O_HAGV, OMD_Promises, OMD_Water quantity, Aggressive humor, OMD_Taxes and finance, OMD_Climate, OMD_Proposal words, OMD_Governance, OMD_Words, OMD_Motions, OMD_Utterances

b. Dependent Variable: OMD_Unique speakers

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3504.771	18	194.709	43.629	.000 ^b
	Residual	700.661	157	4.463		
	Total	4205.432	175			

a. Dependent Variable: OMD_Unique speakers

b. Predictors: (Constant), Affiliative humor, OMD_Sustainability, OMD_Water safety, Relative_time_meeting, OMD_Amendments, OMD_Digitalization, OMD_Water quality, O_HAGV, OMD_Promises, OMD_Water quantity, Aggressive humor, OMD_Taxes and finance, OMD_Climate, OMD_Proposal words, OMD_Governance, OMD_Words, OMD_Motions, OMD_Utterances

Coefficients^a

Model		Unstandardized Coefficients		Standardized	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.231	.672		1.830	.069		
	OMD_Motions	-1.961	.445	-.314	-4.406	.000	.209	4.776
	OMD_Amendments	-3.334	.496	-.304	-6.724	.000	.520	1.921
	OMD_Promises	.159	.277	.038	.573	.568	.248	4.039
	OMD_Words	-7.002E-5	.000	-.054	-.506	.614	.093	9.745
	OMD_Utterances	.141	.015	1.083	9.629	.000	.084	9.916
	OMD_Proposal words	.000	.000	.083	1.881	.062	.540	1.851
	OMD_Governance	-.619	.587	-.062	-1.055	.293	.305	3.274
	OMD_Taxes and finance	-.585	.538	-.058	-1.088	.278	.370	2.705
	OMD_Water quality	.914	.604	.062	1.514	.132	.636	1.573
	OMD_Water quantity	-.584	.610	-.044	-.958	.340	.509	1.964
	OMD_Water safety	.182	1.221	.006	.149	.882	.766	1.305
	OMD_Sustainability	-.464	.839	-.021	-.553	.581	.742	1.348
	OMD_Climate	2.612	1.236	.080	2.114	.036	.748	1.337
	OMD_Digitalization	-.662	.890	-.028	-.744	.458	.738	1.354
	O_HAGV	.650	.357	.066	1.821	.071	.801	1.249
	Relative_time_meeting	.664	.489	.048	1.359	.176	.861	1.161
	Aggressive humor	.769	.591	.050	1.302	.195	.709	1.410
	Affiliative humor	1.283	.228	.214	5.618	.000	.734	1.362

a. Dependent Variable: OMD_Unique speakers

Appendix D: SPSS output model 5-7

Model 5

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.919 ^a	.844	.823	3.15837	2.271

a. Predictors: (Constant), Affiliative humor, OMD_Governance, O_HAGV, OMD_Digitalization, OMD_Amendments, OMD_Climate, OMD_Water safety, Relative_time_meeting, OMD_Motions, OMD_Sustainability, OMD_Water quality, OMD_Water quantity, OMD_Proposal words, OMD_Taxes and finance, OMD_Words, OMD_Promises, OMD_Utterances

b. Dependent Variable: New_unique_speakers

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6835.797	17	402.106	40.310	.000 ^b
	Residual	1266.865	127	9.975		
	Total	8102.662	144			

a. Dependent Variable: New_unique_speakers

b. Predictors: (Constant), Affiliative humor, OMD_Governance, O_HAGV, OMD_Digitalization, OMD_Amendments, OMD_Climate, OMD_Water safety, Relative_time_meeting, OMD_Motions, OMD_Sustainability, OMD_Water quality, OMD_Water quantity, OMD_Proposal words, OMD_Taxes and finance, OMD_Words, OMD_Promises, OMD_Utterances

Coefficients^a

Model		Unstandardized Coefficients		Standardized	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-1.055	1.063		-.992	.323		
	OMD_Motions	.809	.670	.093	1.207	.230	.209	4.794
	OMD_Amendments	-1.685	.750	-.110	-2.247	.026	.512	1.953
	OMD_Promises	.252	.409	.043	.616	.539	.256	3.900
	OMD_Words	.000	.000	.219	1.948	.054	.098	9.256
	OMD_Utterances	.033	.022	.177	1.495	.137	.088	9.412
	OMD_Proposal words	.000	.000	-.096	-1.991	.049	.529	1.889
	OMD_Governance	.176	.952	.011	.185	.854	.323	3.100
	OMD_Taxes and finance	1.717	.844	.112	2.034	.044	.407	2.457
	OMD_Water quality	.458	.945	.021	.485	.628	.648	1.542
	OMD_Water quantity	.805	.943	.042	.853	.395	.510	1.960
	OMD_Water safety	1.085	1.849	.024	.587	.558	.750	1.333
	OMD_Sustainability	-1.482	1.262	-.048	-1.174	.243	.742	1.348
	OMD_Climate	-3.500	1.851	-.077	-1.891	.061	.748	1.336
	OMD_Digitalization	1.078	1.483	.029	.727	.469	.788	1.269
	O_HAGV	.242	.585	.016	.414	.679	.829	1.206
	Relative_time_meeting	-.311	.788	-.015	-.395	.694	.830	1.205
	Affiliative humor	5.693	.341	.671	16.713	.000	.763	1.310

a. Dependent Variable: New_unique_speakers

Model 6

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.790 ^a	.624	.574	4.89508	1.852

a. Predictors: (Constant), Aggressive humor, Relative_time_meeting, OMD_Water safety, OMD_Climate, O_HAGV, OMD_Amendments, OMD_Digitalization, OMD_Governance, OMD_Promises, OMD_Water quality, OMD_Sustainability, OMD_Water quantity, OMD_Proposal words, OMD_Taxes and finance, OMD_Words, OMD_Motions, OMD_Utterances

b. Dependent Variable: New_unique_speakers

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5059.517	17	297.619	12.421	.000 ^b
	Residual	3043.145	127	23.962		
	Total	8102.662	144			

a. Dependent Variable: New_unique_speakers

b. Predictors: (Constant), Aggressive humor, Relative_time_meeting, OMD_Water safety, OMD_Climate, O_HAGV, OMD_Amendments, OMD_Digitalization, OMD_Governance, OMD_Promises, OMD_Water quality, OMD_Sustainability, OMD_Water quantity, OMD_Proposal words, OMD_Taxes and finance, OMD_Words, OMD_Motions, OMD_Utterances

Coefficients^a

Model		Unstandardized Coefficients		Standardized	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.526	1.638		.321	.749		
	OMD_Motions	-1.753	1.024	-.201	-1.712	.089	.215	4.656
	OMD_Amendments	-1.004	1.164	-.066	-.862	.390	.510	1.960
	OMD_Promises	1.777	.637	.301	2.791	.006	.254	3.933
	OMD_Words	.001	.000	.593	3.510	.001	.104	9.660
	OMD_Utterances	-.021	.034	-.111	-.599	.550	.087	9.497
	OMD_Proposal words	.000	.000	-.125	-1.660	.099	.526	1.902
	OMD_Governance	.465	1.480	.030	.314	.754	.320	3.121
	OMD_Taxes and finance	.741	1.310	.048	.565	.573	.406	2.462
	OMD_Water quality	1.978	1.468	.091	1.347	.180	.645	1.550
	OMD_Water quantity	.285	1.461	.015	.195	.846	.511	1.957
	OMD_Water safety	-.478	2.860	-.010	-.167	.867	.753	1.328
	OMD_Sustainability	-.392	1.962	-.013	-.200	.842	.737	1.356
	OMD_Climate	1.858	2.834	.041	.655	.513	.767	1.304
	OMD_Digitalization	-.283	2.294	-.008	-.123	.902	.792	1.263
	O_HAGV	-.272	.910	-.018	-.299	.766	.823	1.215
	Relative_time_meeting	.110	1.224	.005	.090	.929	.825	1.212
	Aggressive humor	8.874	1.367	.416	6.493	.000	.719	1.390

a. Dependent Variable: New_unique_speakers

Model 7

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.959 ^a	.920	.909	2.26181	1.936

a. Predictors: (Constant), Affiliative humor, OMD_Governance, O_HAGV, OMD_Digitalization, OMD_Amendments, OMD_Climate, OMD_Water safety, Relative_time_meeting, Aggressive humor, OMD_Promises, OMD_Sustainability, OMD_Water quality, OMD_Water quantity, OMD_Proposal words, OMD_Taxes and finance, OMD_Words, OMD_Motions, OMD_Utterances

b. Dependent Variable: New_unique_speakers

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7458.075	18	414.337	80.992	.000 ^b
	Residual	644.587	126	5.116		
	Total	8102.662	144			

a. Dependent Variable: New_unique_speakers

b. Predictors: (Constant), Affiliative humor, OMD_Governance, O_HAGV, OMD_Digitalization, OMD_Amendments, OMD_Climate, OMD_Water safety, Relative_time_meeting, Aggressive humor, OMD_Promises, OMD_Sustainability, OMD_Water quality, OMD_Water quantity, OMD_Proposal words, OMD_Taxes and finance, OMD_Words, OMD_Motions, OMD_Utterances

Coefficients^a

Model		Unstandardized Coefficients		Standardized	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-1.589	.763		-2.082	.039		
	OMD_Motions	.286	.482	.033	.593	.554	.207	4.840
	OMD_Amendments	-1.289	.538	-.084	-2.395	.018	.510	1.962
	OMD_Promises	.822	.297	.139	2.764	.007	.249	4.021
	OMD_Words	.000	.000	.155	1.922	.057	.097	9.309
	OMD_Utterances	.011	.016	.059	.689	.492	.086	9.594
	OMD_Proposal words	.000	.000	-.043	-1.248	.214	.520	1.925
	OMD_Governance	.818	.684	.053	1.195	.234	.320	3.123
	OMD_Taxes and finance	1.299	.606	.085	2.144	.034	.405	2.466
	OMD_Water quality	1.133	.679	.052	1.669	.098	.643	1.555
	OMD_Water quantity	1.092	.676	.057	1.615	.109	.509	1.963
	OMD_Water safety	1.434	1.324	.031	1.083	.281	.750	1.334
	OMD_Sustainability	-.686	.907	-.022	-.757	.451	.737	1.357
	OMD_Climate	-2.807	1.327	-.062	-2.115	.036	.747	1.339
	OMD_Digitalization	1.429	1.063	.038	1.344	.181	.788	1.270
	O_HAGV	-.158	.420	-.010	-.375	.708	.823	1.215
	Relative_time_meeting	.174	.566	.009	.307	.759	.825	1.212
	Aggressive humor	7.029	.637	.330	11.029	.000	.706	1.416
	Affiliative humor	5.330	.246	.628	21.653	.000	.750	1.334

a. Dependent Variable: New_unique_speakers

Appendix E: SPSS output model 8-10

Model 8

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.952 ^a	.907	.896	1217.16227	2.173

a. Predictors: (Constant), OMD_Utterances, OMD_Climate, OMD_Water safety, OMD_Water quality, OMD_Digitalization, O_HAGV, Relative_time_meeting, OMD_Taxes and finance, Affiliative humor, OMD_Sustainability, OMD_Water quantity, Aggressive humor, OMD_Amendments, OMD_Proposal words, OMD_Promises, OMD_Governance, OMD_Motions, OMD_Unique speakers

b. Dependent Variable: OMD_Words

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2270739384.668	18	126152188.037	85.153	.000 ^b
	Residual	232592985.872	157	1481483.986		
	Total	2503332370.540	175			

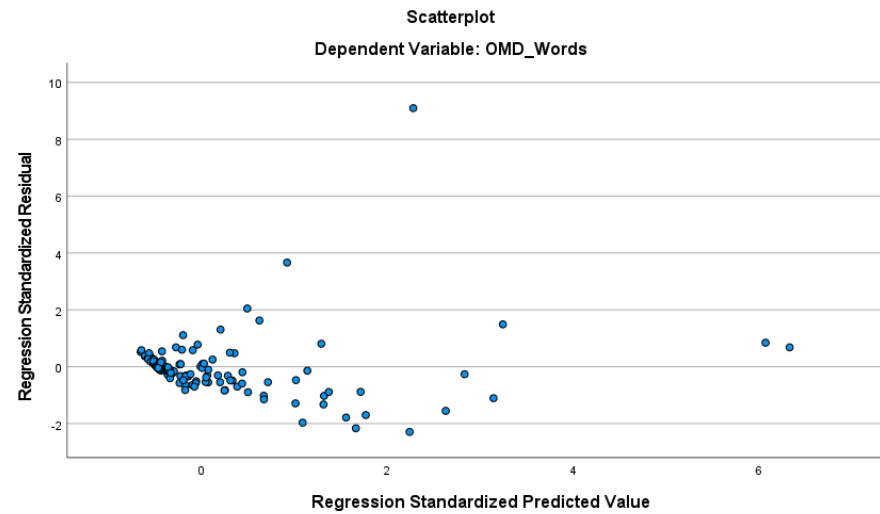
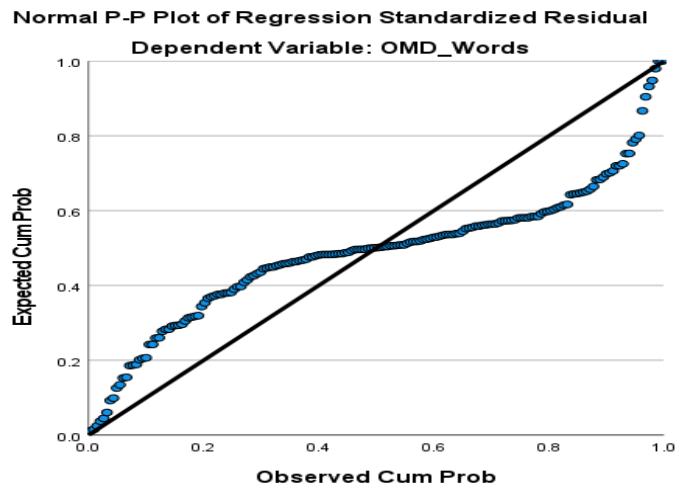
a. Dependent Variable: OMD_Words

b. Predictors: (Constant), OMD_Utterances, OMD_Climate, OMD_Water safety, OMD_Water quality, OMD_Digitalization, O_HAGV, Relative_time_meeting, OMD_Taxes and finance, Affiliative humor, OMD_Sustainability, OMD_Water quantity, Aggressive humor, OMD_Amendments, OMD_Proposal words, OMD_Promises, OMD_Governance, OMD_Motions, OMD_Unique speakers

Coefficients^a

Model		Unstandardized Coefficients		Standardized	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-584.783	388.688		-1.505	.134		
	Affiliative humor	441.984	139.822	.095	3.161	.002	.650	1.538
	Aggressive humor	315.993	341.133	.027	.926	.356	.706	1.417
	OMD_Unique speakers	-23.243	45.945	-.030	-.506	.614	.167	5.992
	OMD_Motions	-31.213	271.899	-.006	-.115	.909	.186	5.366
	OMD_Amendments	-324.832	323.134	-.038	-1.005	.316	.407	2.459
	OMD_Promises	323.045	157.512	.099	2.051	.042	.254	3.941
	OMD_Proposal words	.023	.053	.014	.429	.669	.529	1.890
	OMD_Governance	370.452	338.306	.048	1.095	.275	.306	3.272
	OMD_Taxes and finance	476.565	308.725	.062	1.544	.125	.373	2.685
	OMD_Water quality	168.096	350.180	.015	.480	.632	.628	1.593
	OMD_Water quantity	364.837	351.395	.035	1.038	.301	.510	1.962
	OMD_Water safety	547.667	701.962	.022	.780	.436	.769	1.300
	OMD_Sustainability	-665.802	481.095	-.039	-1.384	.168	.750	1.334
	OMD_Climate	-189.685	721.854	-.007	-.263	.793	.727	1.375
	OMD_Digitalization	465.401	512.160	.026	.909	.365	.740	1.352
	O_HAGV	-361.109	205.670	-.048	-1.756	.081	.800	1.250
	Relative_time_meeting	315.494	282.156	.029	1.118	.265	.858	1.165
	OMD_Utterances	89.285	7.937	.886	11.249	.000	.095	10.495

a. Dependent Variable: OMD_Words



Model 9

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.951 ^a	.905	.894	12.19952	2.048

a. Predictors: (Constant), Relative_time_meeting, Aggressive humor, OMD_Water safety, OMD_Climate, O_HAGV, OMD_Amendments, OMD_Digitalization, OMD_Governance, Affiliative humor, OMD_Promises, OMD_Sustainability, OMD_Water quality, OMD_Water quantity, OMD_Proposal words, OMD_Unique speakers, OMD_Taxes and finance, OMD_Motions

b. Dependent Variable: OMD_Utterances

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	223267.341	17	13133.373	88.245	.000 ^b
	Residual	23514.880	158	148.828		
	Total	246782.222	175			

a. Dependent Variable: OMD_Utterances

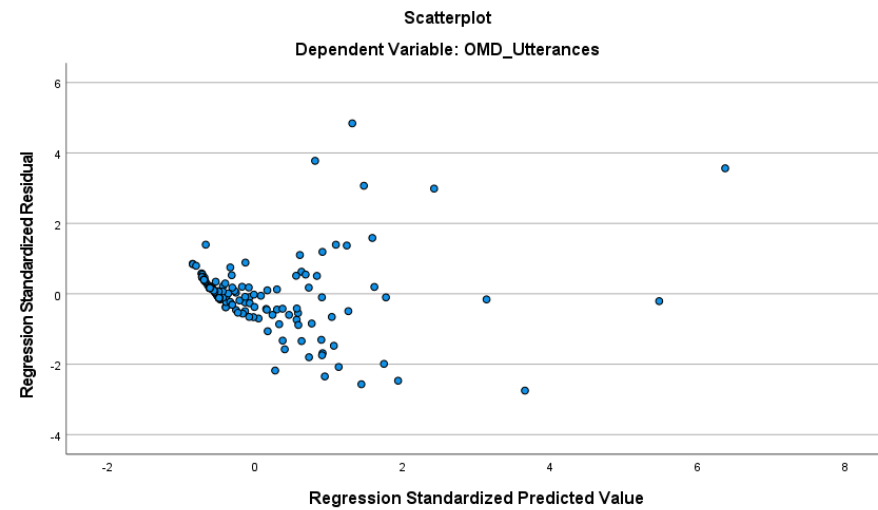
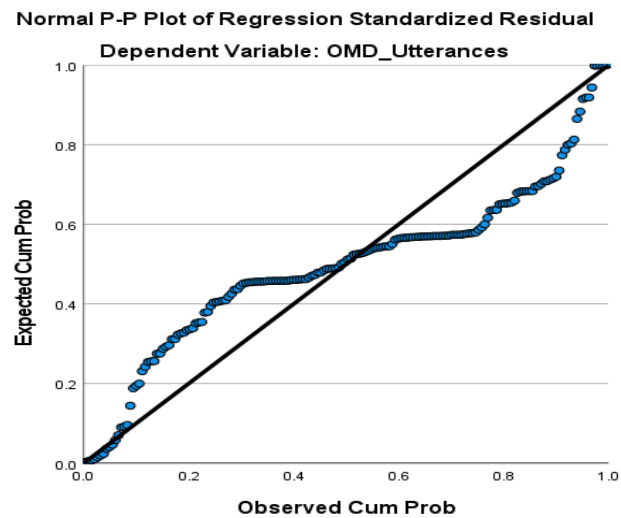
b. Predictors: (Constant), Relative_time_meeting, Aggressive humor, OMD_Water safety, OMD_Climate, O_HAGV, OMD_Amendments, OMD_Digitalization, OMD_Governance, Affiliative humor, OMD_Promises, OMD_Sustainability, OMD_Water quality, OMD_Water quantity, OMD_Proposal words, OMD_Unique speakers, OMD_Taxes and finance, OMD_Motions

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-5.246	3.873		-1.354	.178		
	Affiliative humor	-3.427	1.375	-.074	-2.493	.014	.676	1.480
	Aggressive humor	4.704	3.399	.040	1.384	.168	.714	1.400
	OMD_Unique speakers	4.534	.286	.592	15.837	.000	.432	2.316
	OMD_Motions	16.129	2.404	.337	6.709	.000	.239	4.177
	OMD_Amendments	25.193	2.544	.300	9.902	.000	.659	1.517
	OMD_Promises	1.265	1.576	.039	.803	.423	.255	3.925
	OMD_Proposal words	6.553E-5	.001	.004	.124	.902	.529	1.890
	OMD_Governance	2.967	3.383	.039	.877	.382	.307	3.256

OMD_Taxes and finance	.280	3.094	.004	.091	.928	.373	2.684
OMD_Water quality	-4.626	3.490	-.041	-1.325	.187	.635	1.576
OMD_Water quantity	.199	3.522	.002	.057	.955	.510	1.962
OMD_Water safety	-3.201	7.031	-.013	-.455	.650	.770	1.298
OMD_Sustainability	6.556	4.794	.039	1.368	.173	.758	1.319
OMD_Climate	-16.420	7.116	-.065	-2.307	.022	.752	1.330
OMD_Digitalization	.856	5.133	.005	.167	.868	.740	1.352
O_HAGV	-.981	2.060	-.013	-.476	.634	.801	1.249
Relative time meeting	.123	2.828	.001	.044	.965	.858	1.165

a. Dependent Variable: OMD_Utterances



Model 10

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.868 ^a	.753	.729	19.56147	1.726

a. Predictors: (Constant), Relative_time_meeting, Aggressive humor, OMD_Water safety, OMD_Climate, O_HAGV, OMD_Amendments, OMD_Digitalization, OMD_Governance, Affiliative humor, OMD_Promises, OMD_Sustainability, OMD_Water quality, OMD_Water quantity, OMD_Proposal words, OMD_Taxes and finance, OMD_Motions

b. Dependent Variable: OMD_Utterances

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	185940.710	16	11621.294	30.370	.000 ^b
	Residual	60841.512	159	382.651		
	Total	246782.222	175			

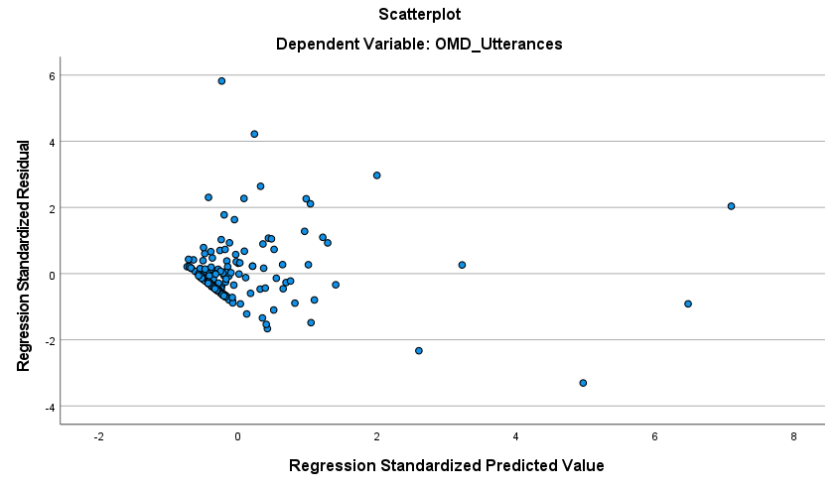
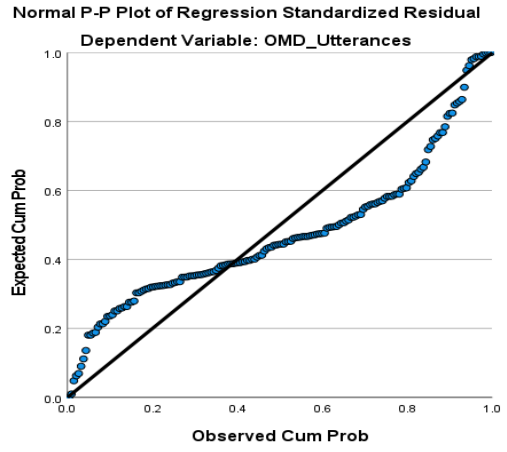
a. Dependent Variable: OMD_Utterances

b. Predictors: (Constant), Relative_time_meeting, Aggressive humor, OMD_Water safety, OMD_Climate, O_HAGV, OMD_Amendments, OMD_Digitalization, OMD_Governance, Affiliative humor, OMD_Promises, OMD_Sustainability, OMD_Water quality, OMD_Water quantity, OMD_Proposal words, OMD_Taxes and finance, OMD_Motions

Coefficients^a

Model		Unstandardized Coefficients		Standardized	t	Sig.	Collinearity Statistics	
		B	Std. Error	Coefficients Beta			Tolerance	VIF
1	(Constant)	1.366	6.175		.221	.825		
	Affiliative humor	5.845	1.994	.127	2.931	.004	.826	1.211
	Aggressive humor	20.945	5.196	.179	4.031	.000	.786	1.273
	OMD_Motions	18.711	3.846	.391	4.865	.000	.241	4.157
	OMD_Amendments	26.279	4.078	.312	6.444	.000	.660	1.516
	OMD_Promises	4.869	2.500	.150	1.948	.053	.260	3.844
	OMD_Proposal words	.002	.001	.137	2.623	.010	.564	1.772
	OMD_Governance	.094	5.416	.001	.017	.986	.308	3.247
	OMD_Taxes and finance	-6.543	4.913	-.085	-1.332	.185	.380	2.632
	OMD_Water quality	-1.362	5.587	-.012	-.244	.808	.637	1.570
	OMD_Water quantity	-6.651	5.605	-.065	-1.187	.237	.517	1.933
	OMD_Water safety	-6.599	11.269	-.026	-.586	.559	.771	1.297
	OMD_Sustainability	12.059	7.666	.071	1.573	.118	.762	1.312
	OMD_Climate	-11.636	11.400	-.046	-1.021	.309	.753	1.328
	OMD_Digitalization	-5.943	8.202	-.033	-.725	.470	.745	1.342
	O_HAGV	5.391	3.239	.072	1.664	.098	.833	1.201
	Relative time meeting	7.865	4.466	.074	1.761	.080	.885	1.131

a. Dependent Variable: OMD_Utterances



Appendix F: SPSS output negative binomial regression

Goodness of Fit^a

	Value	df	Value/df
Deviance	95.694	157	.610
Scaled Deviance	95.694	157	
Pearson Chi-Square	66.226	157	.422
Scaled Pearson Chi-Square	66.226	157	
Log Likelihood ^b	-394.482		
Akaike's Information Criterion (AIC)	826.964		
Finite Sample Corrected AIC (AICC)	831.836		
Bayesian Information Criterion (BIC)	887.203		
Consistent AIC (CAIC)	906.203		

Dependent Variable: OMD_Unique speakers

Model: (Intercept), Affiliative humor, Aggressive humor, OMD_Motions, OMD_Amendments, OMD_Promises, OMD_Words, OMD_Utterances, OMD_Proposal words, OMD_Governance, OMD_Taxes and finance, OMD_Water quality, OMD_Water quantity, OMD_Water safety, OMD_Sustainability, OMD_Climate, OMD_Digitalization, O_HAGV, Relative_time_meeting, OMD_Education, OMD_Innovation, OMD_International affairs, OMD_Doing business with the market, OMD_Notopics

a. Information criteria are in smaller-is-better form.

b. The full log likelihood function is displayed and used in computing information criteria.

Omnibus Test^a

Likelihood Ratio Chi-Square	df	Sig.
124.933	18	.000

Dependent Variable: OMD_Unique
speakers

Model: (Intercept), Affiliative humor,
Aggressive humor, OMD_Motions,
OMD_Amendments, OMD_Promises,
OMD_Words, OMD_Utterances,
OMD_Proposal words, OMD_Governance,
OMD_Taxes and finance, OMD_Water
quality, OMD_Water quantity, OMD_Water
safety, OMD_Sustainability, OMD_Climate,
OMD_Digitalization, O_HAGV,
Relative_time_meeting, OMD_Education,
OMD_Innovation, OMD_International
affairs, OMD_Doing business with the
market, OMD_Notopics

a. Compares the fitted model against the
intercept-only model.

Tests of Model Effects

Source	Wald Chi-Square	Type III	
		df	Sig.
(Intercept)	.905	1	.342
Affiliative humor	7.290	1	.007
Aggressive humor	.168	1	.681
OMD_Motions	5.781	1	.016
OMD_Amendments	2.728	1	.099
OMD_Promises	.002	1	.968
OMD_Words	1.105	1	.293
OMD_Utterances	20.713	1	.000
OMD_Proposal words	1.590	1	.207
OMD_Governance	.a	.	.
OMD_Taxes and finance	.a	.	.
OMD_Water quality	.a	.	.
OMD_Water quantity	.a	.	.
OMD_Water safety	.a	.	.
OMD_Sustainability	.a	.	.
OMD_Climate	.a	.	.
OMD_Digitalization	.a	.	.
O_HAGV	4.290	1	.038
Relative_time_meeting	.068	1	.794
OMD_Education	.a	.	.
OMD_Innovation	.a	.	.

OMD_ International affairs	.a	.	.
OMD_Doing business with the market	.a	.	.
OMD_Notopics	.a	.	.

Dependent Variable: OMD_Unique speakers

Model: (Intercept), Affiliative humor, Aggressive humor, OMD_Motions, OMD_Amendments, OMD_Promises, OMD_Words, OMD_Utterances, OMD_Proposal words, OMD_Governance, OMD_Taxes and finance, OMD_Water quality, OMD_Water quantity, OMD_Water safety, OMD_Sustainability, OMD_Climate, OMD_Digitalization, O_HAGV, Relative_time_meeting, OMD_Education, OMD_Innovation, OMD_ International affairs, OMD_Doing business with the market, OMD_Notopics

a. Unable to compute due to numerical problems

Parameter Estimates

Parameter	B	Std. Error	95% Wald Confidence Interval		Hypothesis Test		
			Lower	Upper	Wald Chi-Square	df	Sig.
(Intercept)	.377	.3962	-.400	1.153	.905	1	.342
Affiliative humor	.317	.1175	.087	.548	7.290	1	.007
Aggressive humor	-.121	.2958	-.701	.458	.168	1	.681
OMD_Motions	-.528	.2197	-.959	-.098	5.781	1	.016
OMD_Amendments	-.541	.3273	-1.182	.101	2.728	1	.099
OMD_Promises	-.006	.1407	-.281	.270	.002	1	.968
OMD_Words	-7.364E-5	7.0053E-5	.000	6.366E-5	1.105	1	.293
OMD_Utterances	.038	.0084	.022	.054	20.713	1	.000

OMD_Proposal words	6.201E-5	4.9176E-5	-3.437E-5	.000	1.590	1	.207
OMD_Governance	-.398	.3528	-1.090	.293	1.274	1	.259
OMD_Taxes and finance	-.278	.3044	-.875	.319	.835	1	.361
OMD_Water quality	.041	.3407	-.627	.709	.015	1	.904
OMD_Water quantity	-.232	.3478	-.914	.450	.445	1	.505
OMD_Water safety	.167	.6574	-1.121	1.456	.065	1	.799
OMD_Sustainability	-.296	.4623	-1.202	.610	.411	1	.522
OMD_Climate	.957	.6613	-.339	2.253	2.094	1	.148
OMD_Digitalization	-.405	.5597	-1.502	.692	.524	1	.469
O_HAGV	.411	.1986	.022	.801	4.290	1	.038
Relative_time_meeting	.073	.2779	-.472	.617	.068	1	.794
OMD_Education	0 ^a	.	.	.	.	.	.
OMD_Innovation	0 ^a	.	.	.	.	.	.
OMD_International affairs	0 ^a	.	.	.	.	.	.
OMD_Doing business with the market	0 ^a	.	.	.	.	.	.
OMD_Notopics	0 ^a	.	.	.	.	.	.
(Scale)	1 ^b						
(Negative binomial)	1 ^b						

Dependent Variable: OMD_Unique speakers

Model: (Intercept), Affiliative humor, Aggressive humor, OMD_Motions, OMD_Amendments, OMD_Promises, OMD_Words, OMD_Utterances, OMD_Proposal words, OMD_Governance, OMD_Taxes and finance, OMD_Water quality, OMD_Water quantity, OMD_Water safety, OMD_Sustainability, OMD_Climate, OMD_Digitalization, O_HAGV, Relative_time_meeting, OMD_Education, OMD_Innovation, OMD_International affairs, OMD_Doing business with the market, OMD_Notopics

a. Set to zero because this parameter is redundant.

b. Fixed at the displayed value.