

SHIFT IN THE VOICES OF EMPLOYEES IN THE WAKE OF COVID-19: EVIDENCE FROM THE U.S. MARKET

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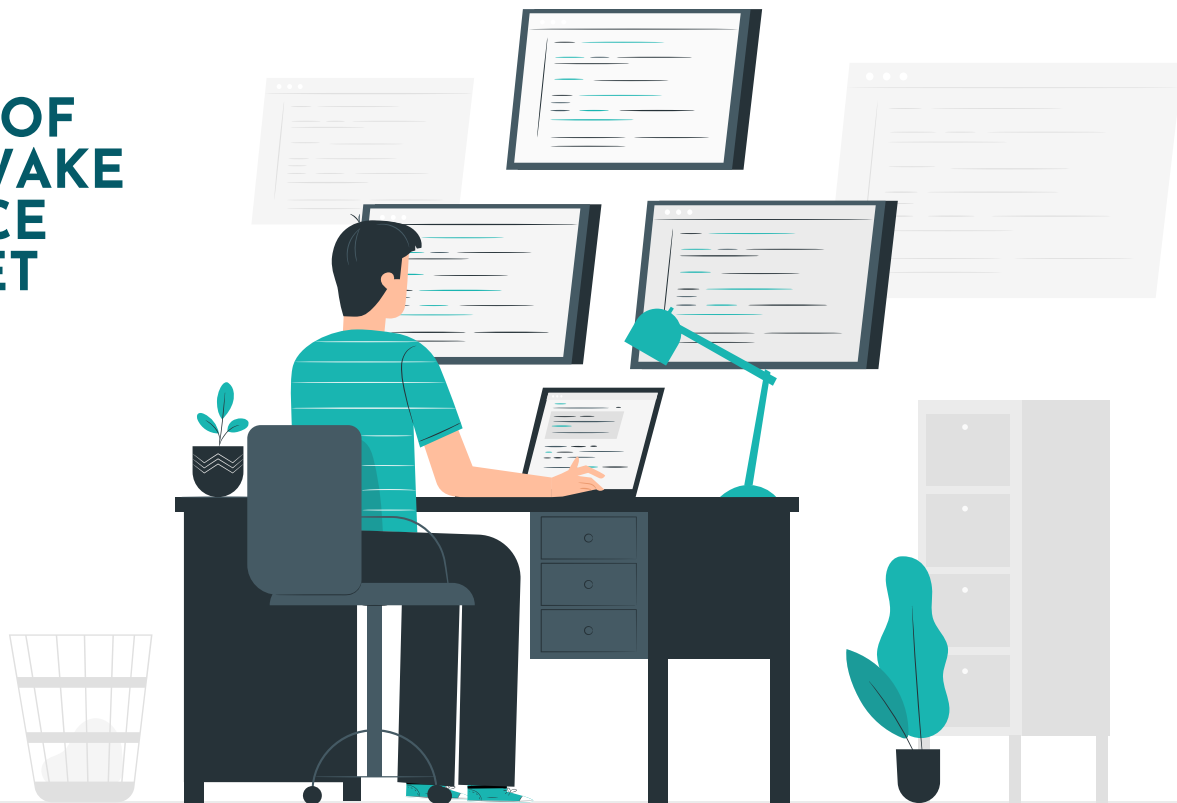


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INTRODUCTION

Basic Anatomic Definitions

WHAT IS EMPLOYER BRAND?

Employer brand is "*The package of **functional, economic, psychological benefits** provided by employment, and identified with the employing company*"

(Ambler & Barrow, 1995)

WHAT IS EMPLOYER BRANDING?

Employer branding is the **process** of **promoting the attractive and unique** image of the employee
(Bakhaus & Tikko, 2004)

WHAT IS EMPLOYER VALUE PROPOSITION (EVP)?

Employer Value Proposition, also commonly referred to as **EVP**, is **unique packaged offerings (tangible and intangible)** by the organization

(Barrow & Mosley, 2005)

INTRODUCTION

Definition of Employer Value Propositions (EVP)



EVP	Definition
Development Value	Provides employees with development opportunities, recognition, and confidence and ability to move into future employment (Berthon et al, 2005).
Application Value	Provides employees with ways to apply and teach their skills to others in the environment, creating a meaningful application atmosphere that is customer-oriented and humanitarian (Berthon et al, 2005).
Economic Value	An employer provides job security, a top salary, and great compensation and opportunities to be promoted (Berthon et al, 2005).
Interest Value	Exciting and great work practices including innovations and employee creativity to support and create high-quality products and services (Berthon et al, 2005).
Social Value	Environment is exciting, fun, and features great relationships among employees and with management; promotes teamwork and collaboration (Berthon et al, 2005).
Management Value	Is described as supervisory and management styles and practices, employed by workers in the company (Dabirian et al, 2019).
Work-Life Balance	Relates to the type of balance between family and work that allows personal and professional success (Dabirian et al, 2019).
Brand Image Value	Relates to brand image perception by the employee towards the employer (Dabirian et al, 2019).

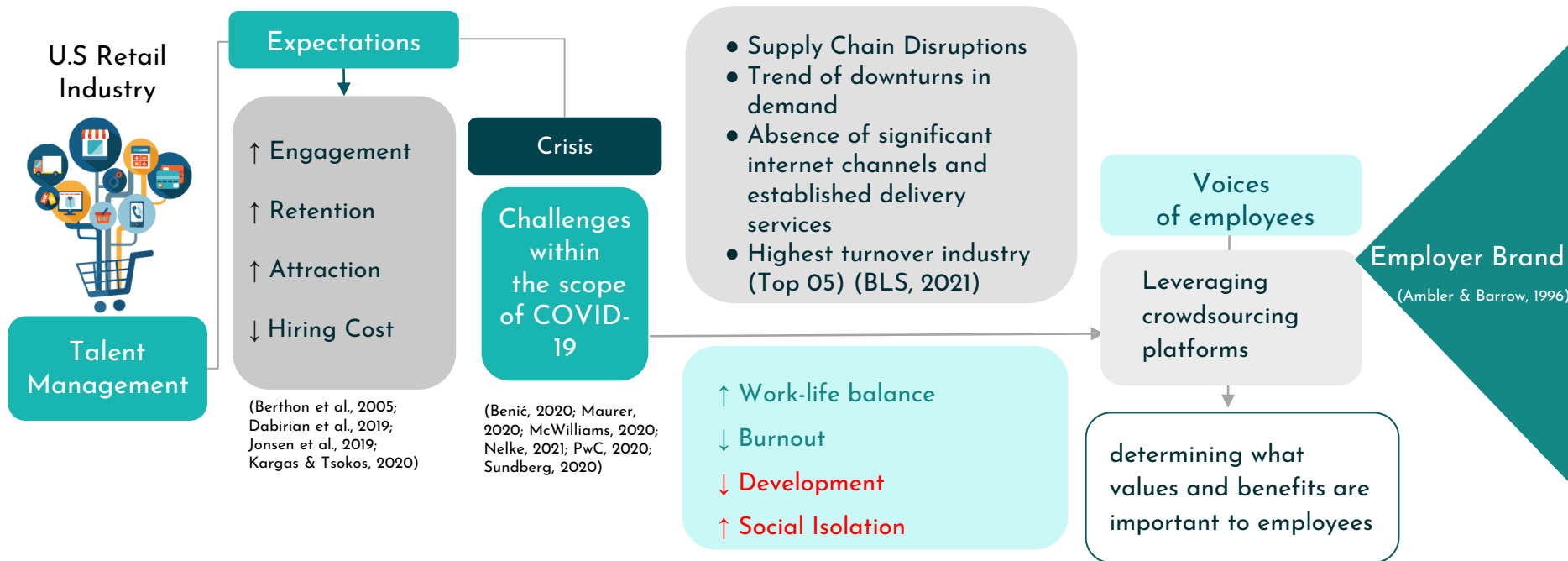
INTRODUCTION

HOW IS EVP REFLECTED?

EVP	Latent Constructs	EVP	Latent Constructs
Development	Self-confidence, career-enhancing, experience, springboard, future, recognition, appreciation Opportunities, career, growth, professional, personal, development Growth, opportunity, career	Social	Relationship, colleagues, support, encourage, fun, environment, Happy organizational culture, people, talented colleagues, team approach Place, great, learn, good
Application	Teach, Application, Customer-oriented, gives back, acceptance, belonging Application, contribution	Management	Assessment, leadership, qualities, superiors, managers, competence, strong vision, motivate, inspire, Management, top, politics, performance, Employee, friendly, policy,
Economic	Compensation, benefits, salary, job-security, Compensation, benefits, salary, perks, job-security Salary, industry, pay,	Work-life Balance	Balance, family, leisure, volunteering, flexibility Balance, life, work, work- life, Culture, office, work, Saturday
Interest	Innovation, Novel, Creativity, High-Quality, Exciting Interest, challenge, achievable, innovation, openness company, environment	Brand Image	Perception, Brand Brand, Job, brand, security, market

(Berthon et al., 2005; Dabirian et al., 2019; Kashive et al., 2020, Sajid et al. 2022)

PROBLEM STATEMENT



EMPLOYER BRANDING

Aim of the Research



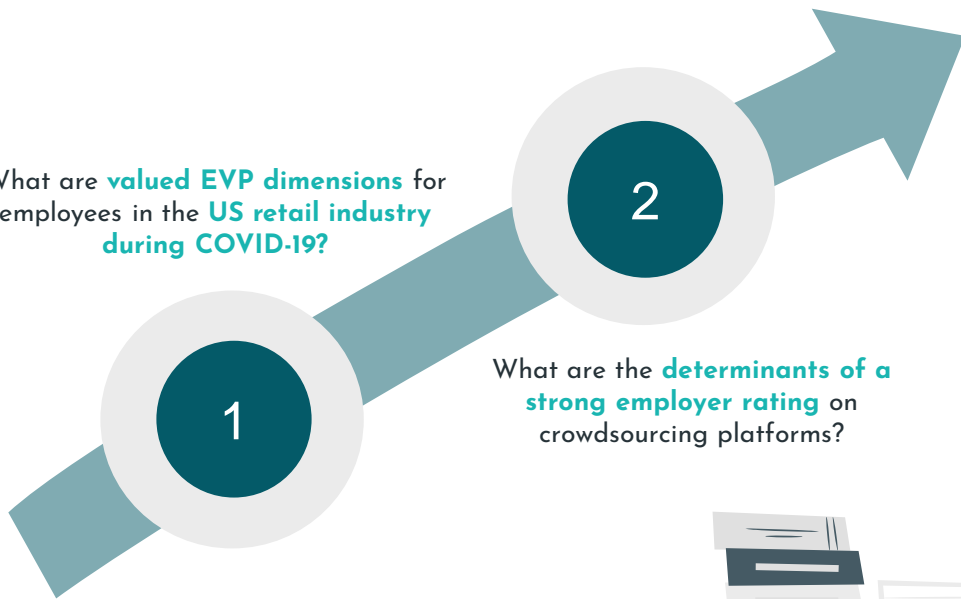
Research Questions



The current study aims **to explore the shift in the EVP**, by **harnessing the voices of employees** during the pandemic within the U.S. retail industry and **to identify the determinants of strong employer rating** on a crowdsourcing platform through text mining methods.



What are **valued EVP dimensions** for employees in the **US retail industry during COVID-19?**



What are the **determinants of a strong employer rating** on crowdsourcing platforms?





RESEARCH POSITIONING

This study is first study that:



1

Explores **valued Employer Brand Values** within the US Retail Industry



2

Considers pandemic - COVID-19, within the employer branding framework



3

Uses **ML methods** namely **Topic Modeling**, to harness voices of employees

LITERATURE REVIEW

01

Employer Brand

The package of functional, economic, psychological benefits provided by employment and identified with the employing company (Ambler & Barrow, 1996).

A broad identification of an employer that delivers a high-quality employment experience and distinct identity for which employees express appreciation, engagement, and confidence and which they are willing to promote (Martin et al., 2011).

An effective tool for effective recruitment, employee engagement and retention (Barrow and Mosley, 2005).

02

Employer Value Proposition

Unique packaged offerings (tangible and intangible) by the organization (Barrow & Mosley, 2005).

Minchington (2010) defines an EVP as a set of associations and offerings provided by an organisation in return for the skills, capabilities and experiences of employees'.

Value propositions and attributes that are being transmitted to both prospective and present employees (Hanin et al., 2013; Leekha Chhabra & Sharma, 2014).

03

Social Media

Firms can use crowdsourced employer branding data to assess where they fit on the workplace attractiveness continuum, according to Kashive et al. (2020).

Crowdsourced employer reviews might indicate affinities or discrepancies between the company brand and real employee experience (Melián-González & Bulchand-Gidumal, 2016; Saini & Jawahar, 2019).

As reported by Suen et al. (2020), while each unique employer rating (EVP) is crucial to the overall employer rating, values and culture might identify it by 83.6 percent.

04

COVID-19

Retention and recruitment activities were becoming exceedingly challenging, which could be attributed to budget cuts, increased work volume, a lack of human engagement, adaptability to distant work culture, and an increase in the number of online events (PricewaterhouseCoopers, 2021).

A lack of strategic approach has frequently been associated with accompanying risks and grounds for unsatisfactory performance, which is then followed by "lower brand exposure and a lower yield of applications" (Nelke, 2021, p. 391).

Glassdoor ratings, revealed a 70% rise in the rate of the reported layoffs (Maurer, 2020). Einck emphasized it as negative acts originating from a pressing necessity (dismissal, redundancy, and wage reduction) and urged to pay more attention to the ways they are disclosed both internally and externally (Handshake, 2022; Maurer, 2020).

05

Retail

Retailers experienced increasing debt burdens, reduced revenue growth, compressed margins, increased Selling, General and Administrative Expenses (SG&A), and slowed asset turnover (Deloitte, 2020).

In order to enhance "supply chain efficiency" and "working capital measures," many grocery merchants began following a "minimum viable ranges" philosophy (Vader, 2020)

Brands' declared purposes are moving to the forefront, and the values that are being communicated become the most sought-after differentiator on the market (Vader, 2020).

RESEARCH METHODOLOGY

Mixed Method Research Design

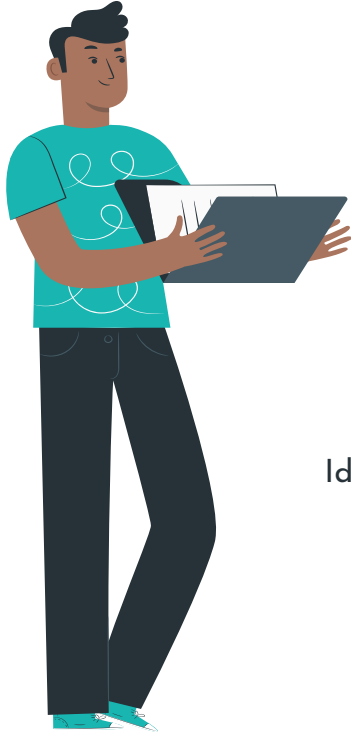


*Indeed is a famous American worldwide **job posting employment website for job listings**, launched in November 2004.



RESEARCH METHODOLOGY

Mixed Method



PRE-PROCESSING

Word Tokenization
Identifying & Remove Stop Words
Lemmatization



TEXT MINING OPERATION

Topic Modeling
Opinion Mining



POST-PROCESSING

Topic Labeling
Considering Reviews
Standardize Way



RESEARCH METHODOLOGY

Initial Variables in Dataset

Variables	Explanation	Variable Type
Review Title	The heading of the review	Text
Review	The review by employee	Text
Rating	Five-Star rating given by employee (1-5 ; where 1 is lowest 5 is highest rating)	Numeric
Company	Name of the company	Text
Job Title	Name of the Position	Text
Status	The status of the job i.e., Current Employee or Former Employee	Binary
Date	The date when the review was posted	Numeric

GLIMPSE ON THE DATASET

Review Title	Review	Rating	Company	Job Title	Status	Date	Subjectivity	Sentiment	Firm Size
Tiring and repetitive work	Some management don't care about what you feel and have to say while other management at the store may like and be nice to you but are forced to do things a specific way because that is how the company is designed top to bottom. Everything is repetitive and it's always the same stuff just another day. It's about what you'd expect from the job.	2	Walmart	Associate	Current Employee	9/09/2	0.46	0.06	2,200,000
Good for a first job	It was a fun place to work. Enjoyed employee discount. It's a good job for a person new to retail. Good training and advancement opportunities. Learned a lot while there.	5	Kohl	Retail Sales Associate	Former Employee	2-Jan-21	0.51	0.46	93,700
It was okay, bad management.	The pay was average and most of the employees were lazy so I had to do most of the work. Also the managers weren't very helpful when there was issues between co-workers, they would brush it off and ignore the problem instead of solve it.	2	Burlington Store	Customer Service Supervisor	Current Employee	12-Feb-21	0.54	0.16	47,000

DATA ANALYSES

Descriptive Statistics & Correlation

Variable	Min	Median	Mean	Max	St. Dev.	Variance
Employee rating	1.000	3.000	3.128	5.000	2.034	1.426
Employee status	0.000	0.000	0.306	1.000	0.212	0.461
Sentiment	-1.00	0.180	0.177	1.000	0.070	0.264
Subjectivity	0.000	0.534	0.535	1.000	0.025	0.157
Firm_size	9,900	320,000	735,888	2,300,000	-	9,032,956

Descriptive Statistics

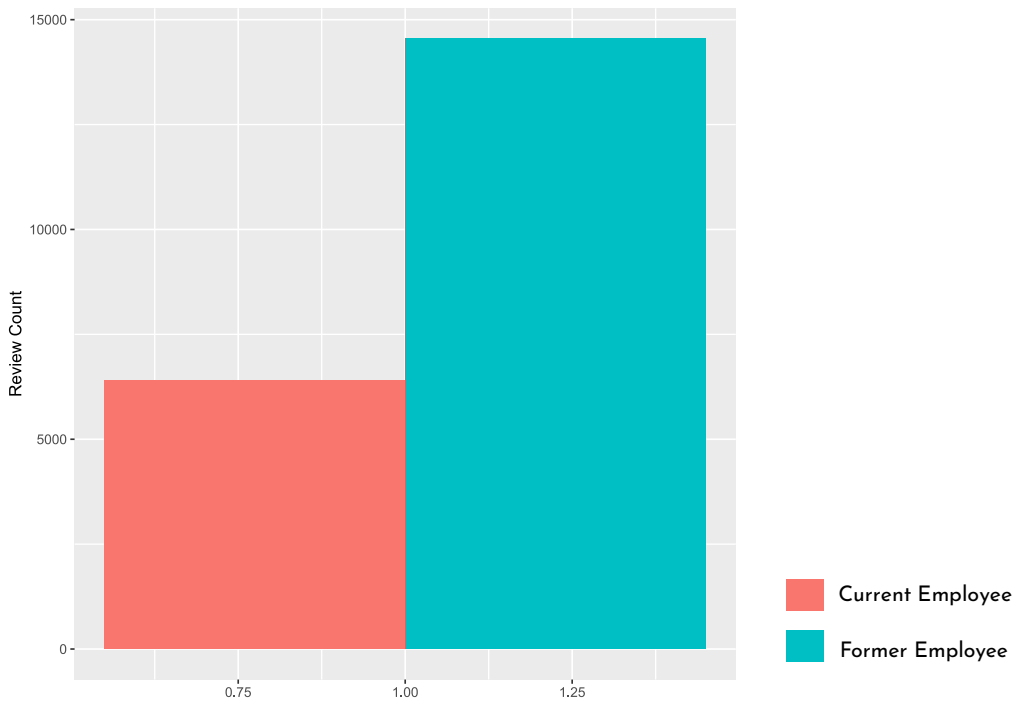
	Sentiment	Subjectivity	Firm Size
Sentiment	1	0.12378	-0.03403
Subjectivity	0.12378	1	0.00002
Firm Size	-0.03403	0.00002	1

Correlation between numeric variables

DATA ANALYSIS

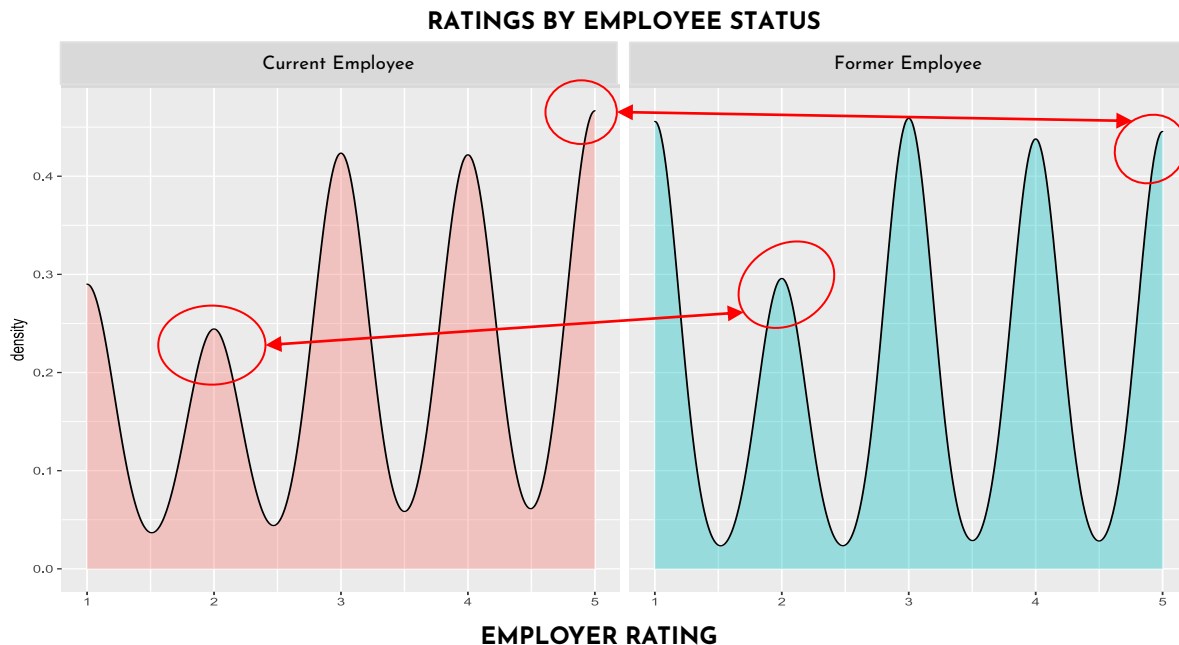
Exploratory Data Analysis

Number of Reviews count by Employment Status



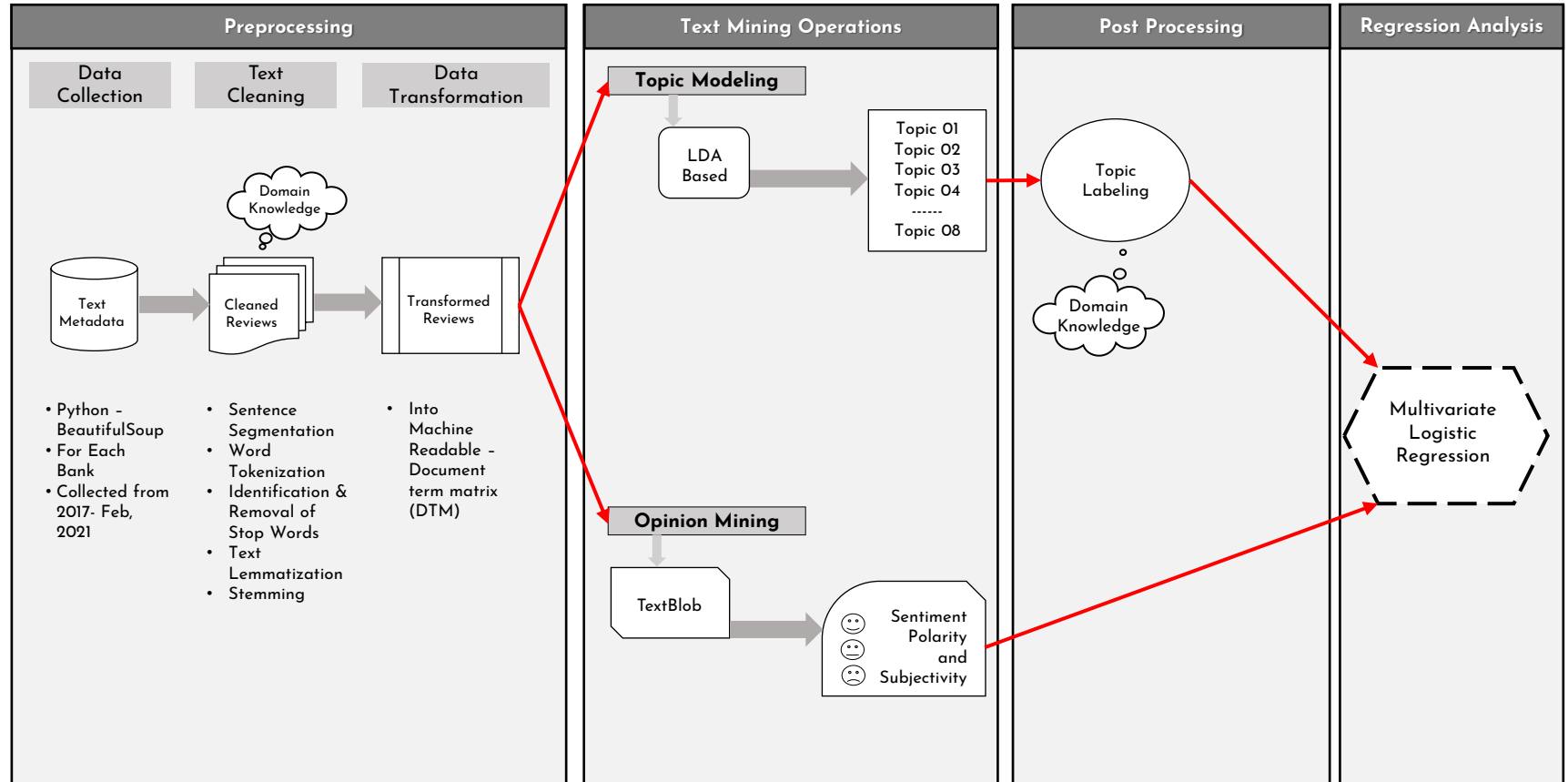
DATA ANALYSIS

Exploratory Data Analysis



These **changes reinforces** the idea that there are differences in reviews by employment status.

DATA ANALYSES PROCESS - A GLIMPSE



DATA ANALYSES

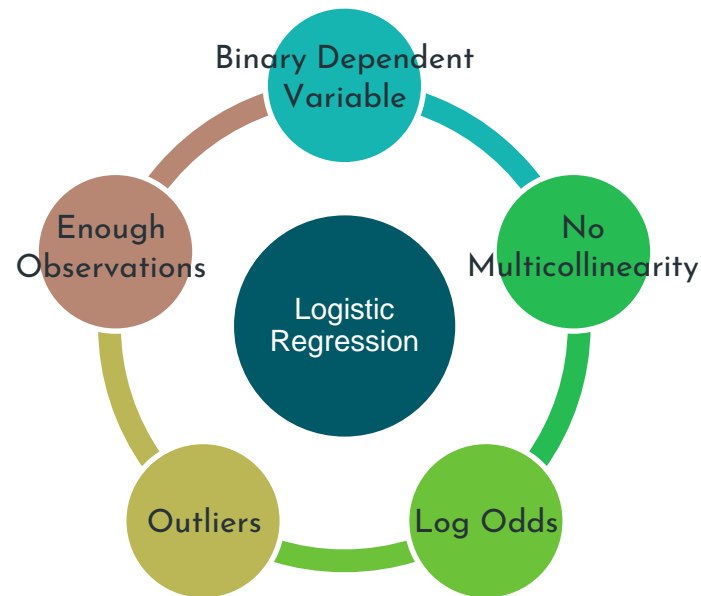
Operationalization of Variables

Variable Name	Type	Range	Description	Extraction Source
Dependent Variable				
Employee Rating	Categorical	0 and 1	1 = Strong Employer Rating 0 = Weak Employer Eating	Indeed.com
Independent Variables				
Job Status	Categorical	0 and 1	0 = Former Employee 1 = Current Employee	Indeed.com
Sentiment	Continuous	-1 to 1	-1 = Negative Sentiment 0 = Neutral 1 = Positive Sentiment	Text Blob from Python
Subjectivity	Continuous	0 to 1	1 = Subjective 0 = Not Subjective	Text Blob from Python
Topics	Categorical	1 to 8	Topic 1 = Development value Topic 2 = Working Conditions Topic 3 = Management Issues during Pandemic Topic 4 = Management Value Topic 5 = Threats of Layoffs Topic 6 = Economic & Work-Life Topic 7 = Social Value Topic 8 = Application Value	Topic Model Results
Control Variable				
Firm Size	Continuous	9.5k - 2,300k	The number of employees in firm	Fortune 500 Web

DATA ANALYSES

Assumptions Check

1. Logistic regression assumes that the **dependent variable to be binary**.
2. Independent variables should not be highly correlated - **No multicollinearity**.
3. The **linearity assumption** - linearity of independent variables and log odds must be checked.
4. The non-presence of **outliers and extreme** individual values.
5. **Enough observations** for the variables to run logistic regression



RESULTS

1. Topic Modeling

Topic Labeling Results

- **Top 50 keywords (n=50)** were analyzed to understand the topic employees are referring to.
- **Topics approximation and labeling** were based on a thorough analysis of **employee reviews considering top keywords**.

Topic Number	Common Words	Label Name
01	Advancement, promote, career, grow, company, retail, promotion	Development Value
02	Long, hour, time, full, weekend, shift, busy, schedule, overtime	Working Conditions
03	Management, communication, policy, pandemic, remote, issues,	Management Issues during Pandemic
04	Manager, management, care, bad, treat, worker, horrible, rude, terrible, favourite, favouritism	Management Value
05	Manager, leave, hire, back, call, Month, start, find, fire	Threats of Layoffs
06	Good, pay, job, work, life, benefit, Balance, work-balance,	Economic & Work Life Balance
07	Great, place, people love, environment, coworker, enjoy, nice, fun, family, friendly, helpful	Social Value
08	Customer, department, sale, learn, service, help, day, stock, associate, area, product, cashier, floor, clean	Application Value

RESULTS

1. Topic Modeling

Topics in Employees Reviews

Topic Number	Label Name	Common Words	In Review
01	Development Value	Advancement, promote, career, grow, company, retail, promotion	<p>...the processes needs to improve and engage more associates into advancement..</p> <p>... Management is ok but typical office politics if you want to get promoted...</p> <p>... Many career advancement opportunities Fast paced working environment...</p> <p>... If you enjoy retail and are looking to grow it is a great place ... has tons of opportunities for development...</p>
03	Management Issues during Pandemic	Management, communication, policy, pandemic, remote, issues,	<p>... This place is a total joke Of course they over hire during a pandemic. Management is the WORSE! No one can communicate effectively HR never answers...</p> <p>... During the pandemic it was extremely chaotic and upper management really didn't care...</p> <p>... This company has taken full advantage of loyal employees during the pandemic and hasn't taken the situation seriously...</p> <p>... Can work remotely generally low stress good facilities when on-site...</p> <p>... They need more remote jobs ... who are unable to move...</p>

RESULTS

2. Multivariate Logistic Regression

Results from Logistic Regression

Variables	Beta Coefficient	T-statistics	Pr(> t)	Log-odd Ratio
Intercept	0.346*** (0.080)	4.336	0.000	1.420
Explanatory Variables				
Employment Status: Former Employee Current Employee	-0.260*** (0.038)	-6.774	0.000	0.770
Sentiment	4.220*** (0.088)	47.712	0.000	70.380
Subjectivity	0.533*** (0.113)	4.723	0.000	1.678
Controlled Variable				
Firm Size	-0.014 (0.019)	-0.745	0.456	0.987

Variables	Beta Coefficient	T-statistics	Pr(> t)	Log-odd Ratio
Topic 02 = Working Conditions Development Value	-0.244*** (0.065)	-3.745	0.000	0.782
Topic 03 = Management Issues during Pandemic Development Value	-0.750*** (0.066)	-11.417	0.000	0.471
Topic 04 = Management Value Development Value	-1.361*** (0.067)	-20.346	0.000	0.256
Topic 05 = Threats of Layoffs Development Value	-1.027*** (0.069)	-14.978	0.000	0.358
Topic 06 = Economic & Work Life Balance Development Value	-0.127* (0.073)	-1.740	0.082	0.880
Topic 07 = Social Value Development Value	0.538*** (0.069)	7.771	0.000	1.713
Topic 08 = Application Value Development Value	0.232*** (0.074)	3.117	0.002	1.261

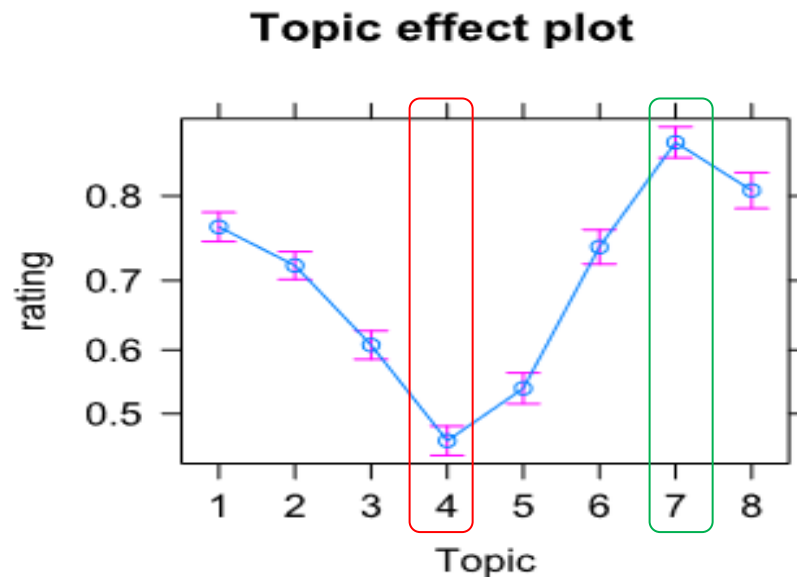
*** p-value < 0.01 | *** p-value < 0.01 | * p-value < 0.1

RESULTS

2. Multivariate Logistic Regression

Results from Logistic Regression - An intuitive view

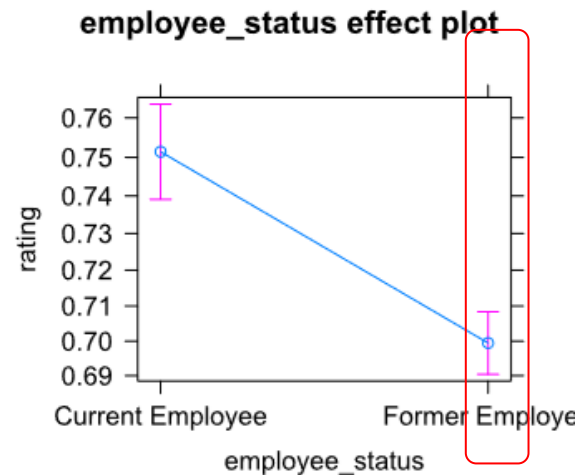
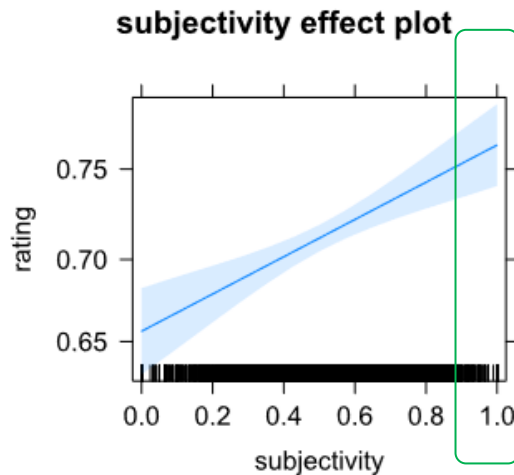
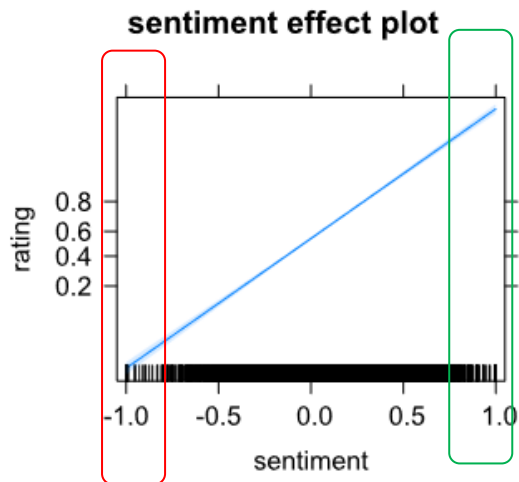
Topic No.	Label Name
1	Development Value
2	Working Conditions
3	Management Issues during Pandemic
4	Management Value
5	Threats of Layoffs
6	Economic & Work Life Balance
7	Social Value
8	Application Value



RESULTS

2. Multivariate Logistic Regression

Results from Logistic Regression - An intuitive view



RESULTS

2. Multivariate Logistic Regression

Goodness of Fit Measure for Logistic Regression

McFadden Pseudo R^2 :

- Value is 0.243; **ranges between 0.20-0.40** indicates **an excellent model fit** (McFadden, 1974).

Goodness of Fit Measures

McFadden $R^2 = 0.2445$

SUMMARY

Employees are **less likely** to give a strong employer rating when **voicing about working conditions, management issues and management value**, the **threat of layoffs**, and **economic and work-life**

Employee status significantly explains the **strong employer rating**.

Social and **application value** are **most likely** to get **strong employer rating**.

Employees who are **positive** in their reviews are **more likely** to **give strong employer rating**.

- **Six EVP dimensions were discovered** namely, development, management, economic, work-life balance, social, and application values

- Show **employees' concerns** about **their workload, issues with supervisors**,

- Also shows **the potential of layoffs**.
- Additionally, **evidence of employees' preference** to have **remote work during COVID-19**.

01

02

MANAGERIAL IMPLICATIONS



Crowdsourcing websites can play an **important role** in **exploring the insights** of current and former **employees**.



During crisis, managers could **promote economic value** by incentivizing employees with financial and non-financial benefit



Reduce work hours or work-load from employees; leading to decreased load, wage cost and **delayed immediate layoffs** in times like COVID-19.



Identify which of the **eight EVP employees** in the company prefer and they can **promote relevant EVP** to build Employer brand which in turn can decrease turnover and improve employee engagement



Managers can make a company/state specific **uniform career progression plan**

MANAGERIAL IMPLICATIONS



Manager could **encourage existing stars to share their experiences** and success stories on platforms for positive word of mouth.



Managers could constitute steady **policies to support and encourage open feedback** in order to minimize work politics.



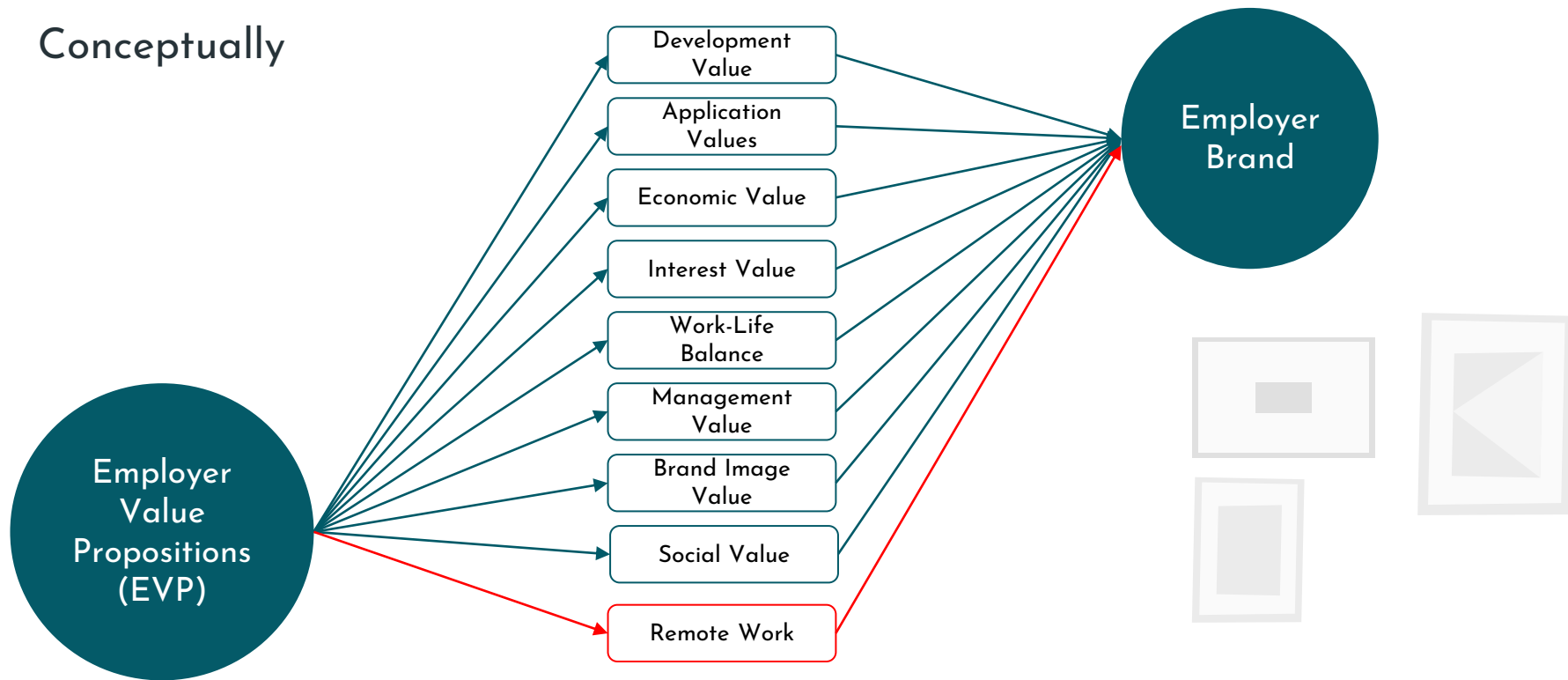
Managers could **increase the opportunities of remote work** in order to keep the employees stay with the company and resulting **in decreased turnover**



Managers may introduce **knowledge sharing and transfer processes** to encourage employee **development and application**; which could cater the need of employees who prefer development and application EVP.

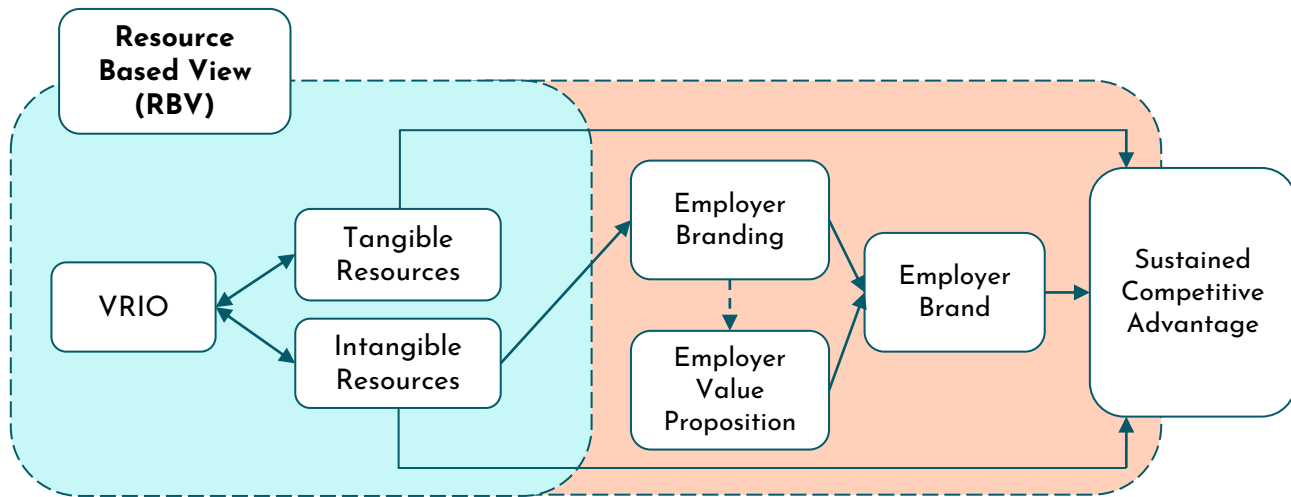
THEORETICAL IMPLICATION


Conceptually




THEORETICAL IMPLICATION

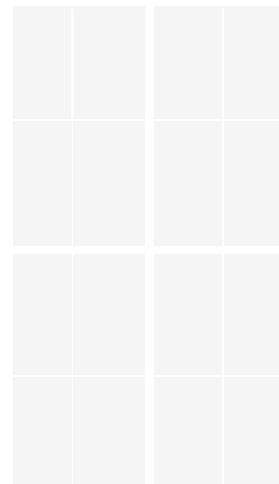
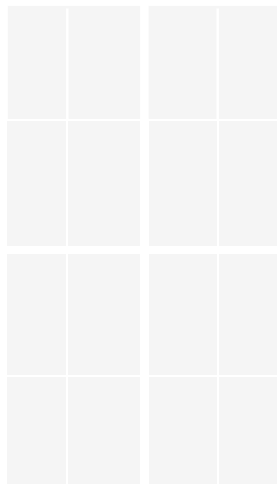
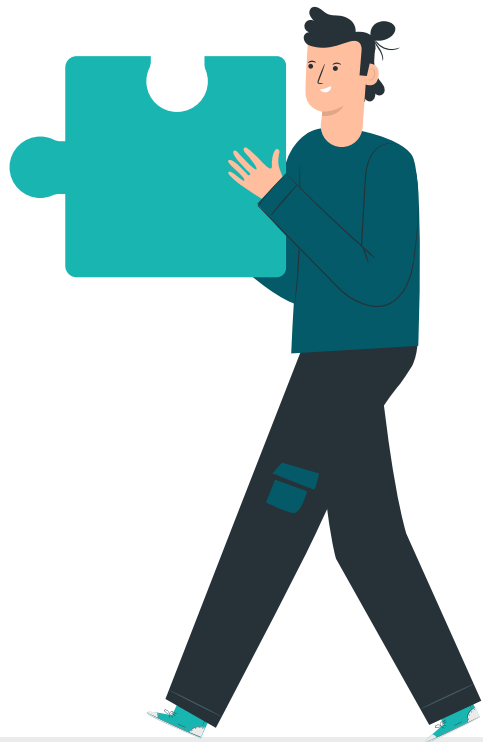
Theoretical Framework Extended for Employer Brand



 Original Resource Base View (RBV) Model by Barney, 1991

 Extension of RBV demonstrating the link between Employer Brand and Sustained Competitive Advantage

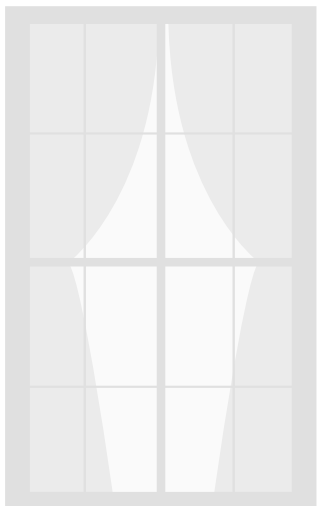
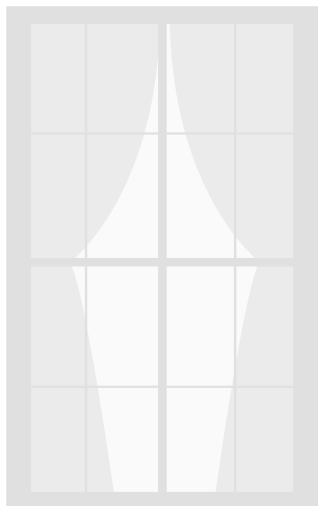




LIMITATIONS

- Focus on one industry.
- Other sentiments like sarcasm, surprise, fear etc.
- COVID-19 has different forms i.e., lockdown, remote work etc.
- Topic modeling, is based on the unigram frequency of the words.





FUTURE RESEARCH

- Other high turnover industries
- Financial impact of most and least EVP values
- Relationship with EVP and employment life cycle
- Other job posting websites
- EVP values and changes over time (longitudinal studies)
- Cross country comparison
- Bi-gram and structural topic modeling



THANKS...

...FOR YOUR ATTENTION



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S1: I love dogs.
 S2: I love Dog and hate knitting.
 S3: My hobby and My Passion is Knitting.

APPENDIX

A Basic Example - Preprocessing

S1: I love dogs.
 S2: I love dog and hate knitting.
 S3: my hobby and my passion is knitting.

[“I”, “love”, “dogs”, “I”, “love”, “dog”, “and”, “hate”, “knitting”, “my”, “hobby”, “and”, “my”, “passion”, “is”, “knitting”]

[“love”, “dog”, “love”, “dog”, “hate”, “knitting”, “hobby”, “passion”, “knitting”]

	love	dog	hate	knitting	hobby	passion
S1	1	1	0	0	0	0
S2	1	1	1	1	0	0
S3	0	0	0	1	1	1
Count	2	2	1	2	1	1

	love	dog	hate	knitting	hobby	passion
S1	0.11	0.11	0	0	0	0
S2	0.11	0.11	0.11	0.11	0	0
S3	0	0	0	0.11	0.11	0.11
Probability	0.22	0.22	1	0.22	0.11	0.11

APPENDIX

Assumptions Check

Assumptions check for Logistic Regression

1. Dummy Dependent variable: **Using Binning** in R, **variable rating was transformed into dummy variable** of 0 and 1.
2. Size of Dataset: Enough data is available as $8138 > 1250^{[1]}$
3. Correlation and Multicollinearity Check:
 - Pearson Correlation was checked for Continuous variables; **No strong significant correlation is reported**
 - For dummy variables, Generalized Variance Inflation Factor (GVIF) was calculated, as suggested in literature (Fox & Monette, 1992); **No collinearity is reported or implied.**

	GVIF	Df	$GVIF^{1/(2 \cdot Df)}$
sentiment	1.03435	1	1.01703
subjectivity	1.021841	1	1.010861
employee_status	1.009855	1	1.004915
Firm_size	1.008915	1	1.004447
Topic	1.057732	7	1.004017

Collinearity between explained variables

[1] Calculated using the formula $x = (10^k) / (\text{probability of least frequent outcome})$

[2] As a rule of thumb, when the GVIF value for a variable exceeds 5 or 10, it creates the problem of collinearity.

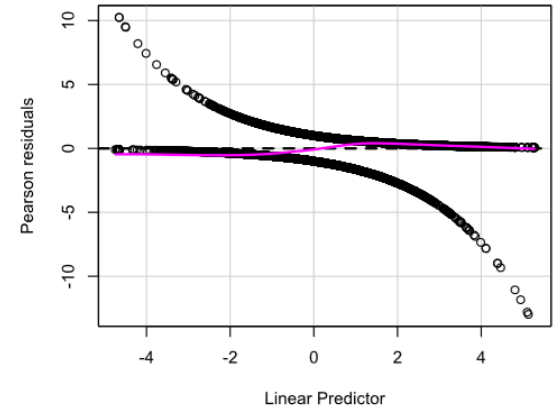
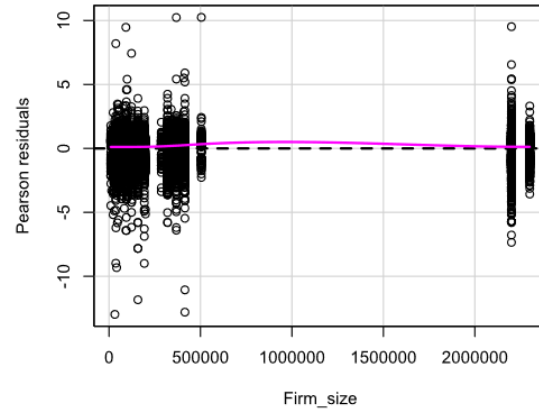
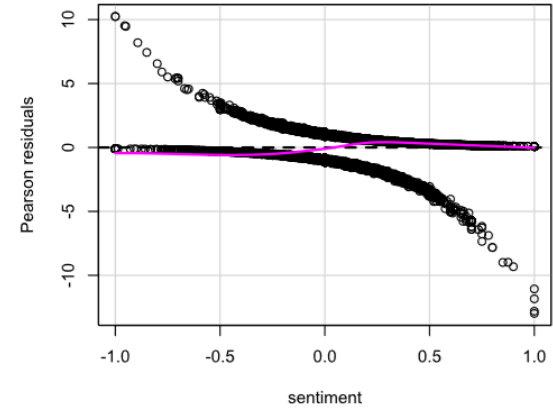
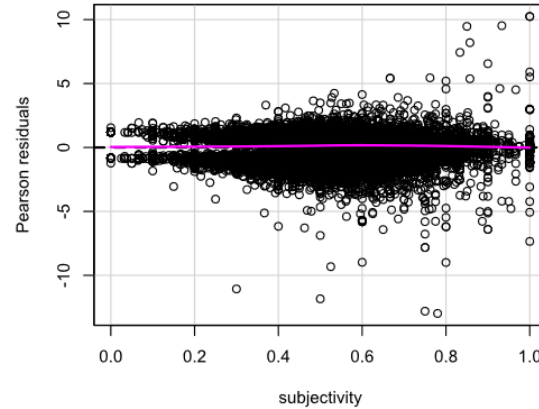
APPENDIX

Assumptions Check

Assumptions check for Logistic Regression

4. Linearity of Independent Variables:

- Residual plots were examined to check for the linearity of independent variables as they are more intuitive (Z. Zhang, 2016).
- Pearson Residuals** & Marginal plot were examined.



Note: A rule of thumb is when the visualized line is straight horizontal without curves, it implies linearity between predictors and residuals (Z. Zhang, 2016)

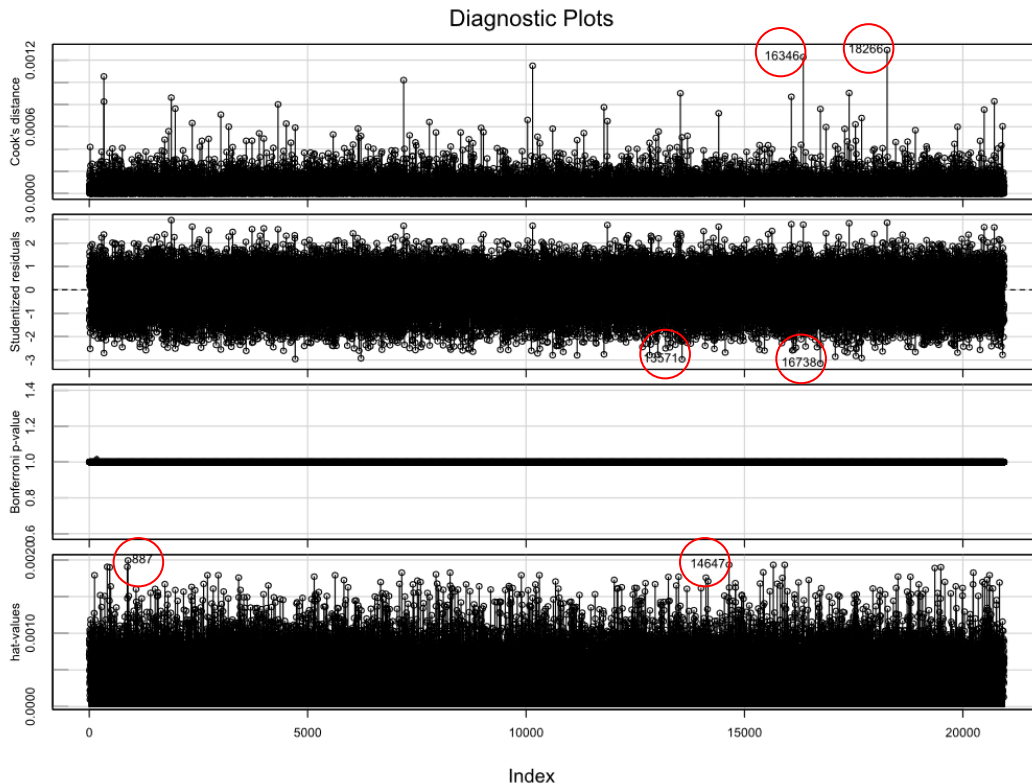
APPENDIX

Assumptions Check

Assumptions check for Logistic Regression

5. Outliers and Influential Values:

- A diagnostic plots including **Bonferonni P**, **hat-values**, **Cook's distance**, and **studentized residuals** were used in conjunction with influence plot.



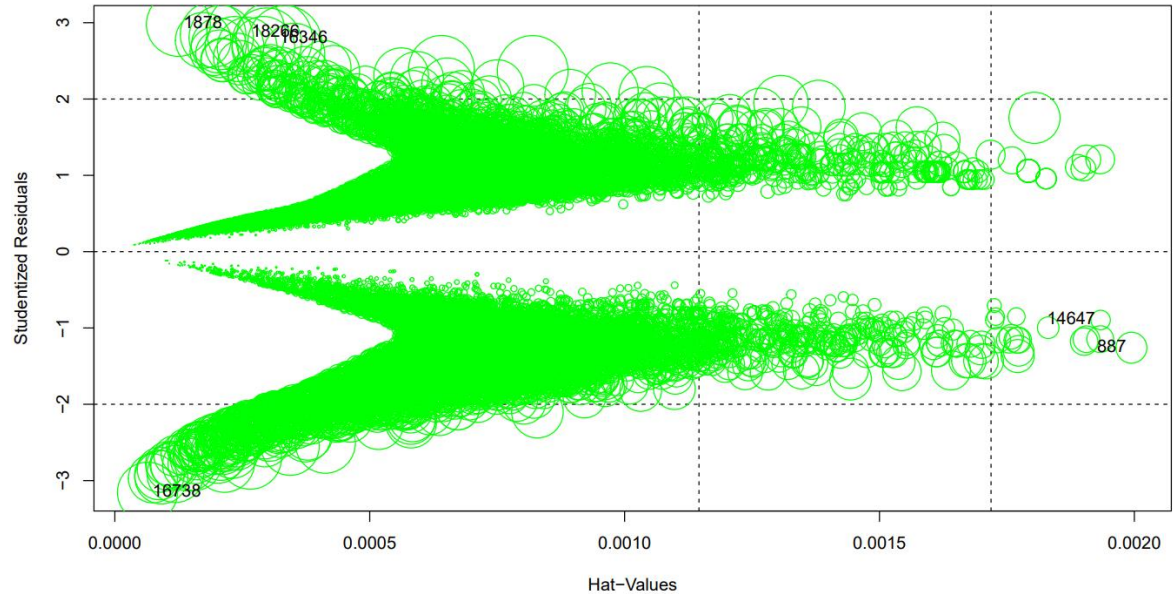
APPENDIX

Assumptions Check

Assumptions check for Logistic Regression

Outliers and Influential Values:

- 1878, 18266, 16346, 16738, 14647, and 887th observations identified as potential outliers and influential values.



APPENDIX

Assumptions Check

Assumptions check for Logistic Regression

Outliers and Influential Values:

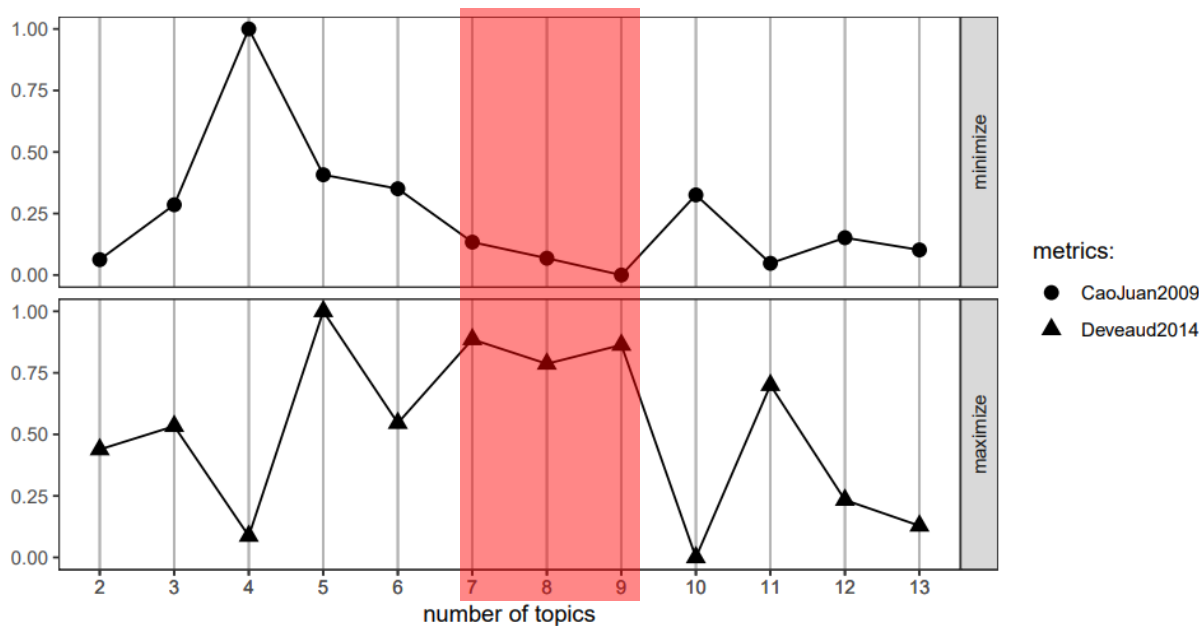
- The six observations were removed from model,
- Regression model was adjusted for the six observations.
- **Some differences were observed** in the two model, thus, the observations were removed during logistic regression analysis.

Variables	Model 1	Model 2
Intercept	0.345842	0.350938
Standard Error (SE)	0.079761	0.079879
sentiment	4.219749	4.253908
SE.1	0.088442	0.088822
subjectivity	0.532815	0.517705
SE.2	0.112822	0.11304
Employee Status (Former Employee)	-0.26027	-0.26156
SE.3	0.038422	0.038477
Firm Size	-1.43E-08	-1.36E-08
SE.4	1.92E-08	1.92E-08
Topic2	-0.24361	-0.24611
SE.5	0.065045	0.065116
Topic3	-0.75022	-0.75262
SE.6	0.065713	0.06579
Topic4	-1.36067	-1.36202
SE.7	0.066877	0.066968
Topic5	-1.02739	-1.02823
SE.8	0.068594	0.068671
Topic6	-0.12728	-0.12806
SE.9	0.073141	0.073264
Topic7	0.537901	0.538139
SE.10	0.069223	0.069334
Topic8	0.231876	0.232064
SE.11	0.074388	0.074495

Topic Modeling

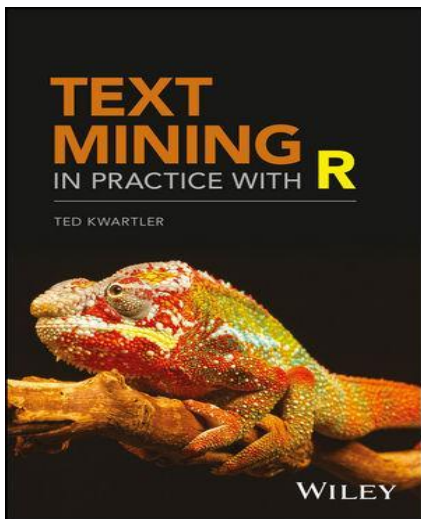
Topic Extraction

- The optimal number of k is found when the differences amongst the different topics are high (Cao et al., 2009; Deveaud et al., 2014).
- The optimal number of topics is $k=7,8,9$, where Deveaud2014 maximizes, and CaoJuan2009 score minimizes.
- $K=7,8,9$ implies that the reviews of employees may be divided into six to eight optimal topics.
- Checked for 7, 8 and 9, and eight topic made most sense.
- After finding the optimal $k=8$, LDA was employed to split and get the eight unique topics from the reviews.



APPENDIX

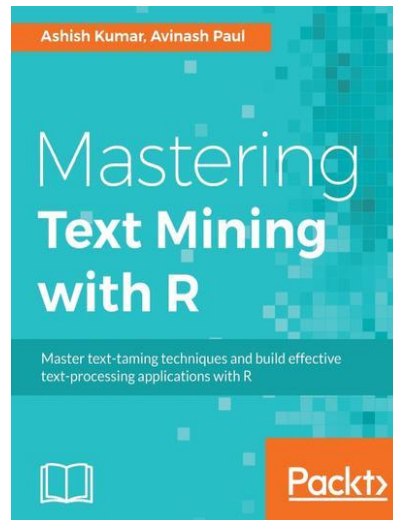
Books referred to for Research Methodology/Data Analyses



Text Mining in Practice with
R
By: Ted Kwartler



Text Mining with R: A tidy
Approach
By: Ted Kwartler



Mastering Text Mining with
R
By: Ashish Kumar and
Avinash Paul

SHIFT IN THE VOICES OF EMPLOYEES IN THE WAKE OF COVID-19: EVIDENCE FROM THE U.S. MARKET

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