

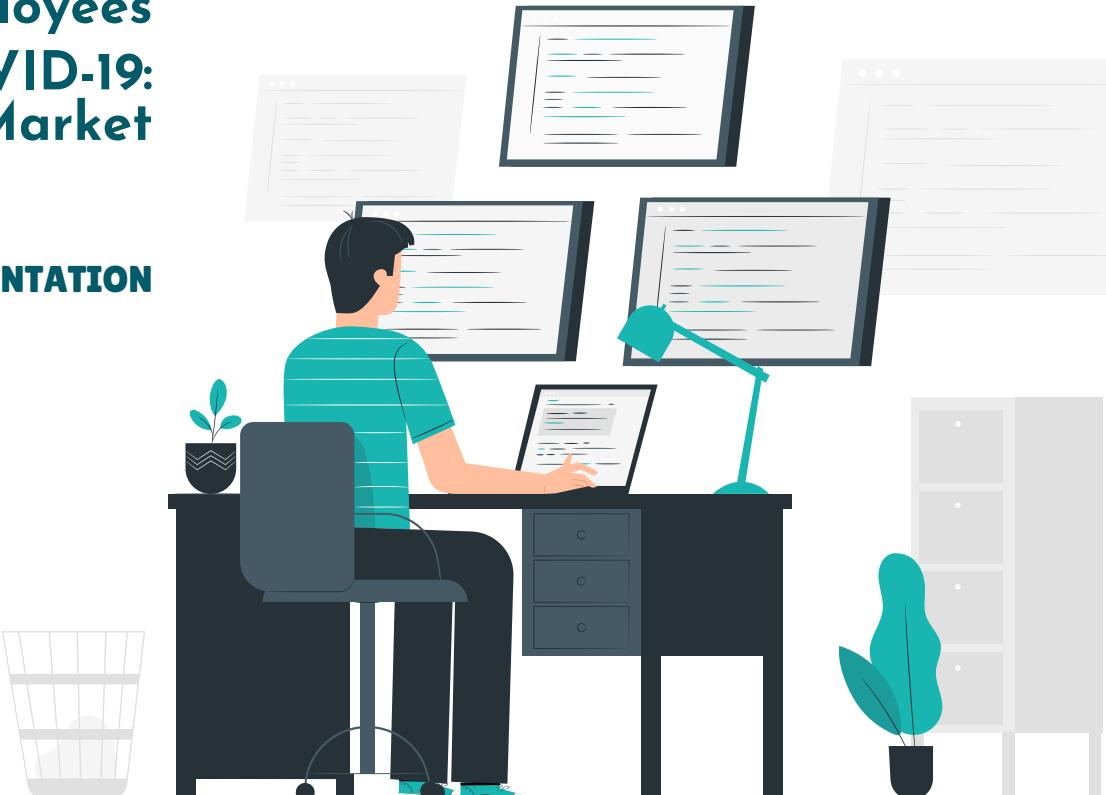
# Shift in the voices of employees in the wake of COVID-19: Evidence from the U.S. Market

## TERM PAPER DEFENCE PRESENTATION

### Authors:

Soman Sajid  
Sophia Redina  
Maxim Sannikov

Scientific Advisor:  
Dmitry Trubnikov



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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?

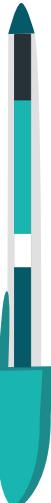
Employer branding is the **process** of **promoting the attractive and unique** image of the employee (Bakhaus & Tikko, 2004).

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

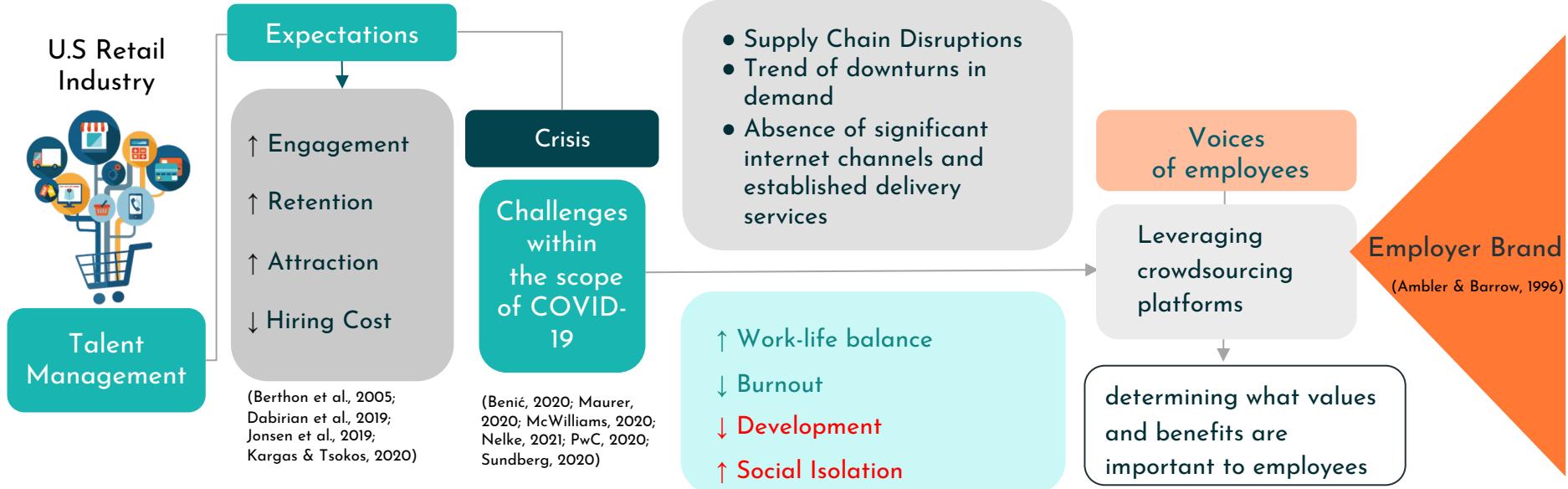
# INTRODUCTION

## HOW IS EVP REFLECTED?

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

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

# PROBLEM STATEMENT



# EMPLOYER BRANDING

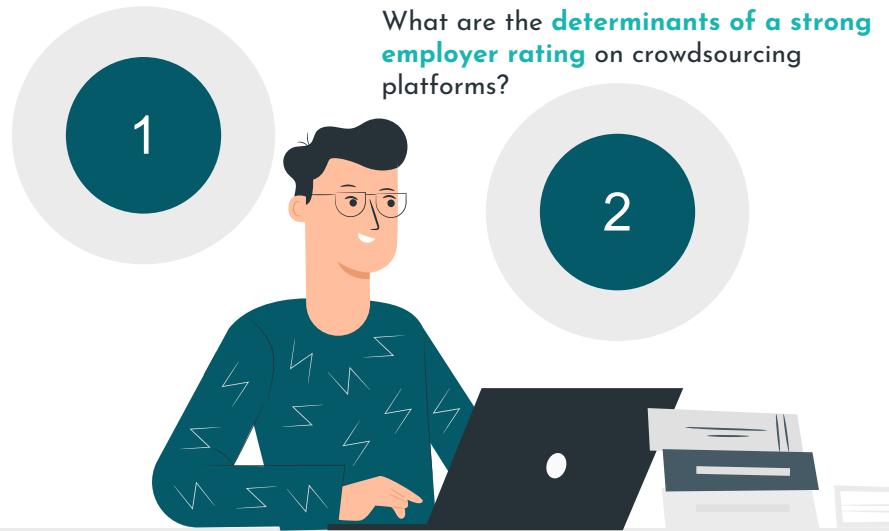
## Aim of the Research



How the voices of employees changed during the COVID-19 pandemic in terms of the EVP dimensions, preferred by employees, and whether these voices have a significant explanation for the employer rating on the crowdsourcing platform (Indeed.com) using Machine Learning Method.

## Research Questions

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 one of the leading research papers that



1

explores **most and least important Employer Brand Values** within the US Retail Industry



2

highlights **Employer Value Proposition (EVP) values** during **and before** COVID-19



3

uses **ML methods i.e. Topic Modeling**

# LITERATURE REVIEW

01

## Employer Brand

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

02

## Employer Value Proposition

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

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).

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).

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).

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).

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'.

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

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).

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

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

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

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.

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).

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

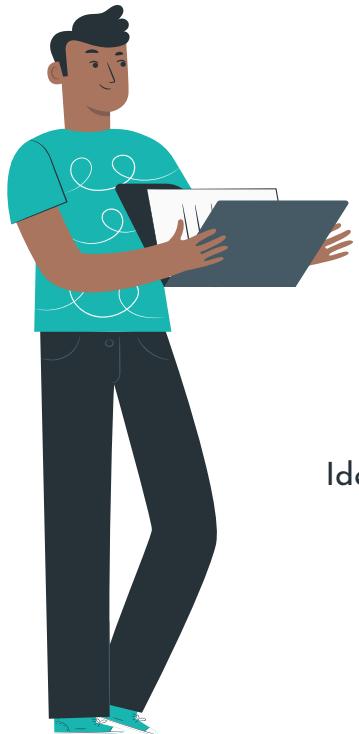
## Mixed Method Research Design



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

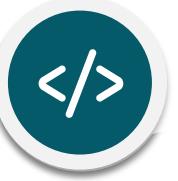


# RESEARCH METHODOLOGY



## Pre-Processing

Word Tokenization  
Identifying & Remove Stop Words  
Lemmatization  
Stemming



## Text Mining Operation

Topic Modeling  
Unigram Analysis  
Opinion Mining



## Post-Processing

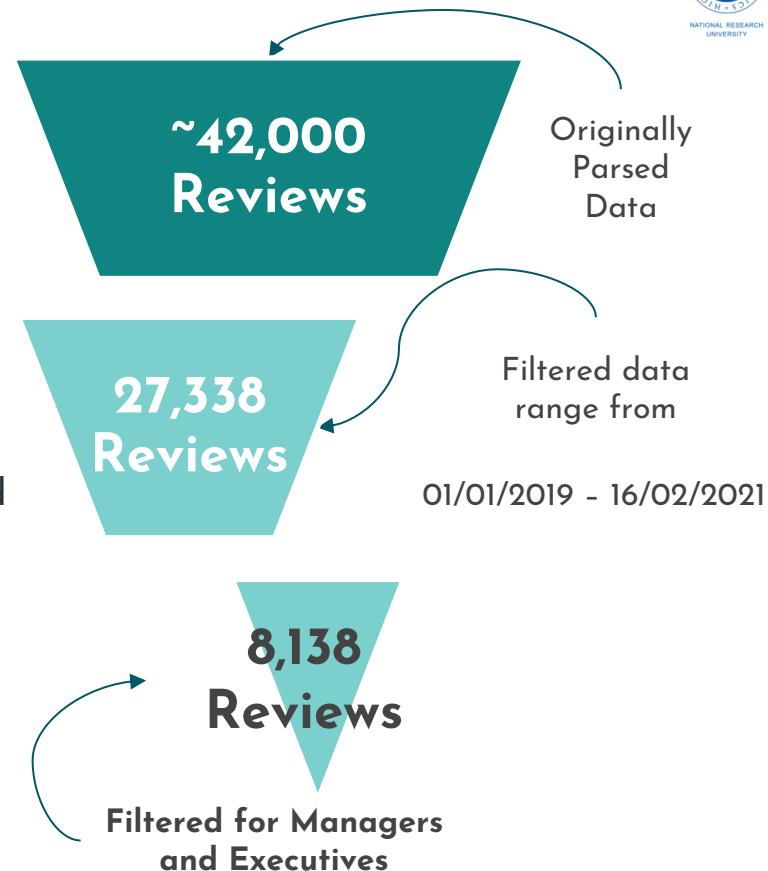
Topic Labeling  
Expert Review  
Intercoder Reliability



# RESEARCH METHODOLOGY

## Research Design

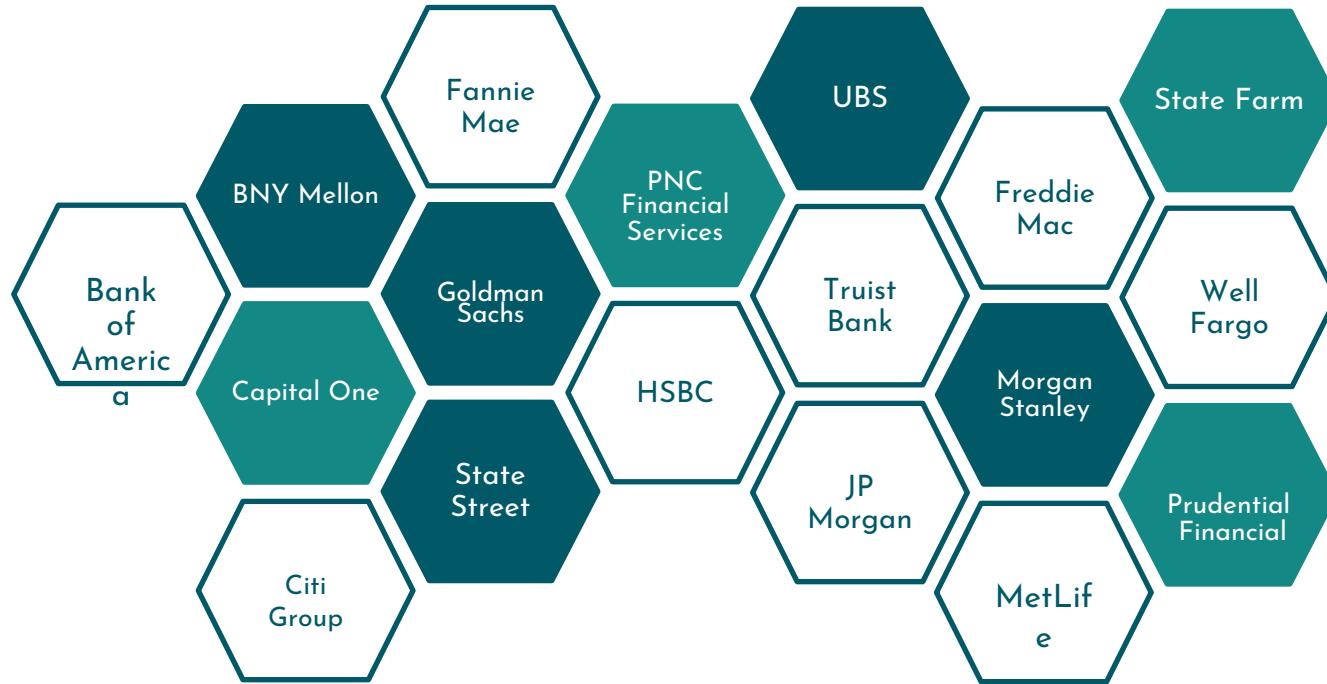
- Data was extract from Indeed.com
- 18 **Fortune 500 and top US banks** were used for data collection
- **Non-Probabilistic Sampling Design** for sampling is observed
  - a. **Convenient Sampling method** is used
- Approximately ~42,000 reviews of employees were parsed
  - a. The date ranged from December 2017 - February 2021
- The dataset was shorted 27,338.
  - a. Only sample ranging from 1<sup>st</sup> January 2019 to 16 February 2021
- The sample was focused on **Managerial Positions and Executive Positions**



Final Dataset consisted of 8,138

# RESEARCH METHODOLOGY

## 18 US Banks



Top 18 US banks listed on the **Fortune** 500 with the highest market capitalization conveniently selected for data collection (parsing of reviews from [indeed.com](https://www.indeed.com))

# RESEARCH METHODOLOGY

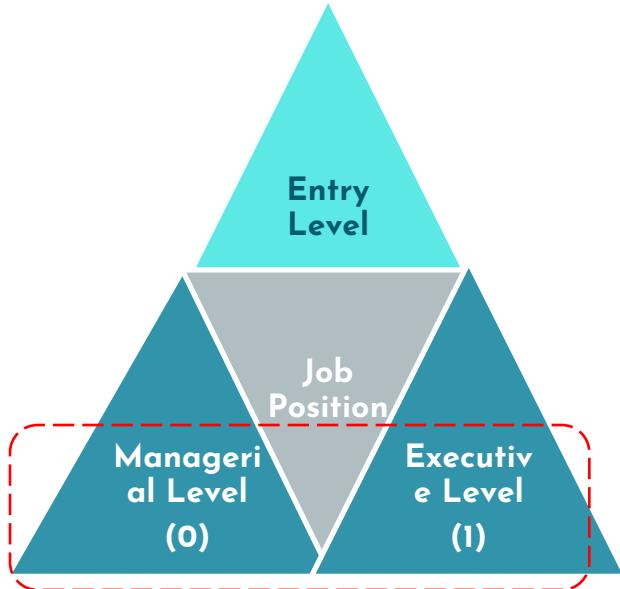
## Sample Job Titles in Each Job Level Category



# RESEARCH METHODOLOGY

## Transformation of Data

- Employer branding is more relevant to managers and executive (Benraïss-Noailles & Viot, 2020)
- Reviews are more perspective for managers and executive level employees.

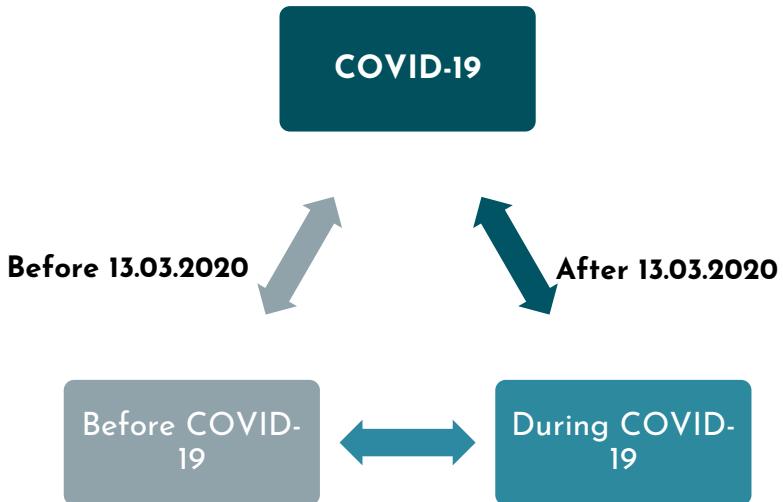


□ Focus of thesis

# RESEARCH METHODOLOGY

## Transformation of Data

- With data transformation, reviews after 13<sup>th</sup> March were considered as review during COVID-19
- While, before 13<sup>th</sup> March 2020, reviews were labeled to be before COVID-19.
- 13 March 2020 was declared as a National Emergency in the USA (White House, 2020)



# RESEARCH METHODOLOGY

## Variables in Dataset

Variables	Explanation	Variable Type
Review Title	The heading of the review	Text
Review	The review by employee	Text
Rating	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	Binary
Job Level	The level of the job i.e., Manager / Executive	Binary
Status	The status of the job i.e., Current Employee or Former Employee	Binary
Date	The date when the review was posted	Numeric
COVID-19	If the review is posted before or during COVID-19	Binary

# GLIMPSE ON THE DATASET

Review Title	Review	Rating	Company	Job Title	Job Level	Status	Date	COVID
this is a good place to start for young professionals.	There are a variety of different jobs and lines of business, you can make moves laterally and upwards based on skill, manager reviews and performance. the most important part is how they have treated us during COVID-19.	5	Bank of America	Relationship Manager	Manager	Current Employee	2/22/2021	1
No work life balance.	it's not about the people that make the company, it's about the people that bring in money and sometimes that's not even the reason for this bank. shareholders are the only priority.	1	Bank of America	Operations Manager	Manager	Former Employee	2/8/2020	0
No Job Security... watch	They will anything little to chase you out the door so watch out! A lot of politics	1	Truist Bank	Vice President Market	Executive	Current Employee	1/28/2021	0

# DATA ANALYSES

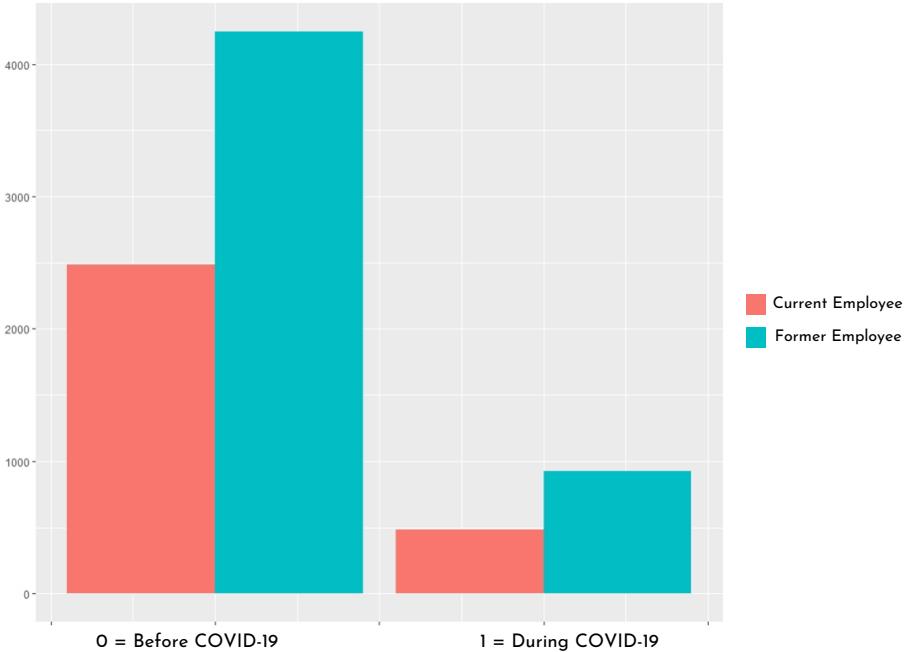
## Descriptive Statistics

Variable	Min	Median	Mean	Max	Standard Deviation	Variance
rating (1-5)	1.00	4.00	3.62	5.00	1.263	1.594
job_level	0.00	0.00	0.21	1.00	0.408	0.166
job_status	0.00	0.00	0.36	1.00	0.481	0.232
covid	0.00	0.00	0.1731	1.00	0.378	0.143
review (wordcount)	1.00	34.00	45.04	319	32.29	1042.78

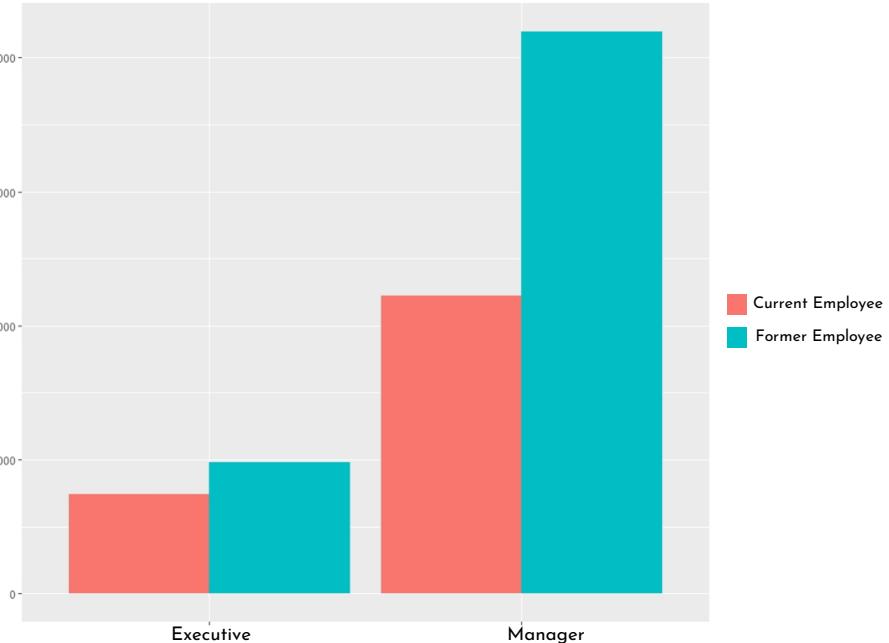
# DATA ANALYSIS

## Exploratory Data Analysis

Number of Reviews from Employees by Job Status - During & Before COVID-19



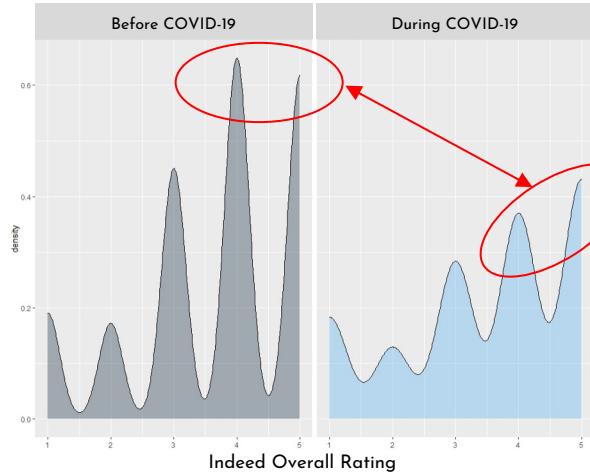
Number of Reviews from Employees by Job Status & Position



# DATA ANALYSIS

## Exploratory Data Analysis

**Rating During & Before Covid**



**Employee Level & Rating**



**Employee Status & Rating**



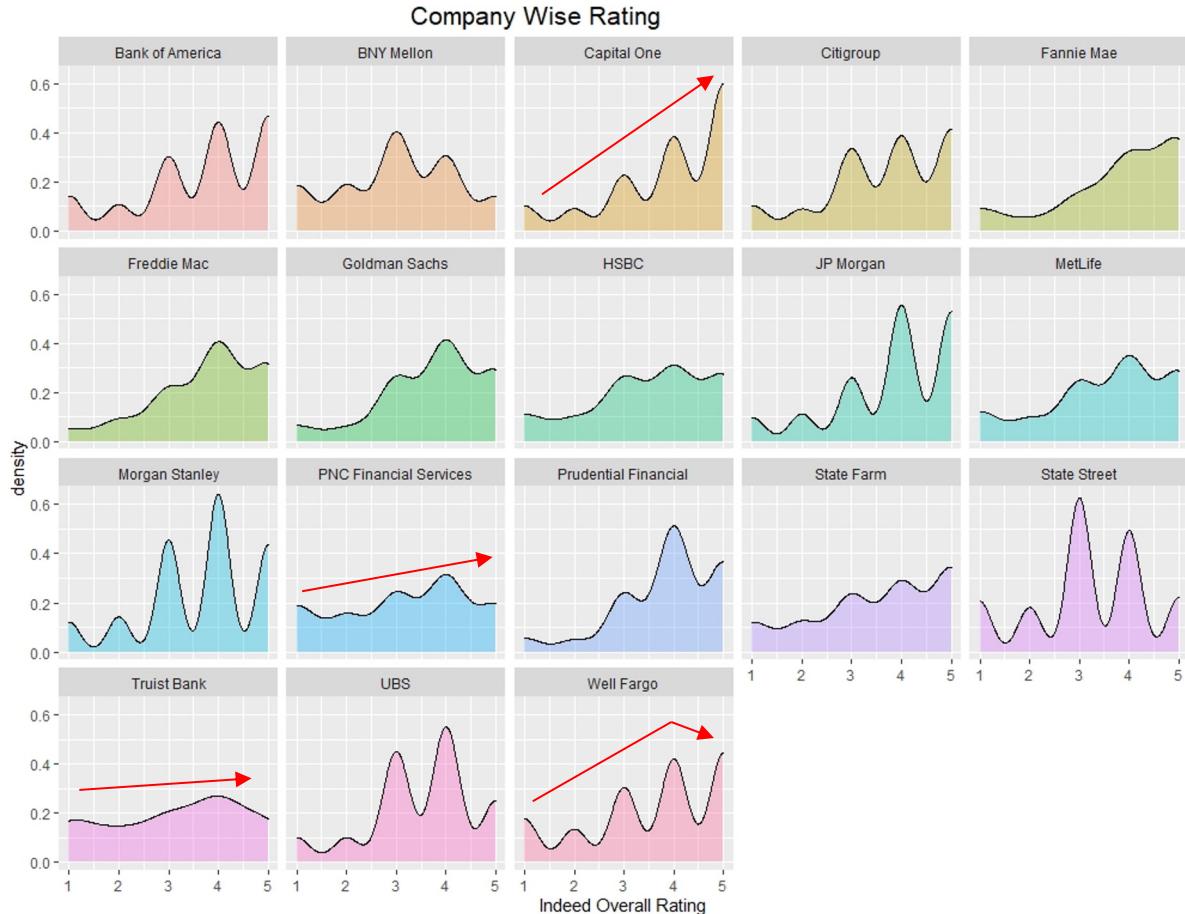
These changes reinforces the importance of our research questions too.

# DATA ANALYSIS

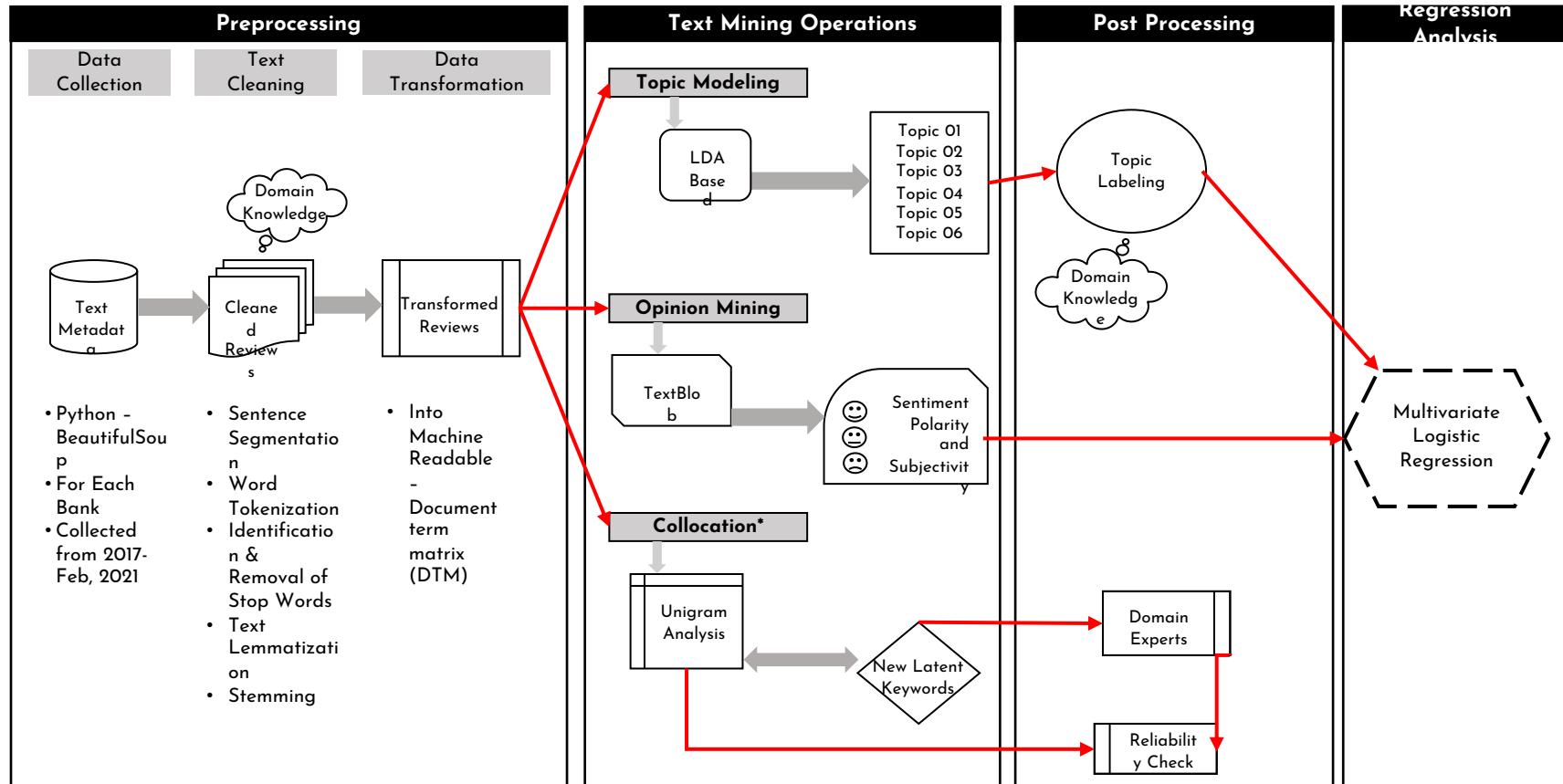
## Exploratory Data Analysis

### NAME OF US BANKS

1. Bank of America
2. BNY Mellon
3. Capital One
4. Citi Group
5. Fannie Mae
6. Freddie Mac
7. Goldman Sachs
8. HSBC
9. JP Morgan
10. MetLife
11. Morgan Stanley
12. PNC Financial Services
13. Prudential Financial
14. State Farm
15. State Street
16. Truist Bank



# DATA ANALYSES PROCESS - A GLIMPSE



\*In corpus linguistics, a collocation is a series of words or terms that co-occur more often than would be expected by chance.

# DATA ANALYSES

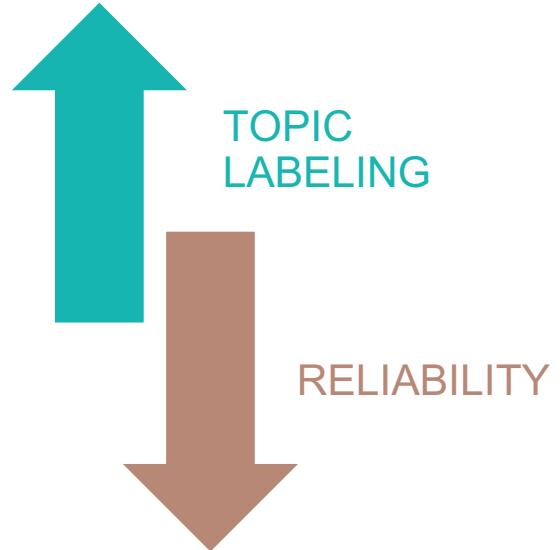
## Post Processing

### TOPIC LABELING

- i. Thorough analysis of words, views in reviews, experts' views from industry.
- ii. Viewed in the light of Employee Value Proposition (EVP)

### RELIABILITY OF NEW KEYWORDS

- i. **Provision of EVP** definition and latent keyword's taxonomy **to 2 expert panel**
- ii. Experts were given new keywords and requested to assign words to respective EVP based on their expertise
- iii. **Insights from Experts** were checked using **Intercoder Reliability - Cohen's Kappa**
- iv. Inconsistent words were dropped from further analysis



# DATA ANALYSES

## Operationalization of Variables

Variable Name	Type	Range	Description	Extraction Source
<b>Dependent Variable</b>				
			1 = Rating 3 and more; Strong employer rating	
<b>Independent Variables</b>				
Job Level	Categorical	0 and 1	0 = Manager Level Employee 1 = Executive Level Employee	Author's classification
COVID	Categorical	0 and 1	0 = Before COVID 1 = During COVID	Author's classification
Job Status	Categorical	0 and 1	0 = Former Employee 1 = Current Employee	Indeed.com
Emotional Valence	Continuous	-1 to 1	Sentiment by employee per each review	TextBlob from Python
Subjectivity	Continuous	0 to 1	Subjectivity by employee per each review	TextBlob from Python
Polarity	Categorical	1 to 3	Net sentiment as negative, neutral, or positive 1 = Negative 2 = Neutral 3 = Positive	TextBlob from Python
Topic	Categorical	1 to 6	Topic 2 = Development Value Topic 3 = Workload & Job Stress Topic 4 = Management Value Topic 5 = Economic & Work-life Value Topic 6 = Application Value	LDA results

# DATA ANALYSES

## Operationalization of Variables

Variable Name	Type	Range	Description	Extraction Source
<b>Control Variable</b>				
<b>Word Count</b>	Continuous	1 to 319	Word count in review by the employee	Author's calculation
<b>Company Reviews</b>	Continuous	306 to 5,956	Number of reviews by company	Author's calculation

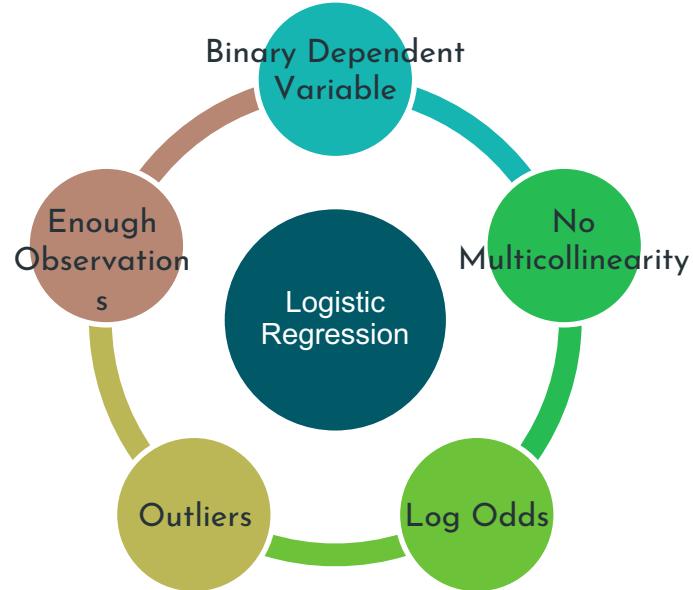
*Pearson Correlation between numeric variables*

	Employee Rating	Company Reviews	Word Count
Employee Rating	1.0000	0.0526	-0.2034
Company Reviews	0.0526	1.0000	0.0118
Word Count	-0.2034	0.0118	1.0000

# 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

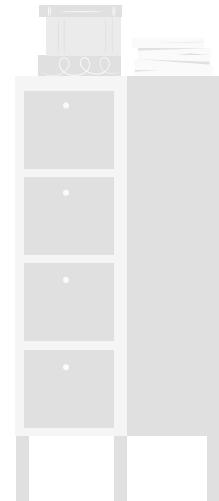




# RESULTS

The order of results discussed are as follows:

1. Results from **Unigram Analysis**
2. Results from **Topic Modeling**
3. Results from **Logistic Regression**



# RESULTS

## 1. Unigram Analysis

### 1.1. Extension of Literature - Identification of New Keywords representing EVP

No.	EVP Values	New Latent Keywords
1	Development Value	Advancement, train, learn, grow, develop, promote, promotion.
2	Application Value	Knowledge, Ability, volunteer, mentor, coach.
3	Economic Value	Pay, reward, security, vacation, raise, free lunch, incentive, perks, commission, pension, bonus, 401k, holidays, dividend, wage.
4	Interest Value	Enjoyable, excitement, morale, workspace, workplace, location, unique.
5	Social Value	Experience, atmosphere, diversity, respect, helpful, collaborative, team building, community.
6	Management Value	Treat, policy, layoff, boss. Extended new latent keywords for EVP.
7	Work Life Value	Long-hour, remote-work, overtime.



Reliability Check?



Results from Intercoder reliability - Kappa

	Kappa Score	Standard Error	t-statistic	p-value
Measure of Agreement	0.820***			
N of Valid Cases	53	0.057	14.304	0.000

\*\*\* p-value <0.01

As a rule of thumb, if the Kappa score is between 0.8 to 1.00, the reliability of the intercoder is almost perfect (Lijffijt et al., 2016; Landis and Koch, 1977).

# RESULTS

## 1. Unigram Analysis

### 1.2. Employer Value Propositions - Before and during COVID-19

*Welch t-test for the group: before and during covid-19*

EVP	Group1	Group2	t-statistic	df	p-value
Development***	Before Covid	During Covid	3.49	16.95	0.00282
Economic*	Before Covid	During Covid	1.87	18.48	0.077
Brand	Before Covid	During Covid	1.01	3.078	0.385
Application***	Before Covid	During Covid	2.99	9.64	0.0141
Social**	Before Covid	During Covid	2.52	17.24	0.0219
Management***	Before Covid	During Covid	3.73	17.69	0.00159
Work-life	Before Covid	During Covid	1.64	9.98	0.131
Interest**	Before Covid	During Covid	2.21	13.85	0.0442

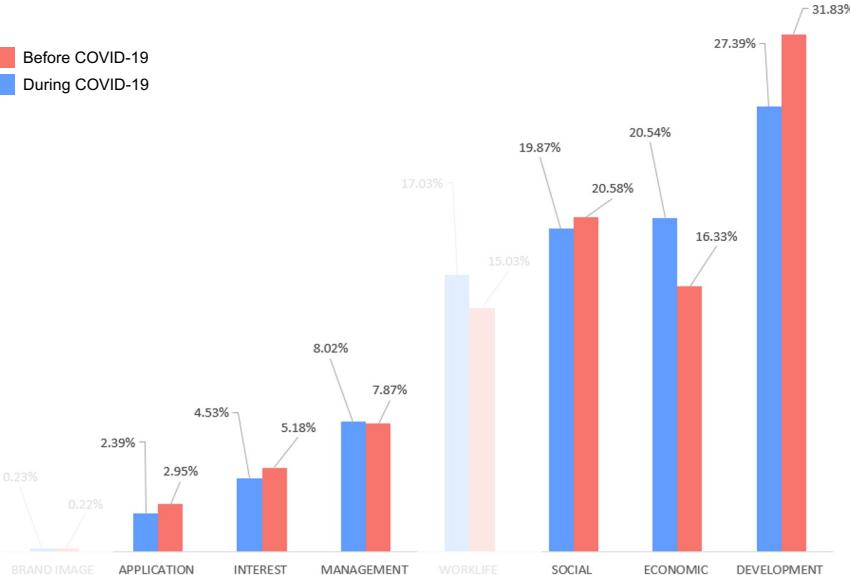
\*\*\* p-value <0.01 / \*\* p-value < 0.05 / \* p-value < 0.1

# RESULTS

## 1. Unigram Analysis

### 1.2. Employer Value Propositions - Before and during COVID-19

Before COVID-19  
 During COVID-19



experience  
 benefit  
 time  
 environment  
 culture  
 opportunity

*Before COVID-19*

environment  
 train  
 balance  
 learn  
 development  
 support  
 performance  
 encourage  
 employer  
 ability  
 politic  
 professional  
 diversity  
 interest  
 location  
 growth  
 community  
 challenge  
 interest  
 talent  
 personal  
 bonus  
 friendly  
 raise  
 flexible  
 atmosphere  
 salary  
 treat  
 reward  
 organization  
 compensation  
 leadership  
 personal  
 friendly  
 health  
 promote  
 colleague  
 advancement  
 career  
 experience

*During COVID-19*

# RESULTS

## 1. Unigram Analysis

### 1.3. Employer Value Propositions - Managers and Executives

Welch t-test for the group: Managers & Executives

EVP	Group1	Group2	t-statistic	df	p-value
Development***	Executives	Managers	-3.11	19.01	0.00581
Economic*	Executives	Managers	-1.98	17.14	0.0643
Brand	Executives	Managers	-0.53	5.24	0.62
Application**	Executives	Managers	-2.51	10.64	0.0294
Social*	Executives	Managers	-2.06	19.49	0.0531
Management***	Executives	Managers	-3.16	19.97	0.00491
Work-life	Executives	Managers	-1.60	10.08	0.14
Interest	Executives	Managers	-1.67	16.42	0.115

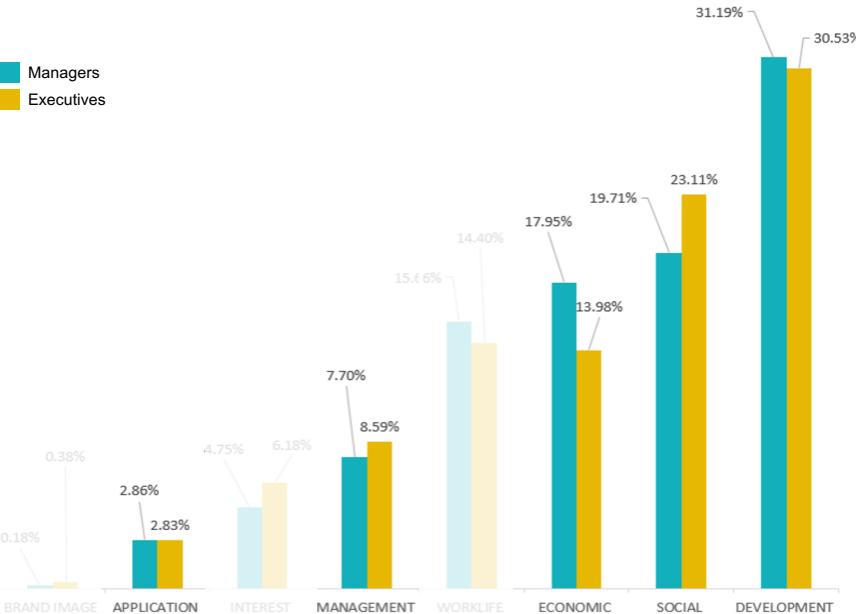
\*\*\* p-value < 0.01 / \*\* p-value < 0.05 / \* p-value < 0.1

# RESULTS

## 1. Unigram Analysis

### 1.3. Employer Value Propositions - Managers and Executives

Managers  
Executives



benefit  
career  
organization  
environment  
learn  
reward  
support  
culture  
time  
experience  
opportunity  
enjoyable  
collaborative  
advancement

*Executives*

culture  
adventure  
train  
balance  
experience  
pay  
life  
promotion  
interest  
quality  
professional  
atmosphere  
flexible  
compensation  
opportunity  
enjoyable  
collaborative  
advancement

*Managers*

# RESULTS

# 1. Unigram Analysis

## *1.4. Employer Value Propositions - Former and Current Employees*

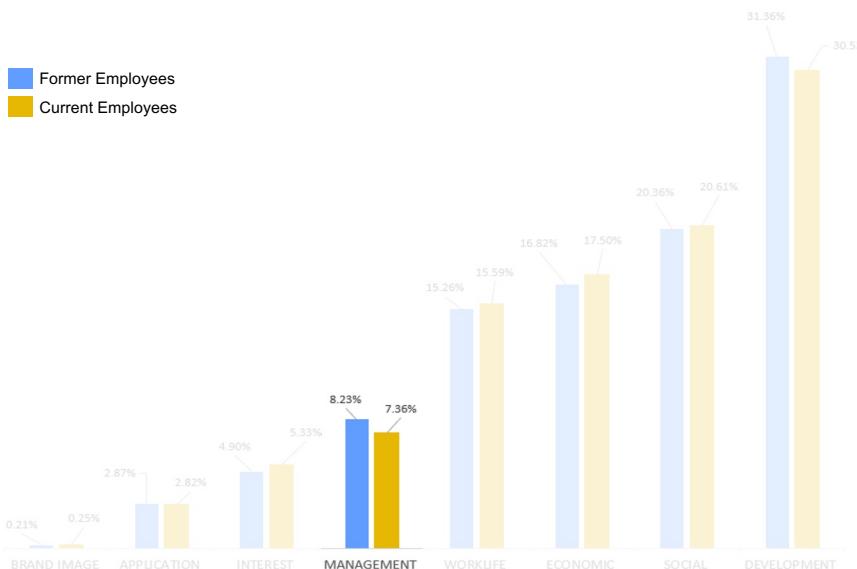
*Welch t-test for the group: Former & Current Employees*

EVP	Group1	Group2	t-statistic	df	p-value
<b>Development</b>	Current Employee	Former Employee	-1.49	27.06	0.1490
	Current Employee	Former Employee			
<b>Economic</b>	Current Employee	Former Employee	-0.80	28.67	0.4320
	Current Employee	Former Employee			
<b>Brand</b>	Current Employee	Former Employee	-0.30	4.90	0.7780
	Current Employee	Former Employee			
<b>Application</b>	Current Employee	Former Employee	-1.19	14.59	0.2510
	Current Employee	Former Employee			
<b>Social</b>	Current Employee	Former Employee	-1.03	26.29	0.3110
	Current Employee	Former Employee			
<b>Management*</b>	Current Employee	Former Employee	-1.90	26.90	0.0677
	Current Employee	Former Employee			
<b>Work-life</b>	Current Employee	Former Employee	-0.68	14.15	0.5090
	Current Employee	Former Employee			

# RESULTS

## 1. Unigram Analysis

### 1.4. Employer Value Propositions - Former and Current Employees



balance culture opportunity knowledge advancement development promotion personal organization ability layoff flexible supervisor policy performance salary compensation career compensation treat friendly professional location promote care benefit growth encourage happy reward environment experience

*Former Employees*

benefit challenge balance atmosphere friendly diversity community ability life growth pay train leadership security compensation development environment culture opportunity career experience personal support professional diversity advancement knowledge encourage vacation promote colleague treat talent policy enjoyable location promotion raise performance organization learn

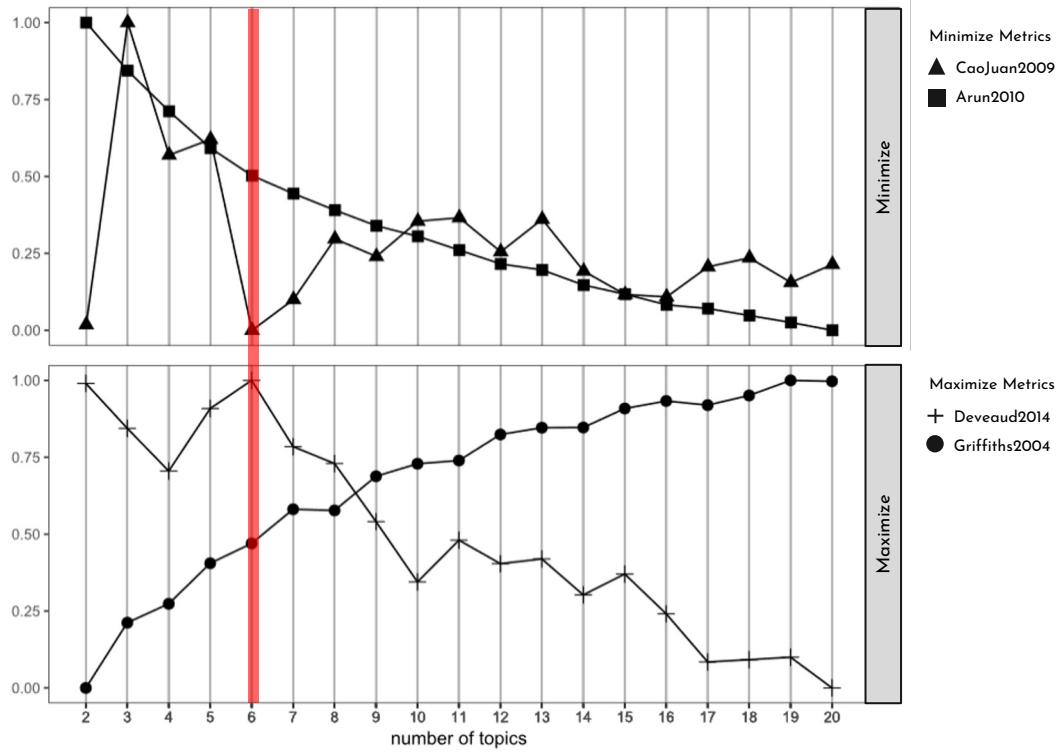
*Current Employees*

# RESULTS

## 2. Topic Modeling

### 2.1. Topic Extraction

- The optimal number of  $k$  is found when the differences amongst the different topics are high (Arun et al., 2010; Cao et al., 2009; Deveaud et al., 2014; Griffiths & Steyvers, 2004).
- The optimal number of topics is  $k=6$ , where Deveaud2014 maximizes, and CaoJuan2009 score minimizes.
- $K=6$  implies that the reviews of employees may be divided into six optimal topics.
- After finding the optimal  $k=6$ , LDA was employed to split and get the six unique topics from the reviews.



Four metrics' results - optimal number of topics

# RESULTS

## 2. Topic Modeling

### 2.2. 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	People, Job, Environment, Culture, Love, Help, Workplace, Friendly	Interest & Social Value
02	Company, Place, benefit, Opportunities, Life, Advancement, Career, Growth	Development Value
03	Customer, Day, Sale, Goal, Meet, Services, Client, Call, Bank	Workload and Job Stress
04	Management, Employee, High, Care, Stress, Lack, Upper, Level, Senior, Leadership, Politics, Favoritism	Management Value
05	Time, Pay, Level, Movement, Hour, Long, Bonus, Salary, Security, Raise, Home	Economic & Work Life Balance Value
06	Develop, Technology, Project, Large, Talent, Drive, Process, Strong, Leader, Big	Application Value

# RESULTS

## 2. Topic Modeling

### 2.2. Six Topics in Employees Reviews

Topic Number	Label Name	Common Words	In Review
01	Interest & Social Value	People, Job, Environment, Culture, Love, Help, Workplace, Friendly	<ul style="list-style-type: none"> <li>...I have been with WFC since 2015 and have worked in a few departments. the culture is more people-focused than my prior firm... </li> <li>...part of the certification team. It was stressful at times, but the coworkers were helpful. the company culture is typical corporate culture, and the job is not that hard... </li> <li>...good place to work with a lot of good people. oppressive commercial lending culture. cumbersome processes which negatively impacts your ability to take care of your clients... </li> <li>...HSBC is the best organization I have ever worked for. the culture is amazing... </li> </ul>
02	Development Value	Company, Place, benefit, Opportunities, Life, Advancement, Career, Growth	<ul style="list-style-type: none"> <li>...solid company in banking industry. great opportunities for advancement. good training. diverse company... </li> <li>...compensation is minimal, but benefits are great. lots of tools for training like plural sight... </li> <li>...chase had positions that you can obtain in very little time. they promote within the company and push their people to try different positions... </li> <li>... the company really cares about you and developing you to succeed in your role. great employees and CEO very personable... </li> </ul>

# RESULTS

## 2. Topic Modeling

### 2.2. Six Topics in Employees Reviews

Topic Number	Label Name	Common Words	In Review
03	Workload and Job Stress	Customer, Day, Sale, Goal, Meet, Services, Client, Call, Bank	<p>[...first job in retail banking, overall a solid company to work for. Too much outbound calling and essentially cold calling clients to push future appointments...]</p> <p>[...Wells Fargo may have eliminated sales goals, but they still pressure employees to have conversations with customers to get more out of them...]</p> <p>[...prudential is very good for you. you can sell insurance to people over the phone ...]</p> <p>[...excellent benefits horrible sales pressure with unrealistic goals...]</p>
04	Management Value	Management, Employee, High, Care, Stress, Lack, Upper, Level, Senior, Leadership, Politics,	<p>[...experienced employees were marginalized and subtly forced out of the work purposely removed from emails and meeting invitations. loss of job was mentioned at least once a month...]</p> <p>[...service managers are exploded, they manage the whole operations and sales team, branch manager sometimes does not have real idea and how the operations are done...]</p> <p>[...a lot of political there. extremely short staffed. upper management does not support you-specifically regional management...]</p> <p>[...this company lacks the ability to have a diverse mentality. everyone agrees with senior</p>

# RESULTS

## 2. Topic Modeling

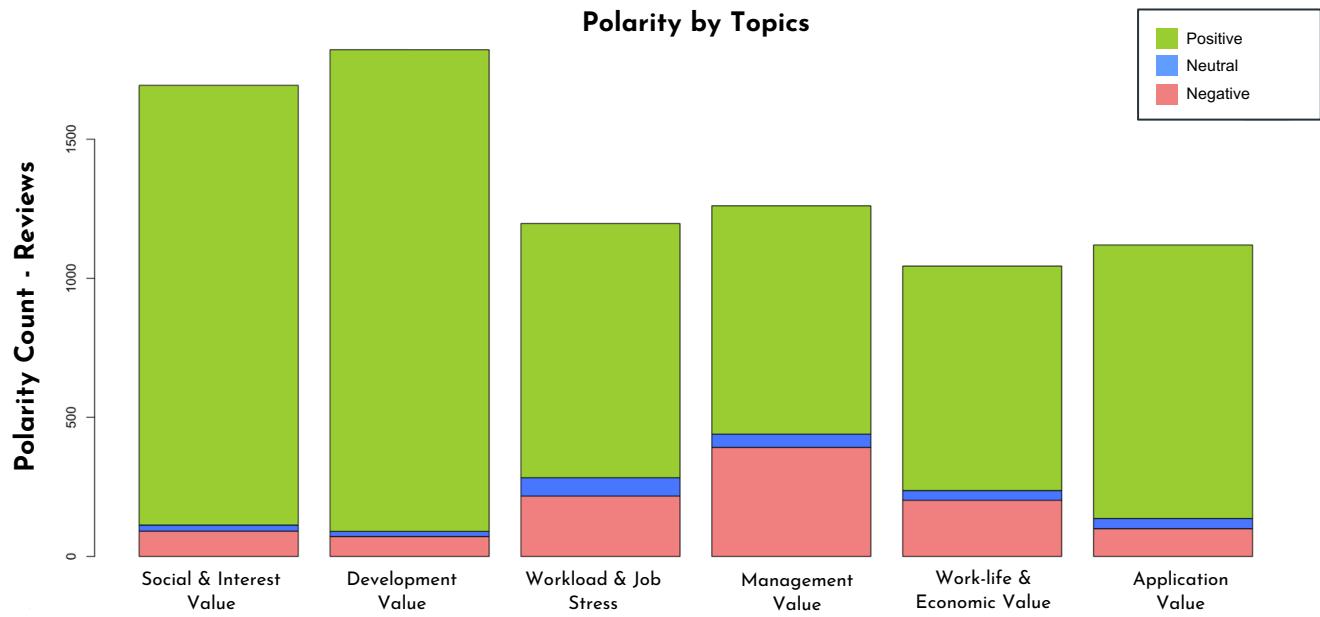
### 2.2. Six Topics in Employees Reviews

Topic Number	Label Name	Common Words	In Review
05	Economic & Work Life Balance Value	Time, Pay, Level, Movement, Hour, Long, Bonus, Salary, Security, Raise, Home	<p>[...] I was often [at work] after 7 pm and had to work a full day on Saturday, but I enjoyed the work and the customers. they offer 100% paid maternity leave for 12 weeks which is unheard of...]</p> <p>[...] there is great opportunity to move up if you commit to working long hours including nights and weekends and sometimes from vacation. the compensation and benefits are worth the efforts...]</p> <p>[...] stressful most of the time. they no longer have room for growth. the pay is good to start but there raises, and compensation is terrible...]</p> <p>[...] job security was always on all our minds and upper management was never honest...]</p>
06	Application Value	Develop, Technology, Project, Large, Talent, Drive, Process,	<p>[...] if you enjoy the structure and consistency of corporate based jobs and environment then you will love it. it does take a lot of effort and utilization of training and knowledge to be successful...]</p> <p>[...] very big on digital and self-help technology...with access to world class training and a path for growth in the digital space ...]</p> <p>[...] learn about China and different cultures, I would prefer to work in a large company.</p> <p>[...] JP Morgan relentlessly drive for better financial performances and tech innovation,</p>

# RESULTS

## 2. Topic Modeling

### 2.2. Six Topics and Net Sentiment Count



# RESULTS

## 3. Multivariate Logistic Regression

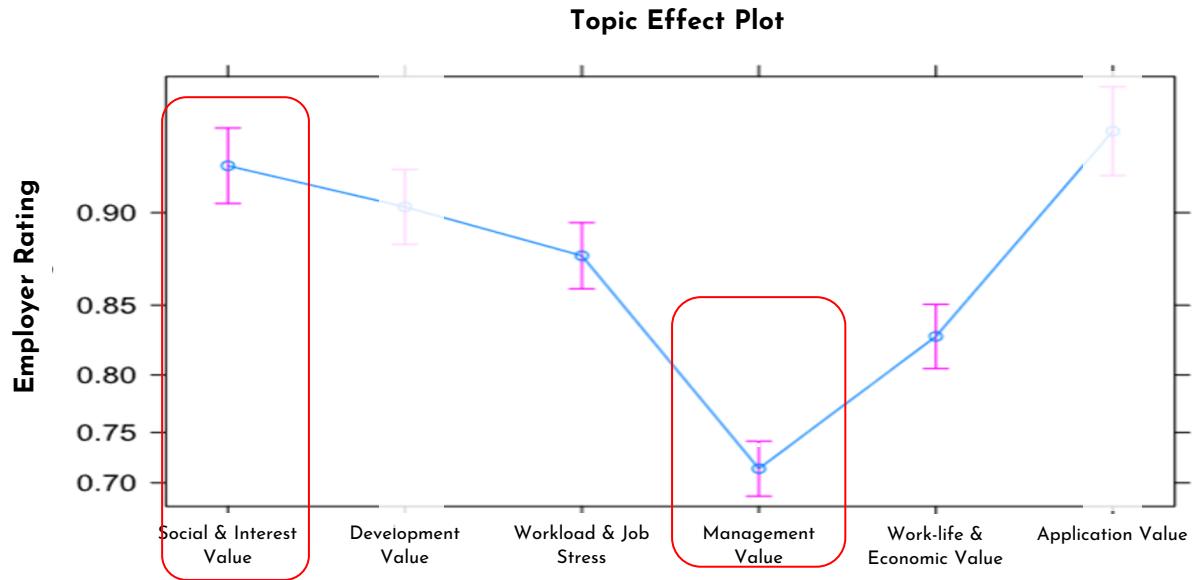
### 3.1. Results from Logistic Regression

Variables	Beta Es.	t-stat	Log odd R.	p-value	Variable	Beta Est.	T-stat	Log odd R.	P-value
<b>Independent Variables</b>					<b>Independent Variables</b>				
(Intercept)	1.49*** (0.18)	8.23	4.418	0	Topic 2 = Development Value   Social & Interest	-0.21 (0.14)	-1.52	0.814	0.128
Job Level = Executives   Managers	0.08 (0.08)	0.9	1.078	0.369	Topic 3 = Workload & Job Stress   Social & Interest	-0.45*** (0.13)	-3.59	0.638	0
Job Status = Current Employee   Former Employee	0.45*** (0.07)	6.15	1.566	0	Topic 4 = Management Value   Social & Interest	-1.51*** (0.12)	-13.02	0.220	0
COVID = During COVID   Before COVID	-0.21** (0.08)	-2.51	0.810	0.012	Topic 5 = Work-life & Economic   Social & Interest	-0.85*** (0.12)	-6.88	0.426	0
Polarity = Neutral   Negative	0.34* (0.19)	1.77	1.401	0.077	Topic 6 = Application Value   Control Variable	0.17	1.18	1.189	0.239
Polarity = Positive   Negative	0.27** (0.12)	2.33	1.311	0.02	Company Reviews	0.00003* (0.00)	1.83	1.00003	0.067
Emotional Valence	3.66*** (0.24)	15.08	38.856	0	Word Count	-0.01*** (0.00)	-9.58	0.992	0
Subjectivity	0.15 (0.21)	-0.69** p-value < 0.01	0.865 p-value < 0.05	0.491 * p-value < 0.1					
	<small>Continuous Variable</small>								
	<small>Categorical Variable</small>								

# RESULTS

## 3. Multivariate Logistic Regression

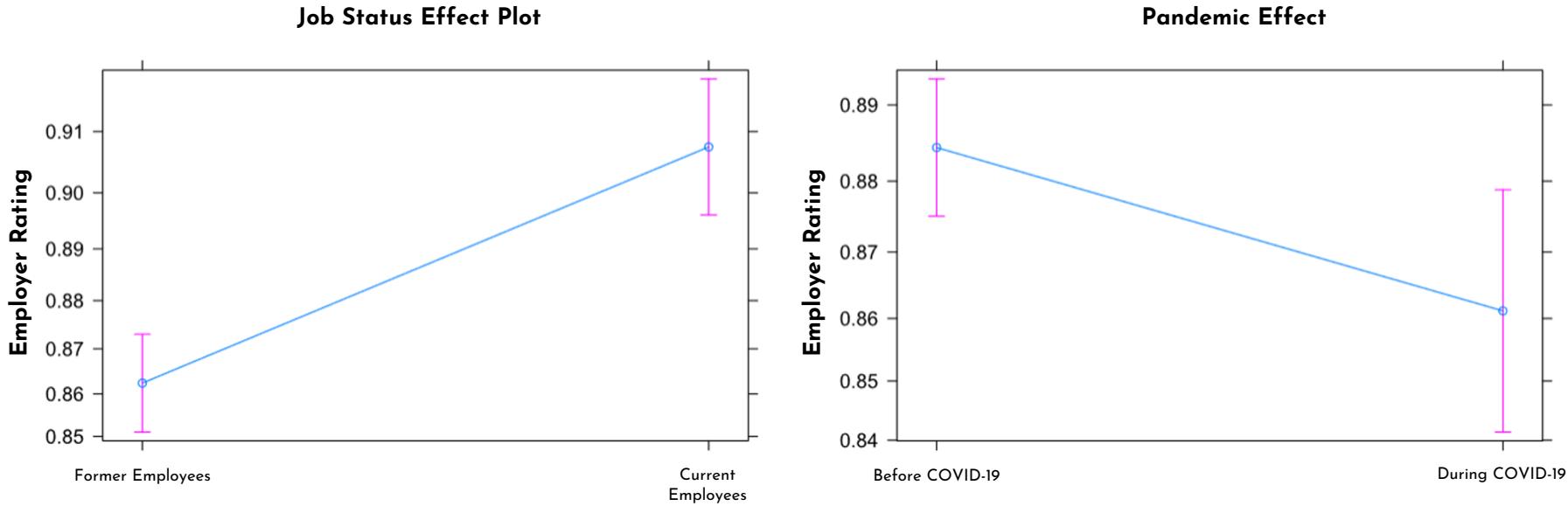
### 3.2. Results from Logistic Regression - An intuitive view



# RESULTS

## 3. Multivariate Logistic Regression

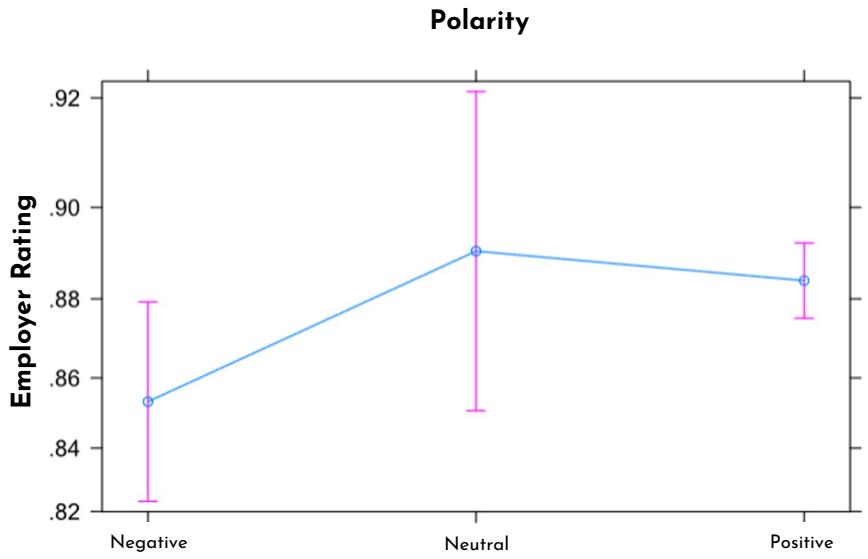
### 3.2. Results from Logistic Regression - An intuitive view



# RESULTS

## 3. Multivariate Logistic Regression

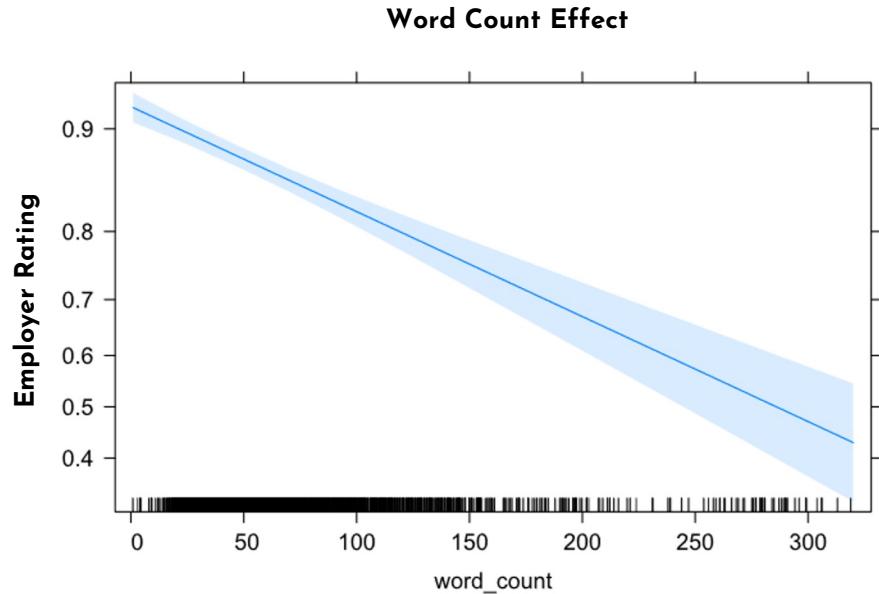
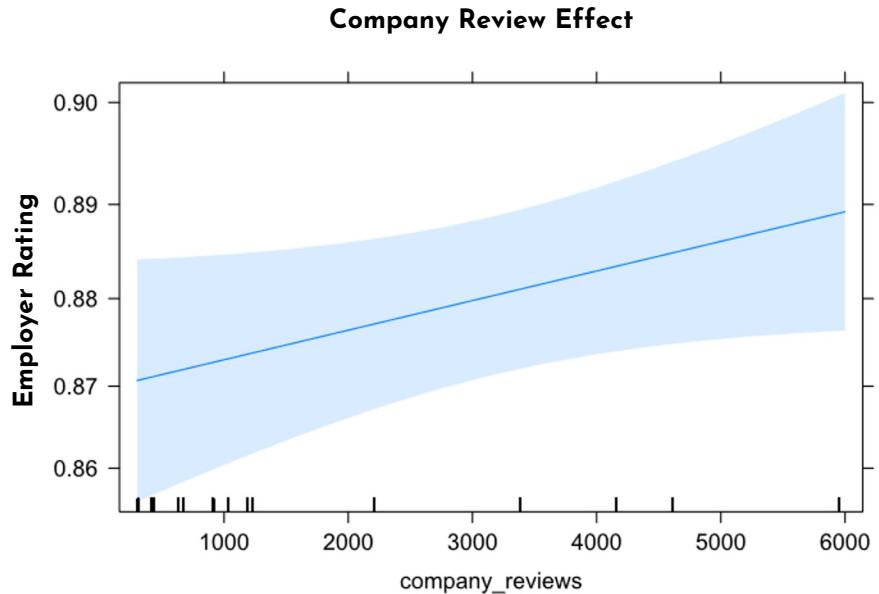
### 3.2. Results from Logistic Regression - An intuitive view



# RESULTS

## 3. Multivariate Logistic Regression

### 3.2. Results from Logistic Regression - An intuitive view



# RESULTS

## 3. Multivariate Logistic Regression

### 3.2. Goodness of Fit Measure for Logistic Regression

#### McFadden Psedo R<sup>2</sup>:

- Value is 0.243; **ranges between 0.20-0.40** indicates **an excellent model fit** (McFadden, 1974).
- Yet, it may not the best measure to describe model fit for logistic, thus, Hosmer & Lemeshow Goodness of Fit is checked.

#### Hosmer & Lemeshow:

- Another way to check for goodness of fit is Hosmer & Lemeshow test statistic for goodness of fit (Lemeshow & Hosmer, 1982).
- For Hosmer and Lemeshow test, the **p-value > 0.05**, implying there is a **good fit for the model**
- Non significance implies the model is good fit**

#### Goodness of Fit Measures

AIC = 5896.6

Log Likelihood = -2,933.306

McFadden R<sup>2</sup> = 0.243

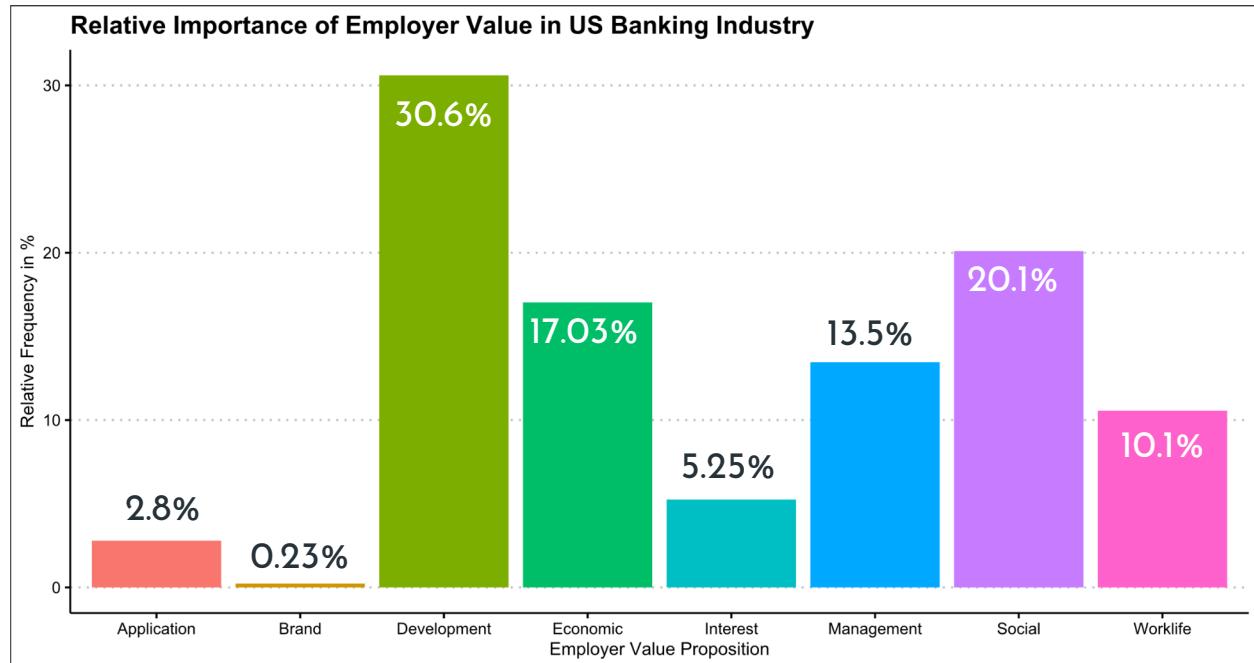
#### Hosmer and Lemeshow Goodness of Fit (GOF) test

X-Squared = 7.3367 | DF=8 | P-Value 0.5008

# DISCUSSION

- What are the **most and least preferred Employer value propositions (EVP)** by employees within US Banking Industry?

- There are **five most preferred EVP values** within the US banking industry, which are ***development (30.6%), social (20.1%), economic (17.03%), management (13.5%), and work-life (10.1%) values.***
- Whereas ***interest, application, and brand image*** values (in order) are the **least preferred EVP**.



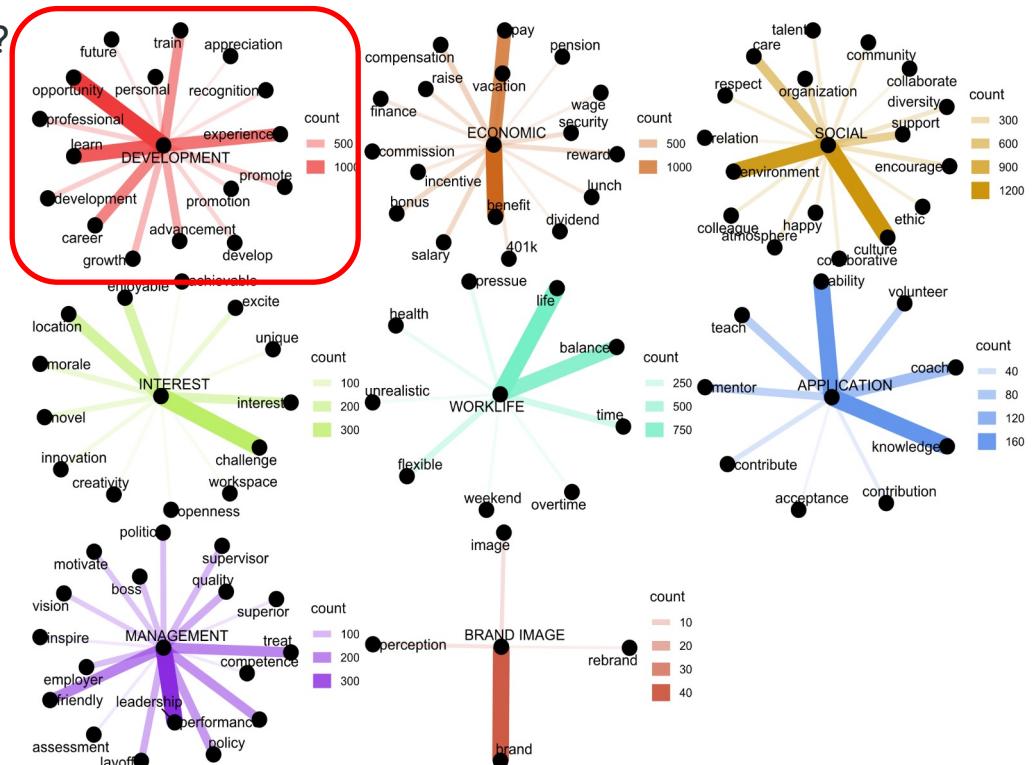
# DISCUSSION

## 1. What are the most and least preferred Employer value propositions (EVP) by employees within US Banking Industry?

The most used words to refer to **development value** are *opportunities, growth, promotion, career, advancement, experience, and others.*

The finding is in line with several authors:

- There is a **significant relationship between development value for employer branding** (N. A. Ahmad & Daud, 2016; M. M. Sutherland et al., 2002; Verma & Highway, 2015).
- Potential employees are **attracted** to a company because of the **perception of the career enhancement** (Froese et al., 2010).
- In contrast, Dabirian reported that **development value is not as significant for employees** in top IT companies in the US compared to other EVP values (Dabirian, Berthon, et al., 2019)



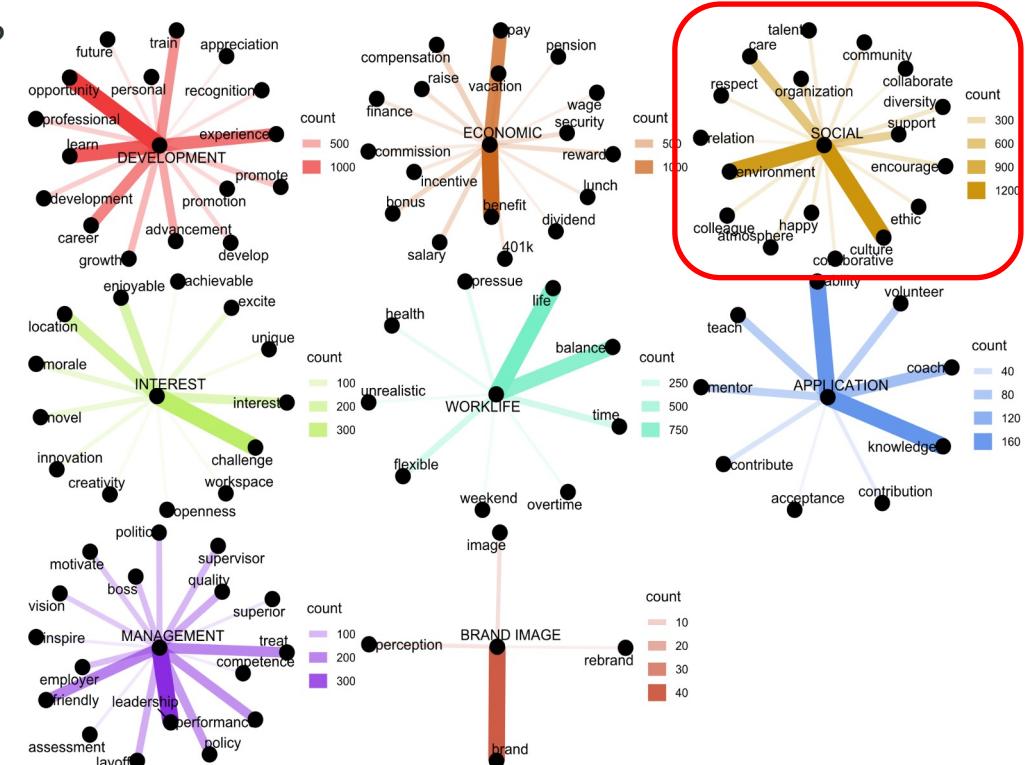
# DISCUSSION

## 1. What are the most and least preferred Employer value propositions (EVP) by employees within US Banking Industry?

The most used words to refer to **Social value** are *culture, support, collaboration, environment, respect, talent, atmosphere, and others.*

The finding is in line with several authors:

- **Strong work culture** (social value) is important for strong employer brand (Raml, 2014).
- **Social value is the most important EVP** employees prefer in IT industry in US (Dabirian, Paschen, et al., 2019).



# DISCUSSION

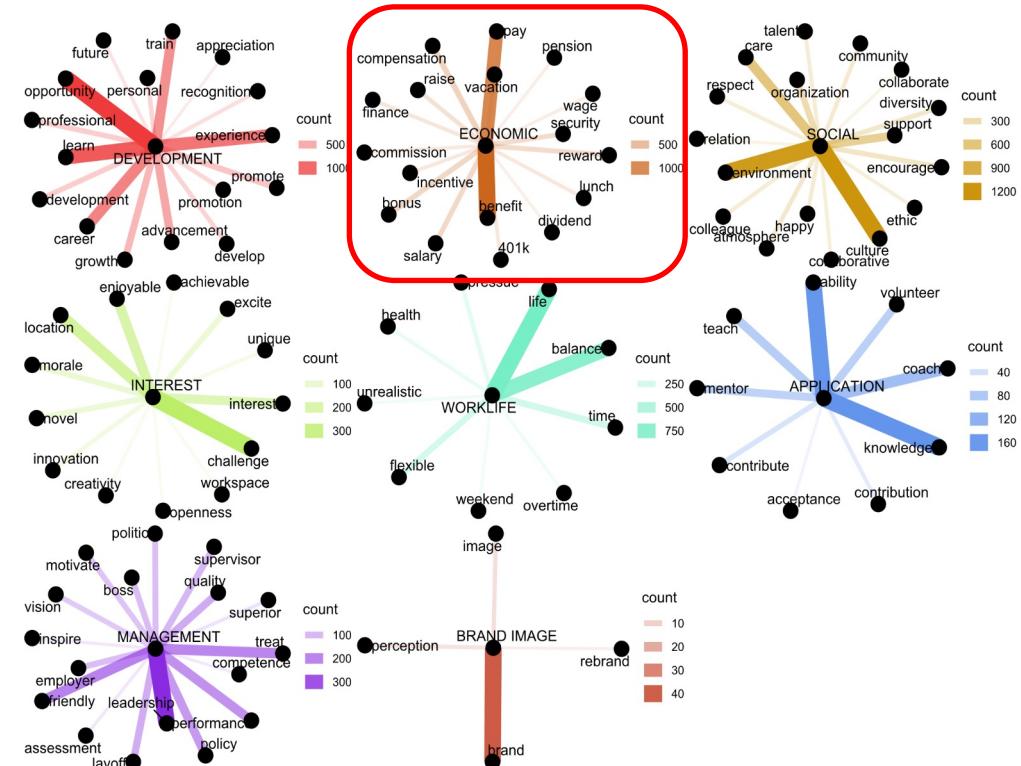
## 1. What are the most and least preferred Employer value propositions (EVP) by employees within US Banking Industry?

The most used words to refer to **Economic value** are wages, perks, salary, vacation, and others.

The finding is in line with several authors:

- **Economic value is the most cherished value by current employees** (Dabirian et al., 2017).
- **Employees' preferences for salary and economic value have no relation with first-choice brands** (Rampl, 2014)

While, on the contrary, **Application value** was found out to be **least preferred for employees** in the study, which is aligned with the findings in US IT industry (Dabirian et al., 2017).



# DISCUSSION

## 2. Do Employee Value Propositions (EVP) differ for Managers & Executives; Former &

### Current

#### Before & During COVID-19:

- Before COVID-19, employees were inclined towards more development value but it decreased during COVID-19.
- In line with Markovits (2014), employee orientation towards development decreases.
- Management value increased during pandemic - showing mixed feelings i.e., happy with management care during pandemic while also complaining about layoffs during pandemic.
- During crisis, employees care more about economic value; Markovits found the same (2014).

#### Managers & Executives:

- Managers care more about their development; in line with Wiley's finding (2012).
- Economic value is the key driver for Managers; Bandiera also argued the same - managers' performance and talent is correlated with financial benefit they get (2015).
- In contrast, executives refer to company's diversity and culture (social value) more; in line with the finding (Rampl, 2014).
- Executives refer to management value by referring to words like leadership and politics.

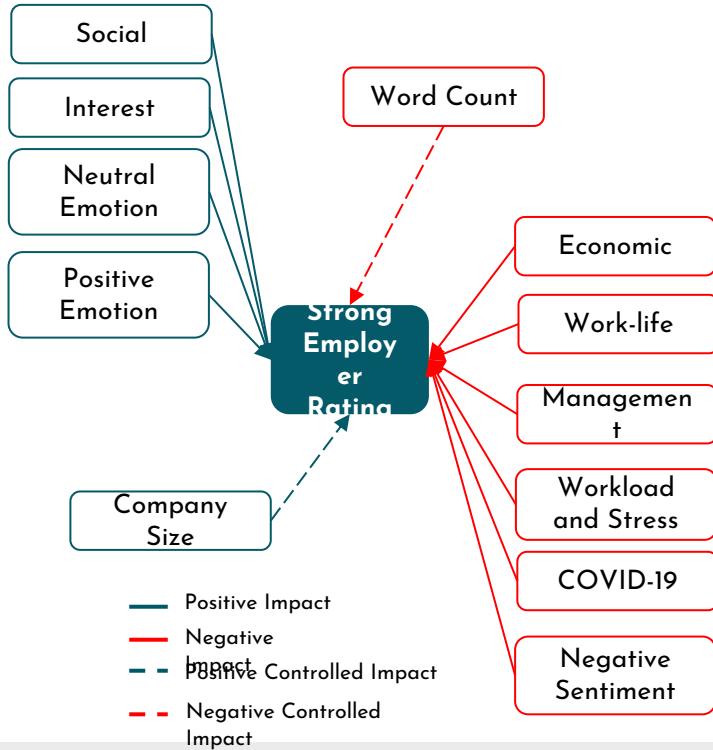
#### Current and Former:

- Most interestingly, Former employees refer to management value more often than current.
- Word politics and relationship with managers appeared more often with negative sentiment.
- Several studies noted that employees leave firm because of politics (Daskin & Tezer, 2012; Dabirian, Paschen, et al., 2019)
- Alexander (1994) also reported inefficiencies in management lead to employees turnover.

# DISCUSSION

## 3. What are the factors determining a strong employer rating by the employees?

- Extended the employer branding literature by identifying the factors that determine a strong employer rating.
- Social and interest values** are significant EVP leading to a strong employer rating.
- While **work-life**, and **economic values** are significant EVP and negatively related to a strong employer rating. Similar results were reported in literature (Aziz et al., 2019; Dabirian et al., 2019).
- Similarly, **management** value is negatively associated with strong employer brand; Morrison argued breach of psychological contracts lead to decreased productivity and dissatisfaction (Morrison & Robinson, 1997).
- The current study also identified a negative relationship between **strong employer ratings** and employees' views about **workload**; similar findings in literature (Alkubaisi, 2015; Khattak et al., 2011; Philip et al., 2018)
- Employees during **COVID-19** tend to review the companies with **weak employer ratings than before COVID-19**. Tang argues that maintain employees morale can assist companies withstand crisis (Shan & Tang, 2020).



# SUMMARY

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**Pandemic** has significantly strong negative relationship with **strong employer rating**.

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

01

- Five Values are most preferred **Development (30.6%)**, **Economic (20.1%)**, **Management (17.03%)**, and **Work-life (10.56%)**.

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

When employee discuss:

**Workload and stress**, they give **poor rating**.

**Management value** also relates to **poor rating**.

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

**Work-life** and **economic value** are more likely to receive **strong employer rating**

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- During COVID-19, **Economic value** grew sharply (20.54%) with **Management value** (8.02%).
- While, before COVID-19, **development value** was **most referred** (31.83%), followed by **social value** (20.58%).
- For Managers, **development** and **economic value** are the **most important** (~31% and 18%).
- While, executives prefer **social**, **management** and **interest value** (23%, 9% and 6%)
- Former employees refer to **more management value** than current employees.

# 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 layovers** 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.



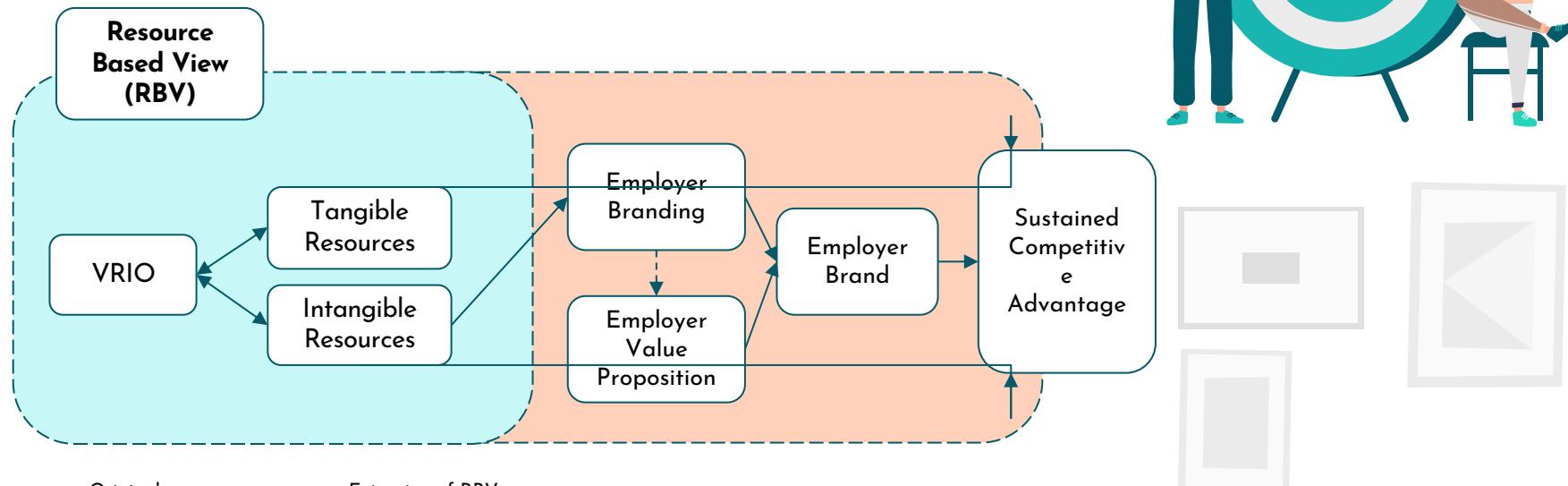
Managers could internally promote the existing EVPs to their current employees which could decrease communication gap and increase employees' involvement in employer brand process.



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.

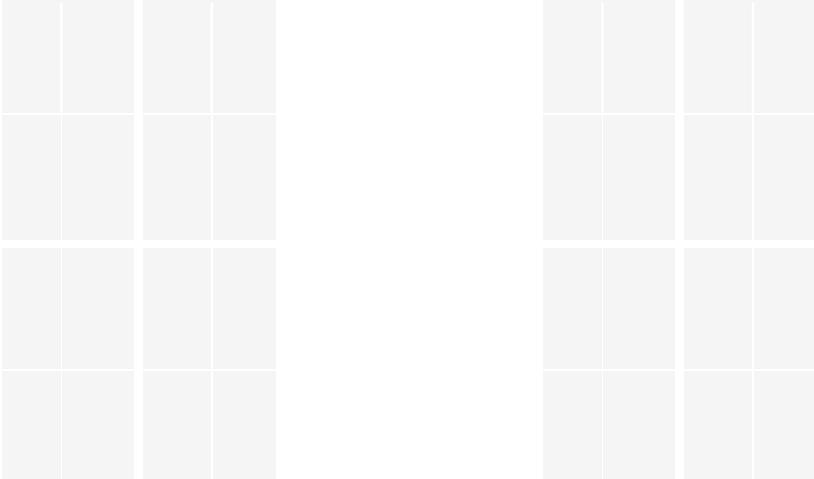
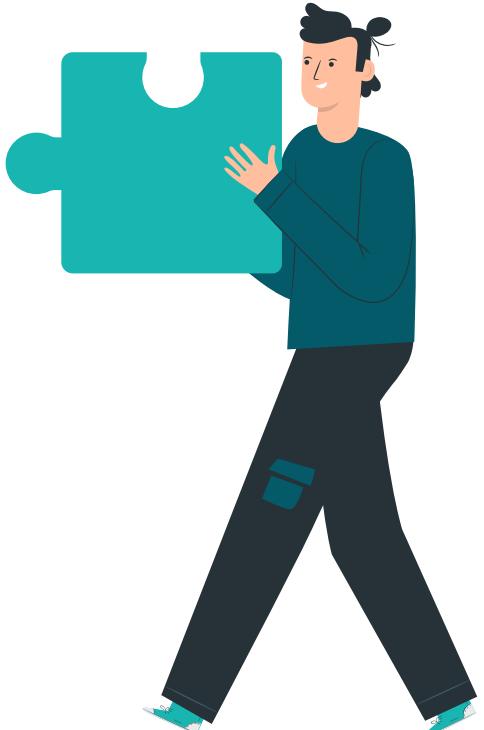
# THEORETICAL IMPLICATION

## Theoretical Framework Extended for Employer Brand



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

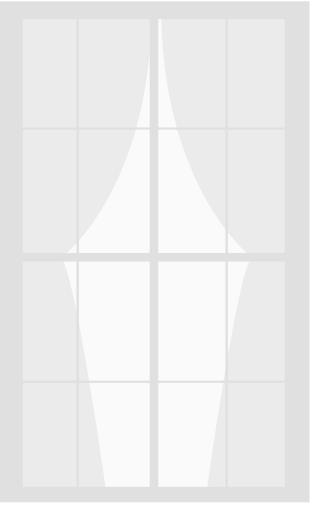
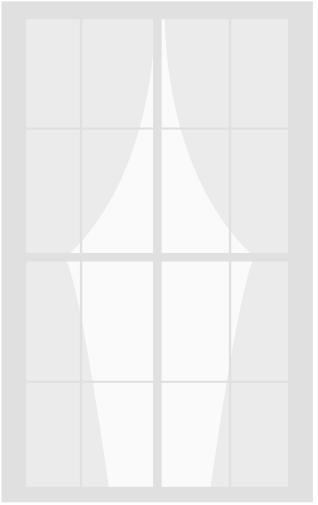
Extension of RBV  
demonstrating the link  
between Employer Brand and  
Sustained Competitive  
Advantage



## LIMITATIONS

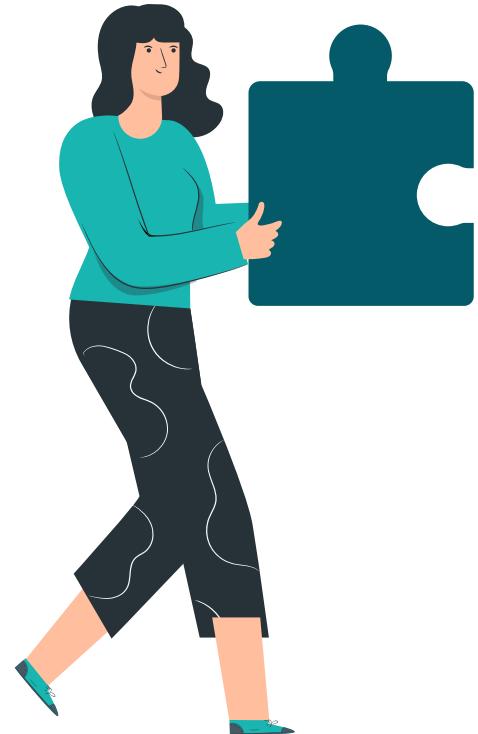
- Focus on one industry.
- Other sentiments like sarcasm, surprise, fear etc.
- COVID-19 has different forms i.e., lockdown, remote work etc.
- Focus on Managers and executive only.





## 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
- Promotion of EVP to existing and prospect employees



# 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

S1: I love dog**s**.

S2: I love **dog** and hate knitting.

S3: **my** hobby and **my** passion is **knitting**.

## A Basic Example - Preprocessing

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

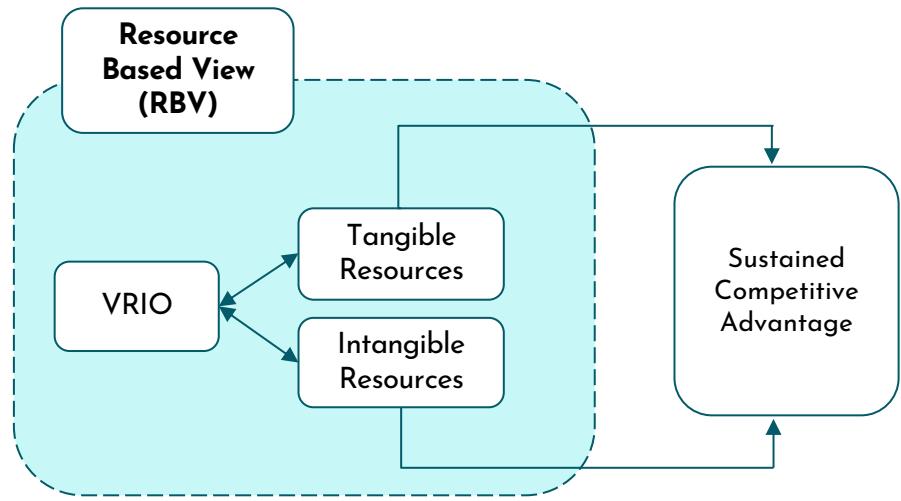
[ “love”, “dog”, “love”, “dog”, “hate”, “knitting”, “hobby”, “passion”, “knitting”]

	<b>love</b>	<b>dog</b>	<b>hate</b>	<b>knitting</b>	<b>hobby</b>	<b>passion</b>
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

	<b>love</b>	<b>dog</b>	<b>hate</b>	<b>knitting</b>	<b>hobby</b>	<b>passion</b>
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	<b>0.22</b>	<b>0.22</b>	1	<b>0.22</b>	0.11	0.11

# LITERATURE REVIEW

## Related Theoretical Framework



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



# 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**

	Emotional Valence	Subjectivity	Company Reviews	Word Count	Variables	GVIF <sub>[2]</sub>	Df	GVIF^(1/2*Df)
Emotional Valence	1.0000	0.3298	0.0273	-0.1776	Job Level	1.037295	1	1.018477
Subjectivity	0.3298	1.0000	0.0188	-0.0754	Job Status	1.009071	1	1.004525
Company Reviews	0.0273	0.0188	1.0000	0.0118	COVID	1.007196	1	1.003592
Word Count	-0.1776	-0.0754	0.0118	1.0000	Polarity	2.639156	2	1.274578
					Emotional Valence	2.372059	1	1.540149
					Subjectivity	1.193912	1	1.092663
					Topic	1.186321	5	1.017232
					Company Reviews	1.022804	1	1.011338
					Word Count	1.084544	1	1.041414

Correlation between explained continuous variables

Collinearity between explained variables

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

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

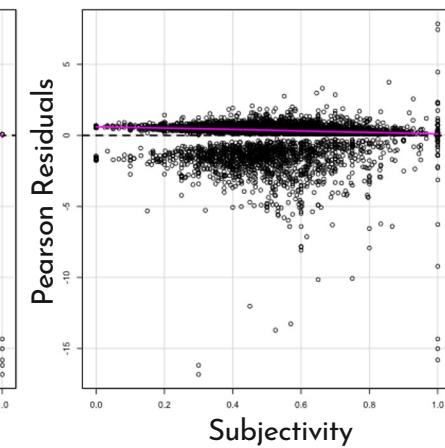
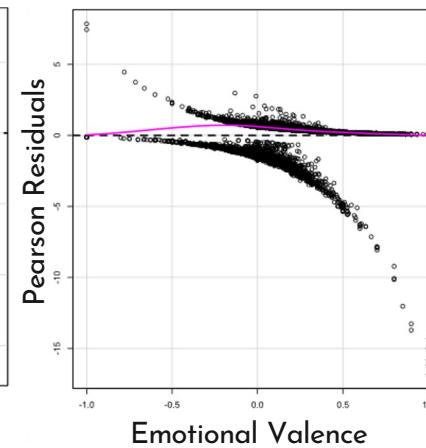
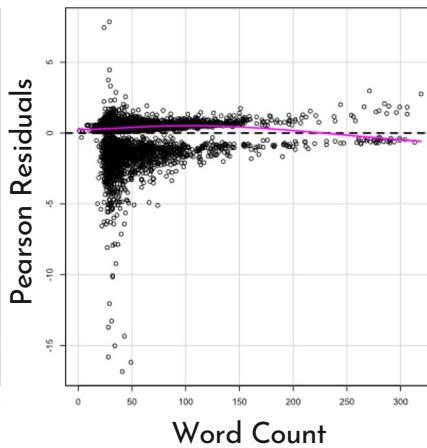
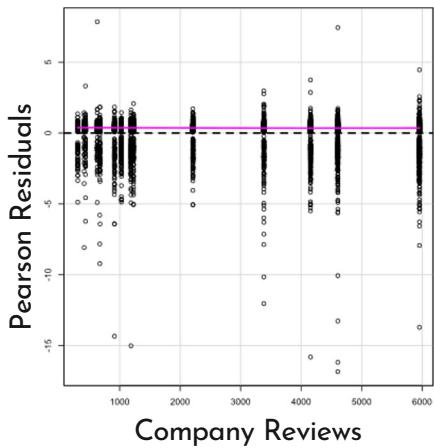
# APPENDIX

## 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).

References

Appendix

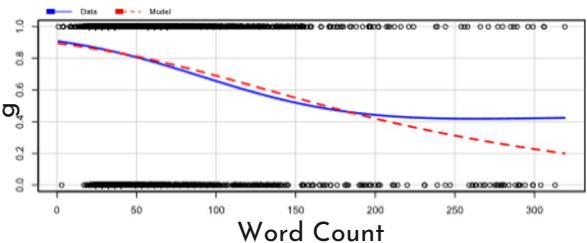
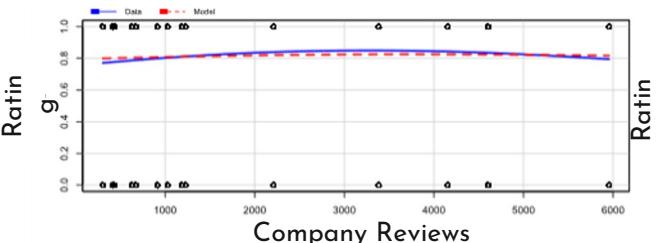
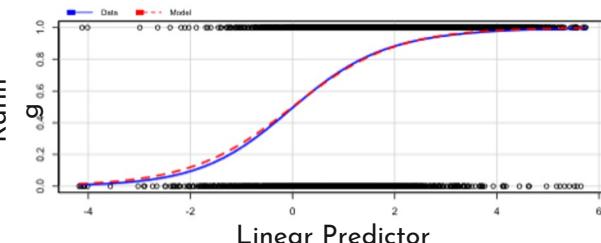
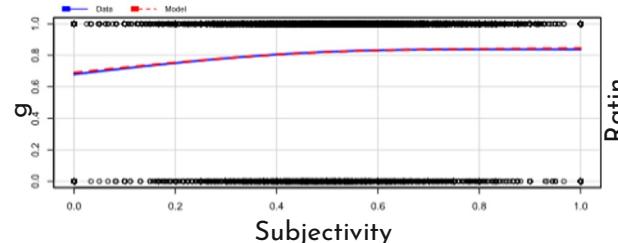
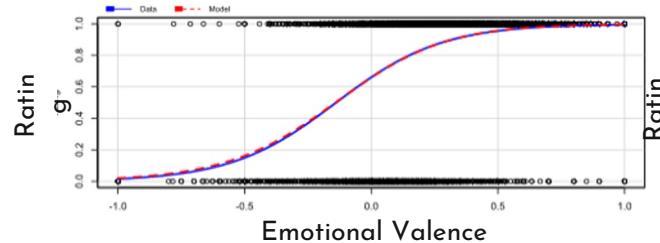
# APPENDIX

## Assumptions Check

### *Assumptions check for Logistic Regression*

#### 4. Linearity of Independent Variables:

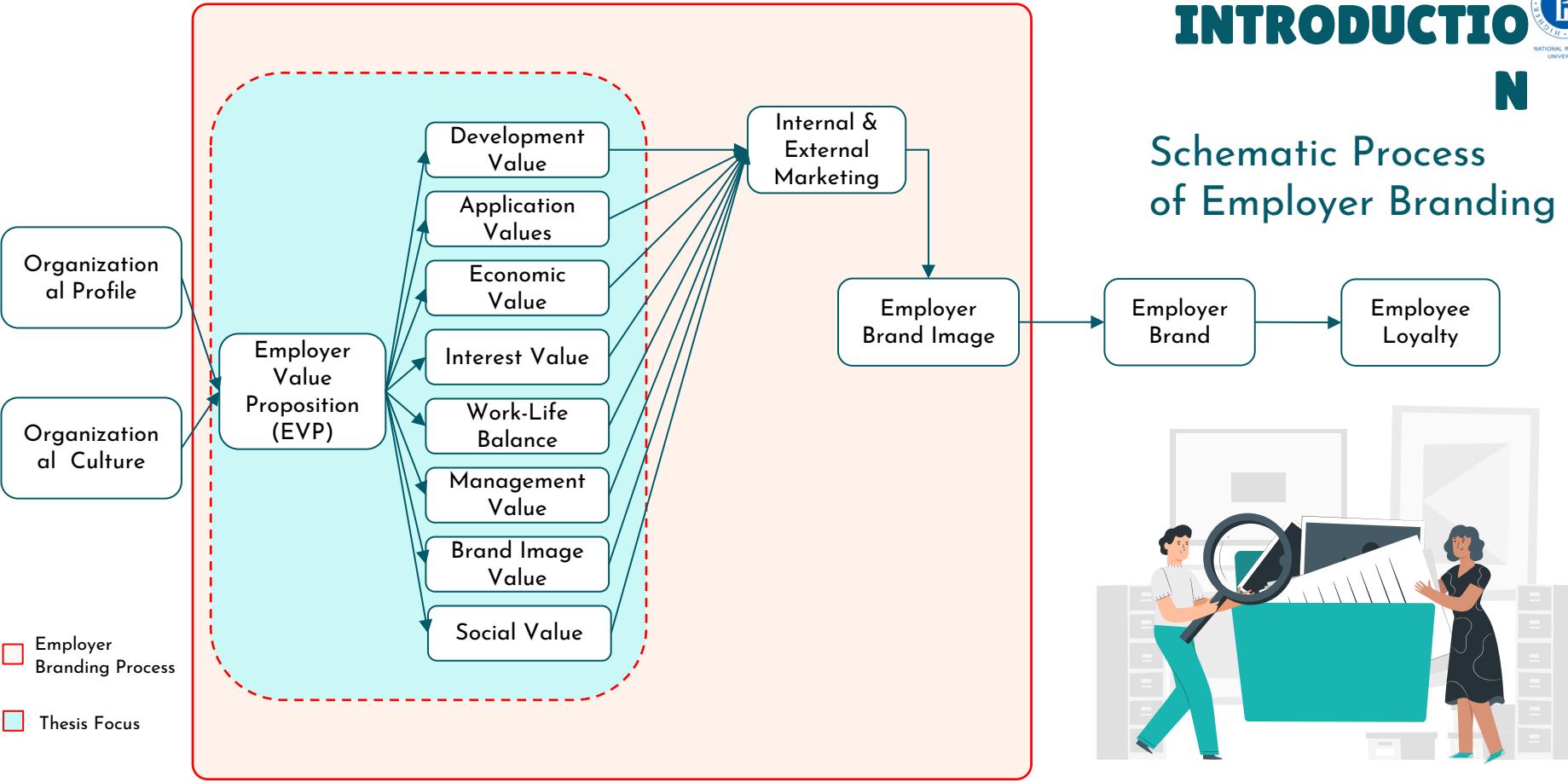
- Another way to check for linearity is to check the model marginal plot where rating was plotted against the explanatory variables (Z. Zhang, 2016).
- Pearson Residuals & Marginal plot were examined.



# INTRODUCTION

N

## Schematic Process of Employer Branding



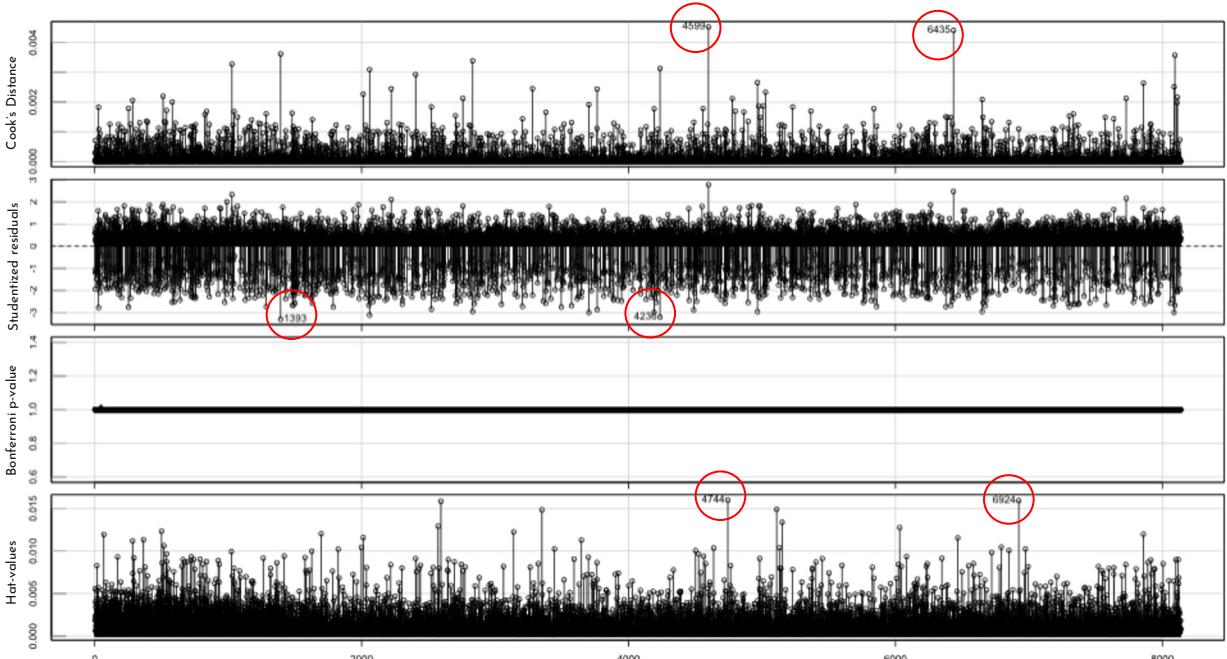
# APPENDIX

## Assumptions Check

### *Assumptions check for Logistic Regression*

#### *5. Outliers and Influential Values:*

- A diagnostic plots including **Bonferroni P-hat values**, **Cook's distance**, and **studentized residuals** were used in conjunction with influence plot.
- 4599, 6435, 4755, 6924, 4236, and 1393 observations identified as potential outliers.



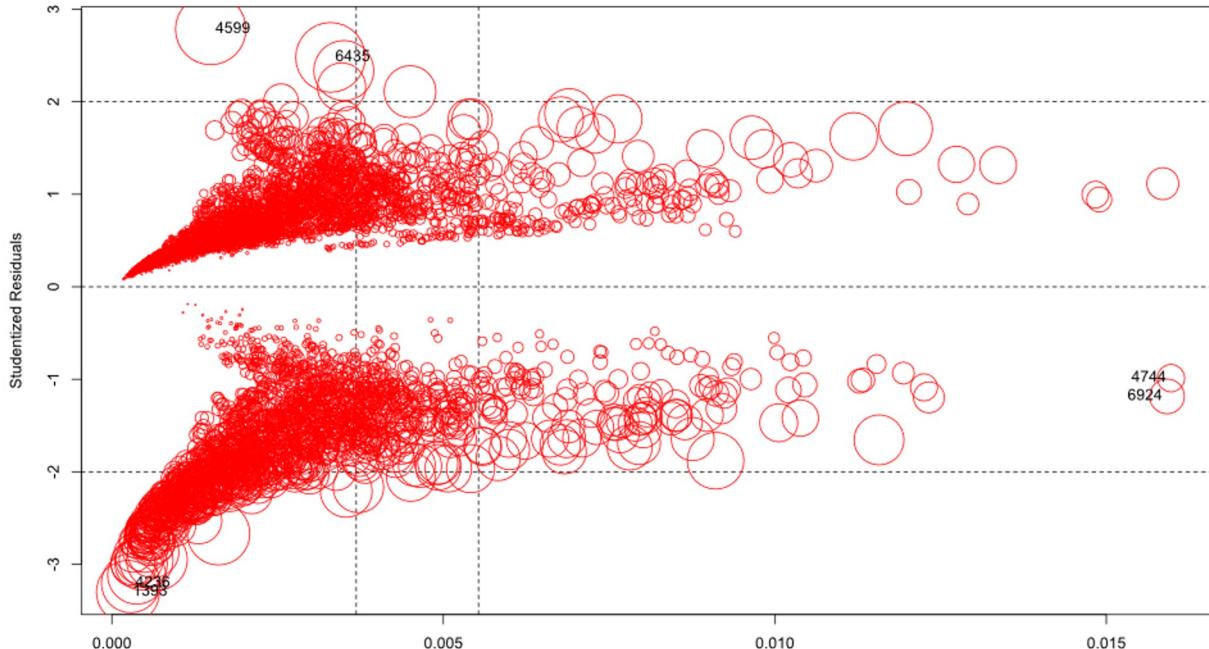
# APPENDIX

## Assumptions Check

### Assumptions check for Logistic Regression

#### Outliers and Influential Values:

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

## Assumptions Check

### *Assumptions check for Logistic Regression*

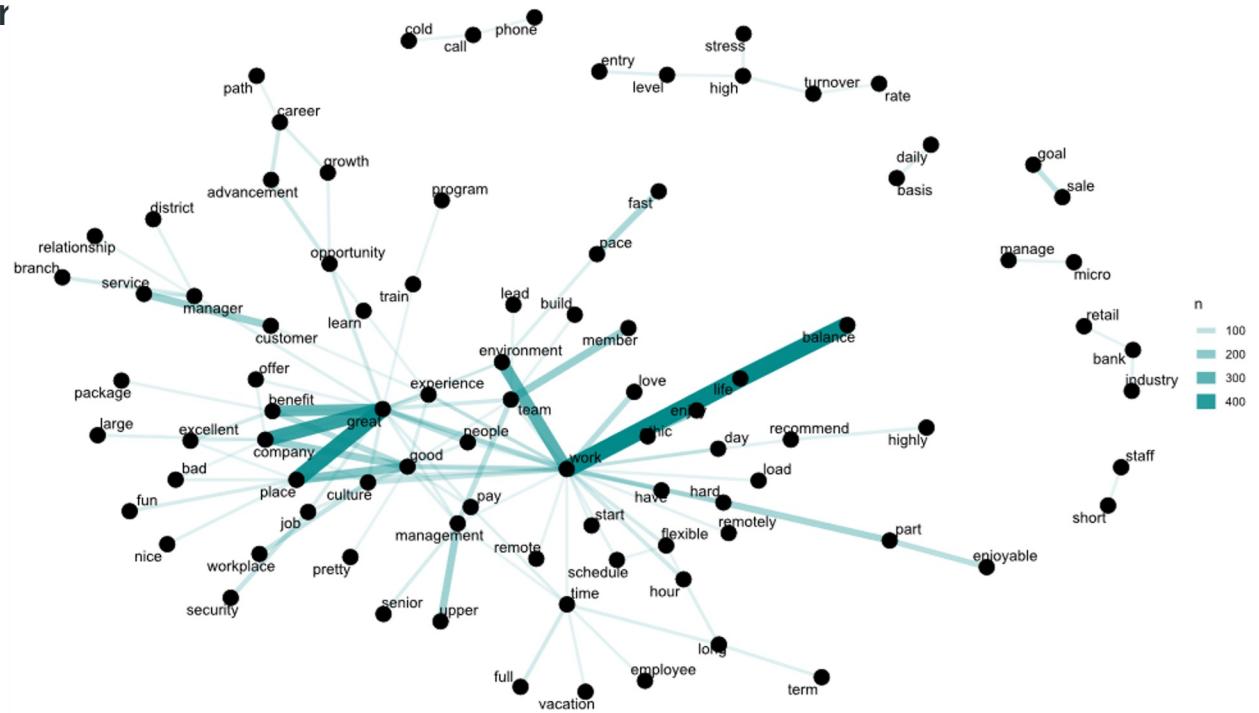
#### Outliers and Influential Values:

- The six observations were removed from model,
- Regression model was adjusted for the six observations.
- No significant differences were found** in the two model, thus, the observations were kept back in the model.

Variables	Model 1	Model 2
job_level1	0.0754	0.0763
standard error.1	0.0839	0.0842
job_status1	0.4485	0.4524
standard error.2	0.0730	0.0732
covid1	-0.2107	-0.2043
standard error.3	0.0840	0.0844
polarity2	0.3371	0.3105
standard error.4	0.1903	0.1917
polarity3	0.2710	0.2086
standard error.5	0.1163	0.1168
emotional_valence	3.6599	3.8589
standard error.6	0.2426	0.2467
subjectivity	0.1460	0.2148
standard error.7	0.2120	0.2137
topic2	0.2057	0.2308
standard error.8	0.1351	0.1360
topic3	-0.1198	-0.4675
standard error.9	0.1254	0.1260
topic4	-1.5139	-1.5251
standard error.10	0.1163	0.1171
topic5	-0.8551	-0.8664
standard error.11	0.1241	0.1248
topic6	0.1730	0.1636
standard error.12	0.1470	0.1479

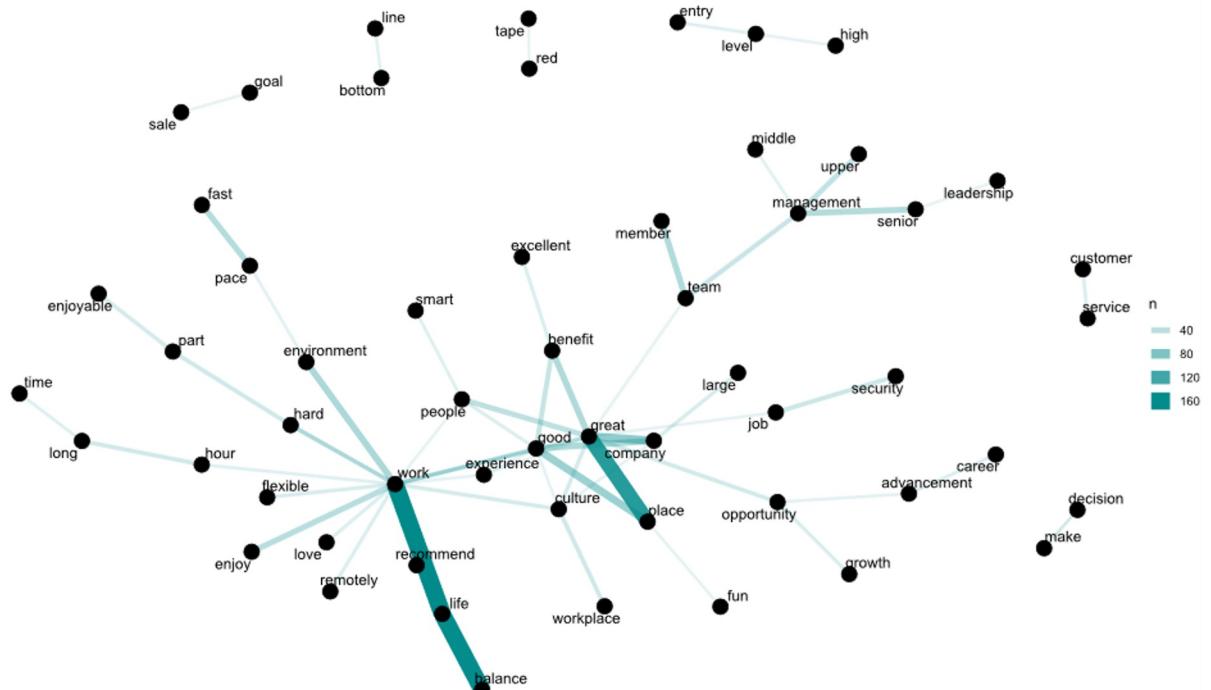
# APPENDIX

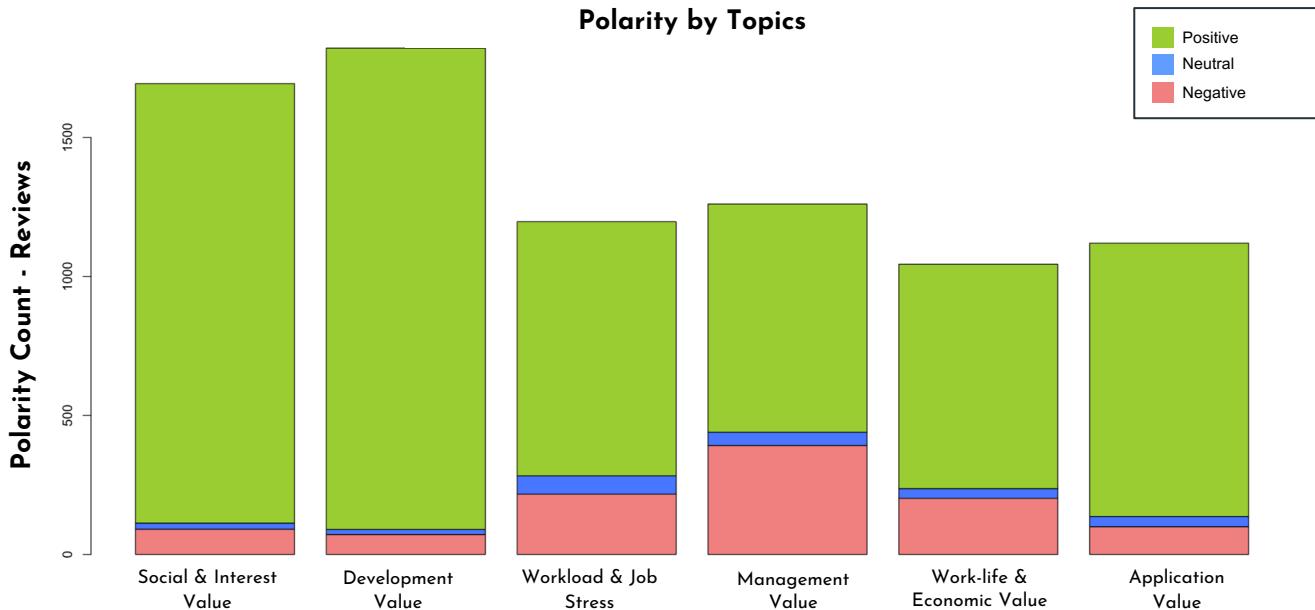
## An example Bigram used for In-depth understanding (Manager

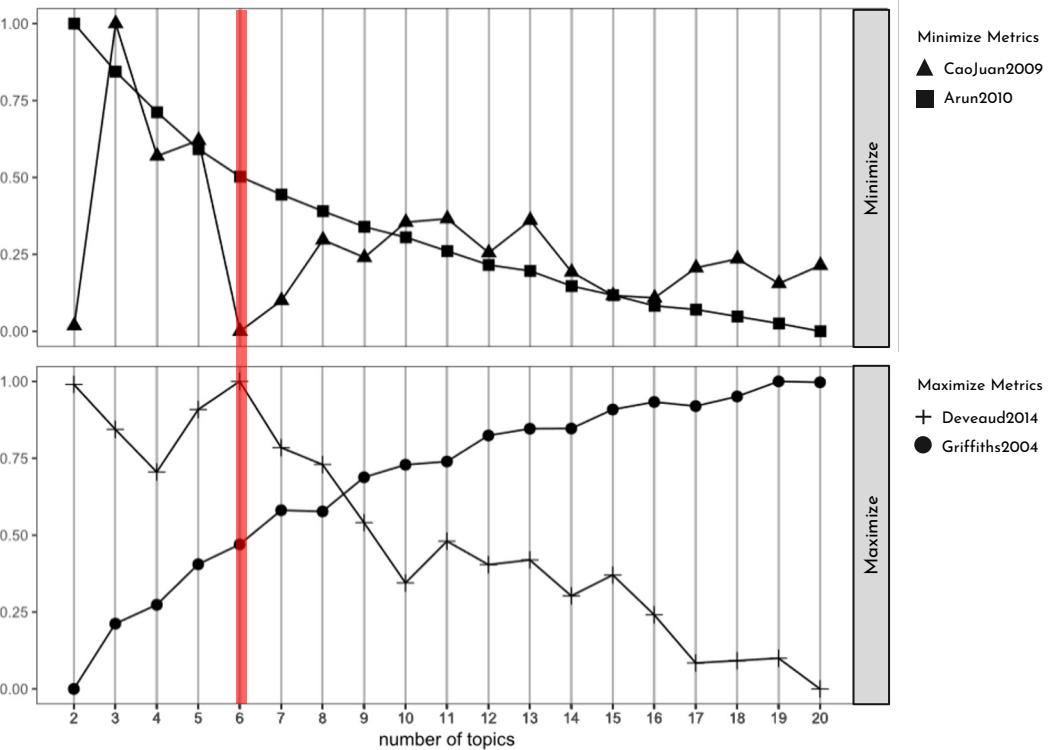


# APPENDIX

## An example Bigram used for In-depth understanding (Executive)

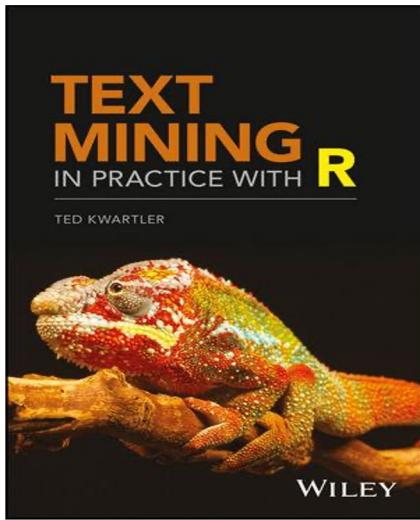






# APPENDIX

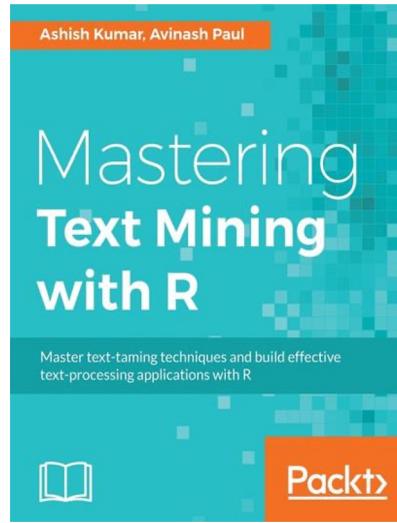
## Books referred to for Research Methodology/Data Analyses



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