CHAZEN INSTITUTE **RESEARCH BRIEF**

The Effect of CEO Communication Styles on Firm Performance

KEY TAKEAWAYS

✓ By integrating data on facial expressions, voice, and speech transcripts researchers have developed five new categories for communication styles: excitable, stern, dramatic, rambling, and melancholy.

✓ CEO communication styles can help predict a firm's ability to grow, adapt to change, and reallocate existing assets.

✓ CEOs with dramatic communi-cation styles are less likely to oversee acquisitions.

CEOs spend the vast majority of their time communicating within their organizations, to investors, and to customers. They are charged with inspiring staff, persuading potential business partners, and negotiating with competitors, making their approach to communication critical to their success as leaders. So what exactly can we learn from how they communicate, and to what extent can their communication style predict outcomes for their businesses?

In "Machine Learning Approaches to Facial and Text Analysis: Discovering CEO Oral Communication Styles," forthcoming in the *Strategic Management Journal*, **Dan Wang, Chazen Senior Scholar at Columbia Business School**; Prithwiraj Choudhury, assistant professor at Harvard Business School; Natalie Carlson, PhD student at Columbia Business School; and Tarun Khanna, the Jorge Paulo Lemann Professor at Harvard Business School, use machine learning tools to identify unique CEO communication styles and decipher how these different styles influence CEO decision-making and influence the ability of their businesses to grow and change.

Research

Using a collection of video and corresponding transcripts, the researchers developed an integrated method for interpreting textual, facial, and oral communication data. The video data was taken from unstructured interviews with 61 emerging-market CEOs. Transcripts from the videos were used to

code the variance of sentiment (categorization of specific emotions) and topic entropy (diversity of topics). In addition, cutting-edge facial image expression recognition was used to categorize the extent to which impressions used by CEOs were happy, angry, dramatic, or disgusted. The setting provides a unique perspective on how CEOs view what is important to them.

Results

Integrating these different data points allowed the researchers to predict the behavior of a firm based on five distinct CEO communication styles: excitable, stern, dramatic, rambling, and melancholy.

Excitable communication is defined by the use of consistently positive language as well as happy and surprised facial expressions. Stern is characterized by more angry, contemptuous, and disgusted facial expressions and less facial happiness. Dramatic has the strongest associations with such disparate facial expressions as anger, disgust, happiness, and sadness. Rambling is most strongly characterized by long answers and meandering responses. Melancholy communication loads heavily on facial sadness and contempt.

The research indicates that these different styles correlate statistically with firm-level decisions related to acquisition of new assets and enhancement or reconfiguring of existing assets through innovation. For example, the researchers found that emerging market CEOs with dramatic communication styles in speech were less likely to oversee acquisitions.

The results reveal that there is value to synthesizing textual sentiment and facial expressions in CEO communication styles, as opposed to analyzing firm-level outcomes using text and video data separately.

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THE FIVE CEO COMMUNICATION STYLES

Excitable
constantly positive language as well as happy and surprised facial expressions

Stern
angry, contemptuous, and disgusted facial expressions and less facial happiness

Dramatic
disparate facial expressions such as anger, disgust, happiness, and sadness

Rambling
long answers and meandering responses

Melancholy
facial sadness and contempt