

Validating and Using Dictionaries for Measuring Psychological Attributes

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**MOTIVATED TO ACQUIRE? THE IMPACT OF CEO
REGULATORY FOCUS ON FIRM ACQUISITIONS**

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Regulatory Focus Theory



- ***A motivation theory*** from psychology, suggesting that there are different ways of approaching desired end-states (Higgins, 1997; 1998)
- ***Promotion Focus*** – concerned with advancement, growth, and accomplishment
- ***Prevention Focus*** – concerned with prevention, safety and responsibility

Research Question



- **Does the regulatory focus of the CEO influence firm outcomes?**
- **How does CEO regulatory focus influence the firm's proclivity to acquire?**

Challenge



- **How can we measure CEO promotion and CEO prevention foci?**
- **Content analysis**
- **However, this required us to create and validate our own dictionaries**

Developing Dictionaries



Step #1 – Determining initial list of words

- Used in regulatory focus survey measures
- From word fragment completion tests
- Words used in research describing promotion and prevention foci

Developing Dictionaries



Step #2 – Reduce list of words

- Take broad list of words and keep only those with the greatest theoretical alignment
- Resulted in 27 promotion words and 25 prevention words

Developing Dictionaries



Step #3 – Content Validity

- Contacted 25 subject matter experts who had recently published papers on regulatory focus
- Presented a list of our words sorted alphabetically
- Asked to code whether each word reflected a promotion focus, prevention focus, or unclear

Developing Dictionaries



Step #3 – Content Validity - Results

- 39 of 52 words had unanimous agreement
- 13 remaining words were coded into their *a priori* category by at least 75% of respondents

Developing Dictionaries



Step #4 – Convergent & Discriminant Validity

- 174 undergraduate students
- Completed Lockwood et al (2002) measure of regulatory focus, measures of Big Five, affectivity, and core self-evaluation
- Asked to write at least ten sentences “What are some of the most important issues facing you regarding your education in the next few years? How will you address those issues?”

Developing Dictionaries



Step #4 – Convergent & Discriminant Validity

- Implicit measures of promotion focus was significantly related to survey measure of promotion focus but not to prevention focus
- Implicit measure of prevention focus was significantly related to survey measure of prevention focus but not to promotion focus
- Used regression analysis to demonstrated expected relationships with Big 5, Core self-evaluation and affectivity

Promotion Words

Accomplish, Achieve, Aspire

Aspiration, Advancement

Attain, Desire, Earn, Expand

Grow, Gain, Hope, Hoping

Ideal, Improve, Increase

Momentum, Obtain, Optimistic

Progress, Promotion, Promoting

Speed, Swift, Toward

Velocity, Wish

Prevention Words

Accuracy, Afraid, Anxious

Avoid, Careful, Conservative

Defend, Duty, Escape

Escaping, Evade, Fail

Fear, Loss, Obligation

Ought, Pain, Prevent

Protect, Responsible

Risk, Safety, Security

Threat, Vigilance

Using Dictionaries



Used our dictionaries in LIWC to analyze letters to the shareholders

- Provides a non-intrusive measure
- Consistent comparable format across time
- Avoids priming-effect

Letters to Shareholders



Significant evidence suggests that CEOs are, at least heavily involved in writing the letter (Duria et al., 2007)

- CEOs have a fiduciary duty to sign the letter
- Significant within-person consistency for style, word choice, and content of letters (e.g., Eggers & Kaplan, 2009)
- Consistent with language used by CEOs in interviews and speeches ($r > .70$) (Nadkarni & Chen, 2014)

Letters to Shareholders



- Strong predictive power for a wide range of outcomes:
 - Competitive attacks and retaliations (Marcel et al., 2010)
 - Speed and direction of strategic actions (Nadkarni & Barr, 2008)
 - New product introduction (Nadkarni & Chen, 2014)
 - Post-merger performance (Daly et al, 2004)

Using Dictionaries



Using LIWC

- Saved our own dictionary
- Ensured that we would capture alternative tenses of our words using LIWC's "*" function
 - "accomplish*"
 - Captures "accomplish", "accomplished", "accomplishments"

Example



- “....the initial public offering allows Rockwell to focus on **increasing** its market share in the **expanding** dialysis market and **improving** its profitability by implementing the following strategies: acting as an independent, single source supplier; offering a higher level of delivery and customer service; **increasing** revenue through sales of new products; and **expanding** market share in targeted market segments.”
- **CEO Robert L. Chioini of Rockwell Medical Technologies**

Example



- “We also faced special challenges, including an unprecedented energy trading **loss** at one of our affiliates, the bankruptcy of power supplier Mirant Corp., and Hurricane Isabel..... Our top priority in responding to Mirant’s bankruptcy has been to create certainty around electrical supply and cost and to **protect** our customers and shareholders from attempts by Mirant to **avoid** its legal obligations.”
 - **Dennis R. Wrasse – CEO of Pepco Holdings**

Options for Your Research



Some psychological constructs have validated measures that you can use

- **Temporal Focus** (Nadkarni & Chen, 2014)
- **Commitment to the Status Quo** (McClelland et al., 2010)
- **Regulatory Focus** (Gamache et al., 2015)

Options for Your Research



Other psychological constructs will require you to create and validate your own measures

- Challenging and risky
- Potential for a valuable empirical contribution

Advice



- Do it! It is a lot of work but it is worth it
- Be patient – both in developing your measure and collecting your data
- Work with good people including people from psychology or organizational behavior

Thank You!