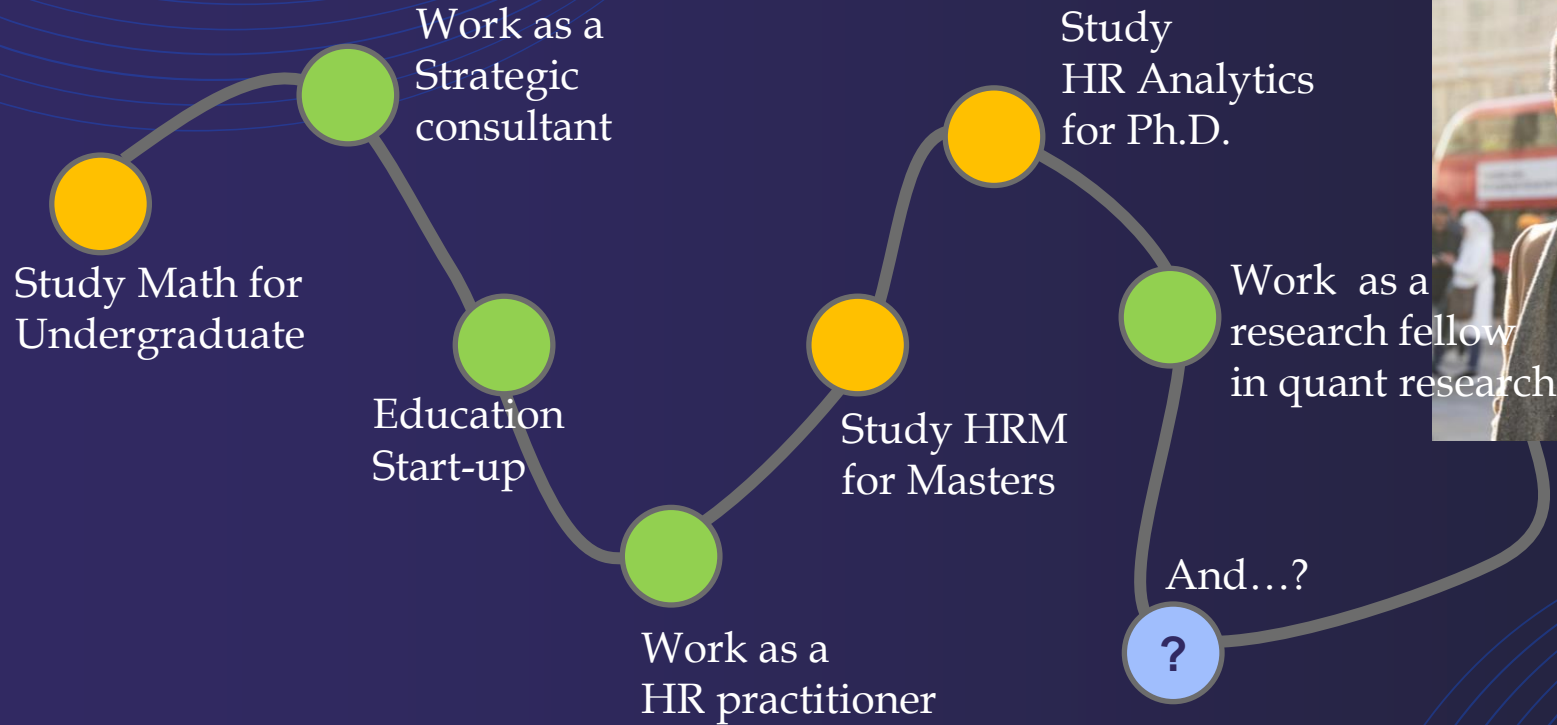# The global HR Analytics landscape and considerations for introducing HR Analytics

Jaejin Lee

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University of Leeds, England, UK

Who am I? - Career Journey

Study Math for Undergraduate

Work as a Strategic consultant

Education Start-up

Work as a HR practitioner

Study HRM for Masters

Study HR Analytics for Ph.D.

Work as a research fellow in quant research

And...?

?

You can expect the following from this presentation

☐ Definition of Human Resource Analytics(HRA) and its trends

☐ Changes in the perception of HRA by Korean HR practitioners

☐ Backgrounds of HR(People) Analytics leaders

☐ Requirements for HRA team members

☐ Exploration of organisations using Network Analysis

☐ Research/Project collaboration between Industry & Universities
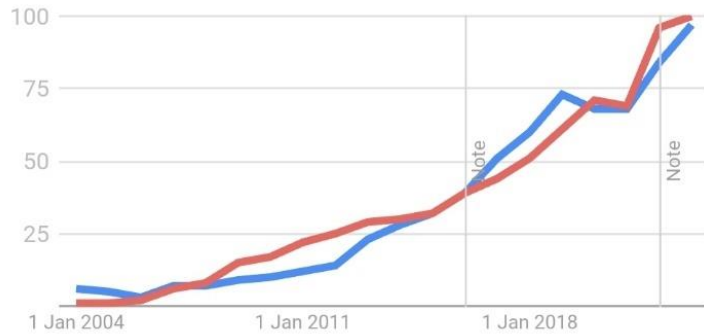
What is Human Resource Analytics?

"**HR Analytics (HRA)** is a holistically- and socially-constructed concept of emergent properties to pursue a data-driven decision-making process for better business outcomes in the field of HR"
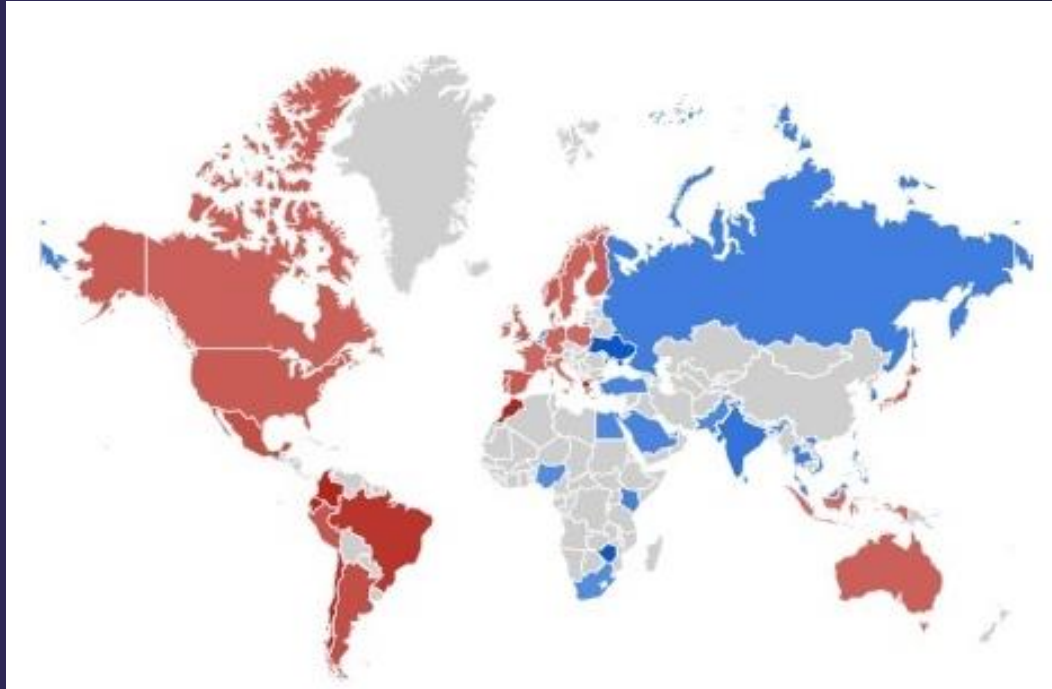

SODIUM CHLORIDE

$[Na]^+$ $[\ddot{C}l]^-$

Sodium ion   Chloride ion
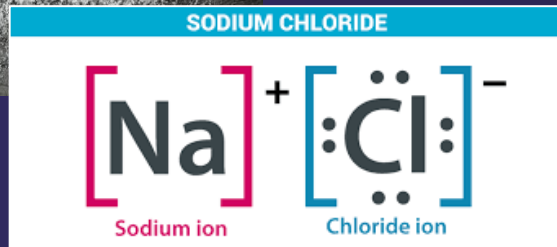
Trends on People Analytics versus HR Analytics

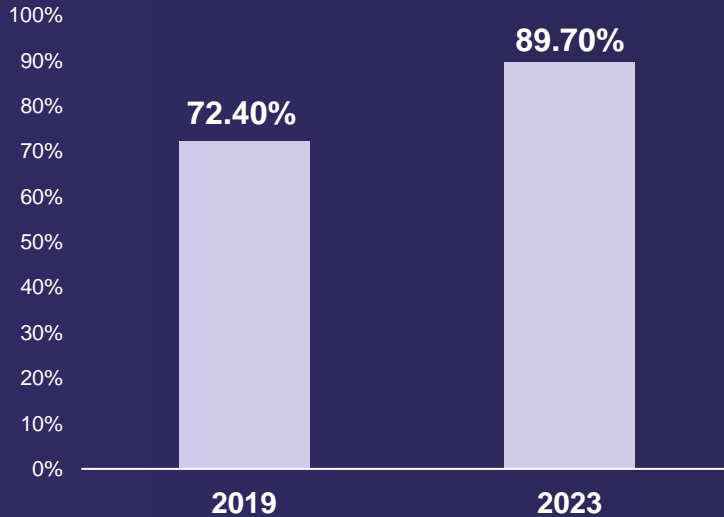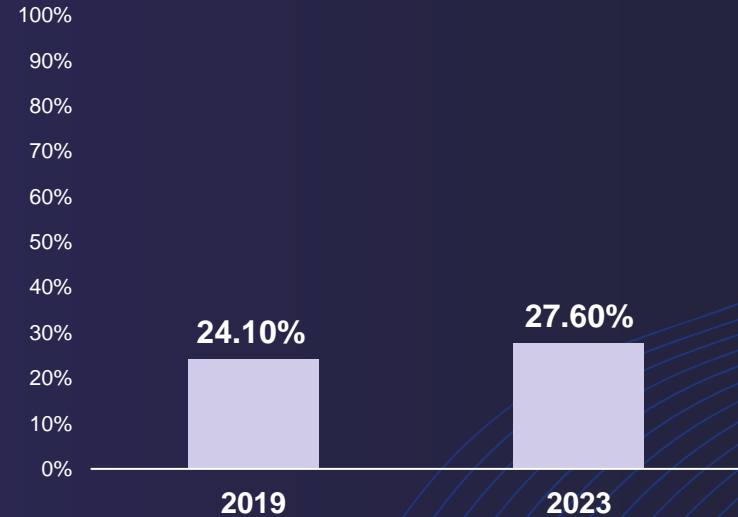
People Analytics (PA)   HR Analytics (HRA)

Changes in Korean HR practitioners' perception of HRA

I know HRA well and I can clearly explain the concept of HRA to my colleagues

- 2019: 72.40%
- 2023: 89.70%

**My organisation and leaders prefer data-driven decision-making over experience/intuition.**

- 2019: 24.10%
- 2023: 27.60%

Source: Random Sampling Survey from Korea HR professionals
(5-point Likert scale; n=129 in 2019; n=73 in 2023)

Changes in Korean HR practitioners' perception of HRA

My organisation has sufficient and reliable HR data (data quality)

Appr. x2

13.80%

24.10%

100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%

2019   2023
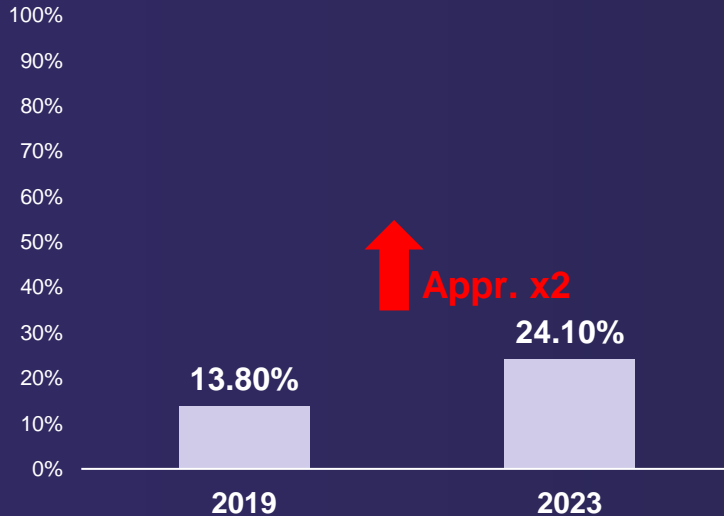
The organisation that I work utilises HR analytics sufficiently well

Appr. x2

6.90%

13.70%

100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%

2019   2023

Source: Random Sampling Survey from Korea HR professionals
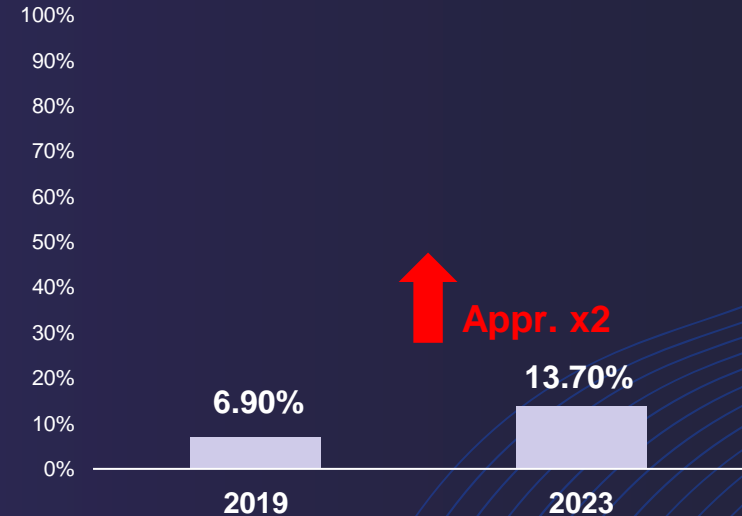*(5-point Likert scale; n=129 in 2019; n=73 in 2023)*

Changes in Korean HR practitioners' perception of HRA

The biggest factors that hinder the positive implementation of HR analytics

in my company are as follows. (Note. Duplicate answers allowed)

2019

1. Lack of data (69.6%)
2. Lack of data analysis capabilities/skills (60.9%)
3. Lack of project sponsors (56.5%)

2023

1. Lack of data (69.0%)
2. Lack of data analysis capabilities/skills (65.5%)
3. Lack of awareness of data analysis (55.2%)
4. Lack of project sponsors (51.7%)

What do they have in common?

Kathleen Hogan

CHRO at Microsoft
8 years as CHRO
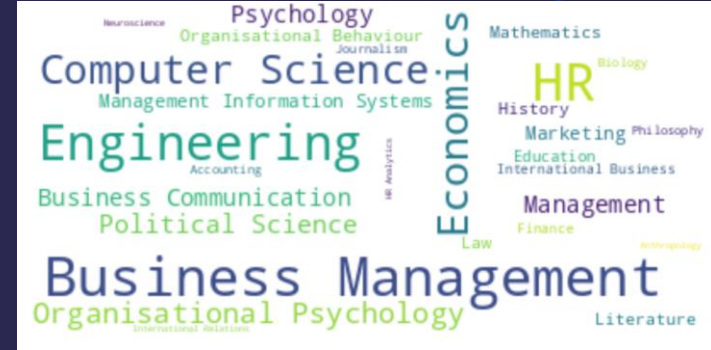**Studied Applied Mathematics**

Leena Nair

Global CEO at CHANEL
Former CHRO at Unilever
5 years as CHRO

Studied Electric Engineering

What background do HR(People) Analytics leaders have?

Career Background

1st	**HR (30%)**
2nd	**HR System (18%)**
3rd	**Business Consulting (17%)**
4th, 5th	**HR Consulting (7%), Management (7%)**
6th	**HR Analytics (4.5%)**

Academic Background (major)

1st	**Business Management (12%)**
2nd	**HR (11%)**
3rd	**Engineering (10%)**
4th	**Economics (7%)**
5th	**Computer Science (7%)**

What Career Background Do People Analytics Leaders Have?
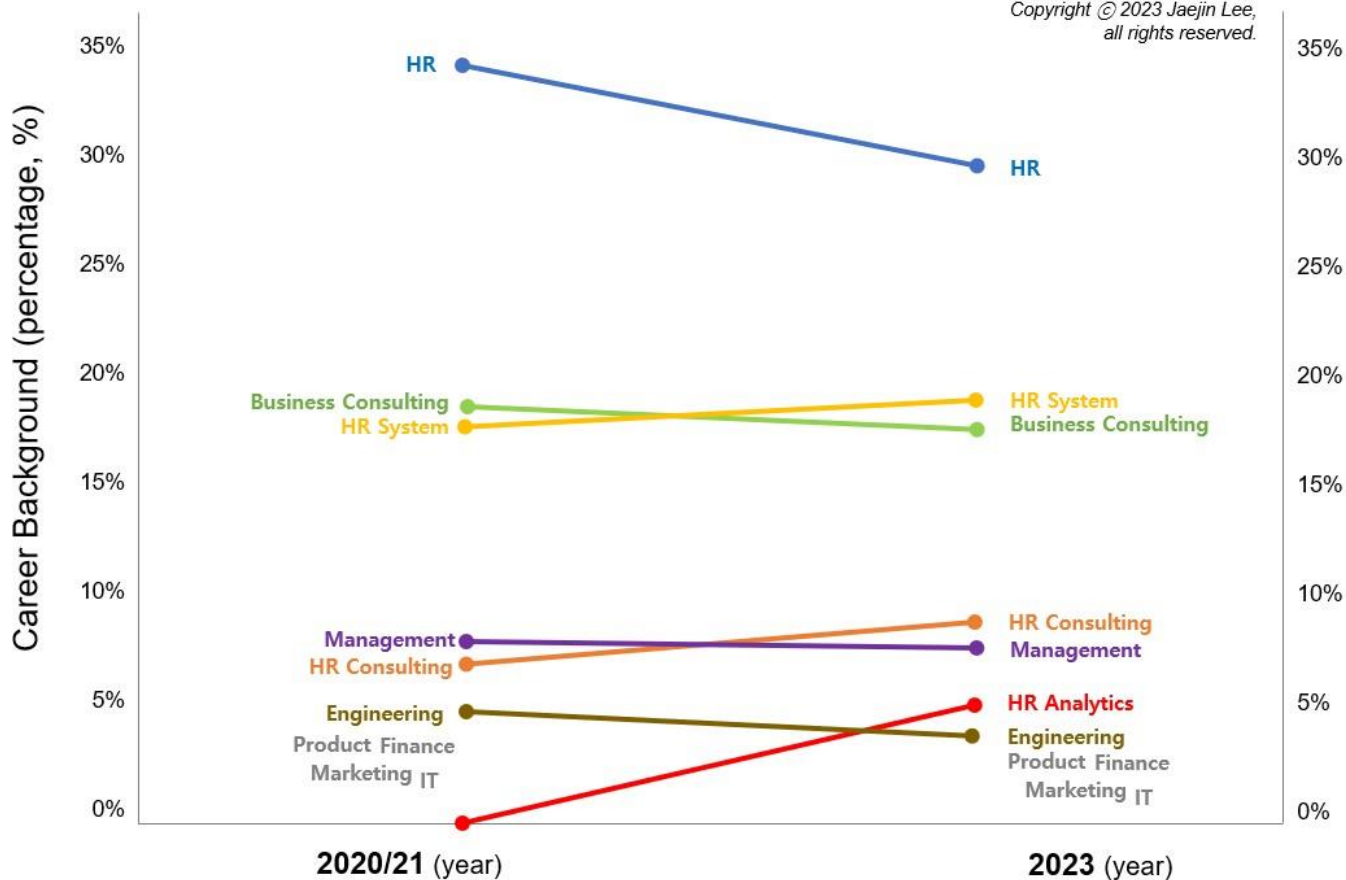
What **Academic Background** Do People Analytics Leaders Have?

Academic Background (percentage, %)

2020/21 (year) — **2023** (year)

Business Management → Business Management
HR → HR
Economics → Engineering
Engineering → Economics
Organisational Psychology → Computer Science
Psychology → Organisational Psychology
Computer Science → Psychology

Marketing, History, Mathematics, Business Communication, Political Science, Management Organisational Behaviour, Management Information Systems, Law, Education, Finance, Literature, International Business

Two Experts! (minimum)

- Understanding of overall HR functions, such as recruitment, compensation, assessment, onboarding etc.
- Ability to recognise what the important business issues are.
- Broad understanding of the company's internal history.
- Extensive individual network with key stakeholders in the company.
- Experience of the data analysis project process (albeit indirectly).
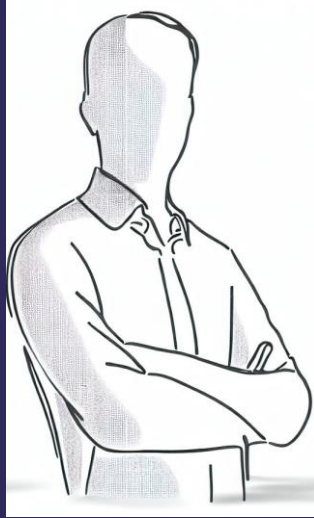
HR professional

Data Analyst

- Knowledge and skills in statistics and data analysis.
- Ability to report analysed data from the other's perspective.
- Wide range of interests and understanding of HR tech solutions.
- Capabilities to utilise various analysis methodologies.
- Understanding of the data analysis process through collaboration.
- Other than data analysis experience, has also experienced business and HR processes (albeit indirectly).

Advanced analysis method – Network Analysis

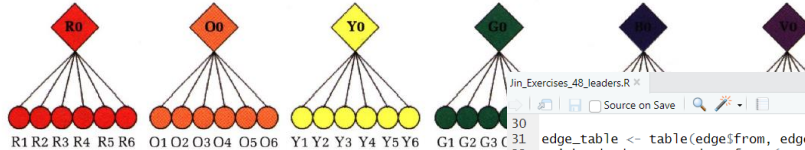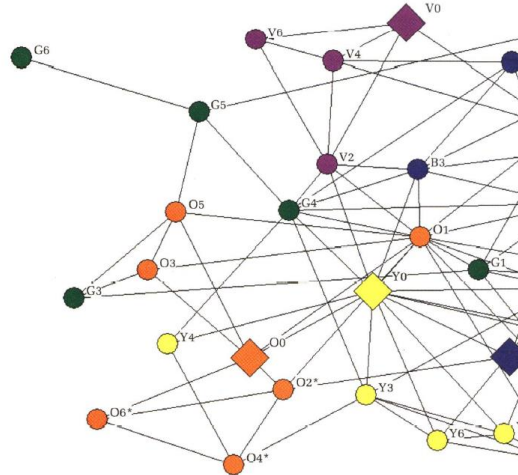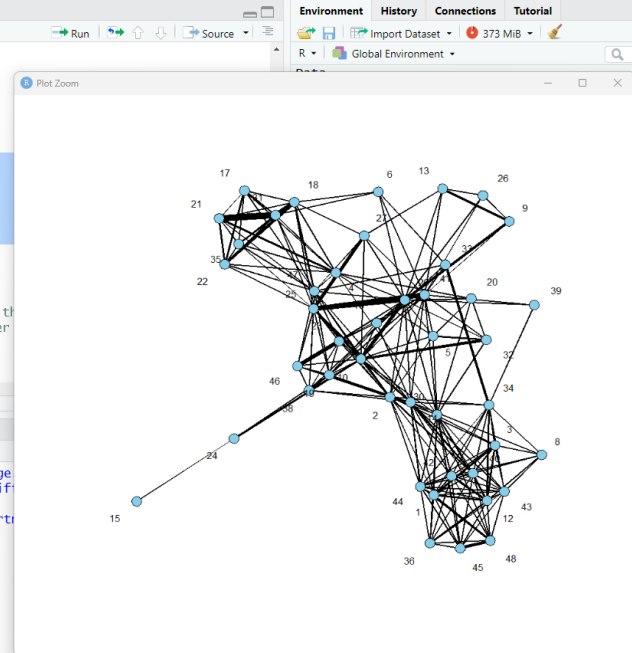FIGURE 1
A Typical Organizational Chart for a 6 × 7 Division

R0 O0 Y0 G0 B0 V0

R1 R2 R3 R4 R5 R6   O1 O2 O3 O4 O5 O6   Y1 Y2 Y3 Y4 Y5 Y6   G1 G2 G3

FIGURE 2
A Social Network Map for a 6

Note: Diamonds represent supervisors; circles represent frontline employees;

```
Jin_Exercises_48_leaders.R
                                  Source on Save                      Run    Source

30
31  edge_table <- table(edge$from, edge$to)
32  weighted_edge <- as.data.frame(as.table(edge_table))
33  colnames(weighted_edge) <- c("from", "to", "weight")
34  head(weighted_edge)
35
36  net <- network(edge, directed = FALSE, loops = FALSE, multiple = TRUE)
37
38  set.seed(123)
39  gplot(net, gmode="graph", displaylabels=TRUE,
40        edge.lwd=weighted_edge$weight,
41        vertex.cex=0.8,
42        label.cex=0.8,
43        vertex.col="skyblue")
44
45  ###
46  # Degree Centrality: The degree of a node is the number of links it has. It's equal to th
47  # Betweenness Centrality: A measure of a node's centrality in a network. It's equal to t
48  # Closeness Centrality: A measure of the degree to which an individual is near all other
49  # Eigenvector Centrality: A measure of the influence of a node in a network.
50
51  # 1. Degree Centrality
52
28  (Top Level)
```

```
Terminal   Background Jobs

R 4.2.0 · ~/Desktop/2023.09.11 Network Analysis Workshop/★WB personal project/
# "Set3": This is the name of one of the color palettes available in the RColorBrewer package
# "Set3" provides distinct colors suitable for categorical data, which makes it ideal for dif
plot(net, vertex.col = colors[net %v% "department"], main = "Leaders' Relationships by Depart
average_degree_by_department <- tapply(degree(net), net %v% "department", mean)
print(average_degree_by_department)
         0        1        2        3        4        5        6        7
 .00000 53.80000 23.33333 44.66667 16.66667 32.75000 20.00000 26.00000
set.seed(123)
gplot(net, gmode="graph", displaylabels=TRUE,
      edge.lwd=weighted_edge$weight,
      vertex.cex=0.8,
      label.cex=0.8,
      vertex.col="skyblue")
```

Environment   History   Connections   Tutorial
Import Dataset   373 MiB
R   Global Environment

Plot Zoom

*Hollenberk, J. & Jamieson, B. (2015). Human Capital, Social Capital, and Social Network Analysis. Implications for Strategic HRM
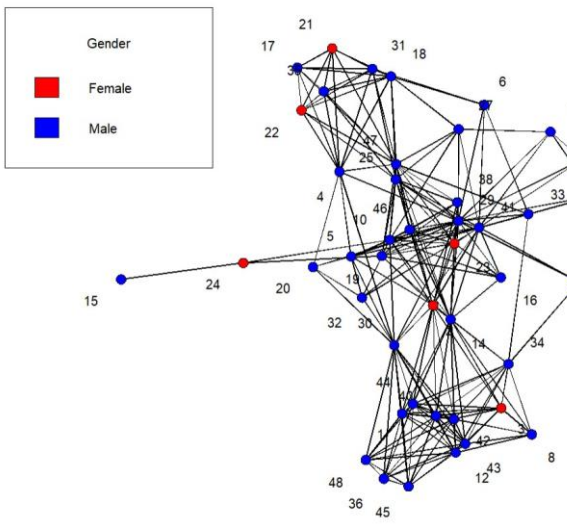
Advanced analysis method – Network Analysis

Leaders' Relationships by Department
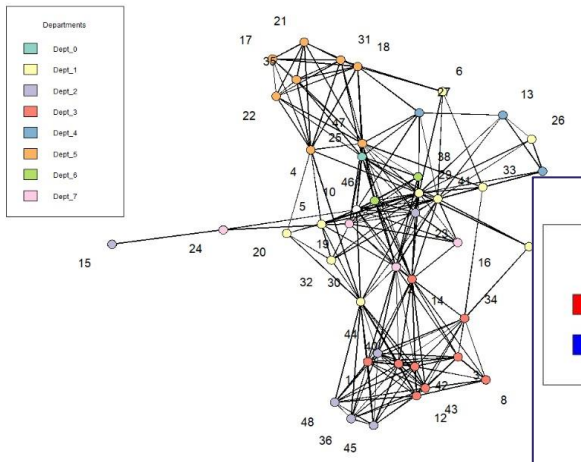
Leaders' Relationships by Gender

Leaders' Relationships by Position
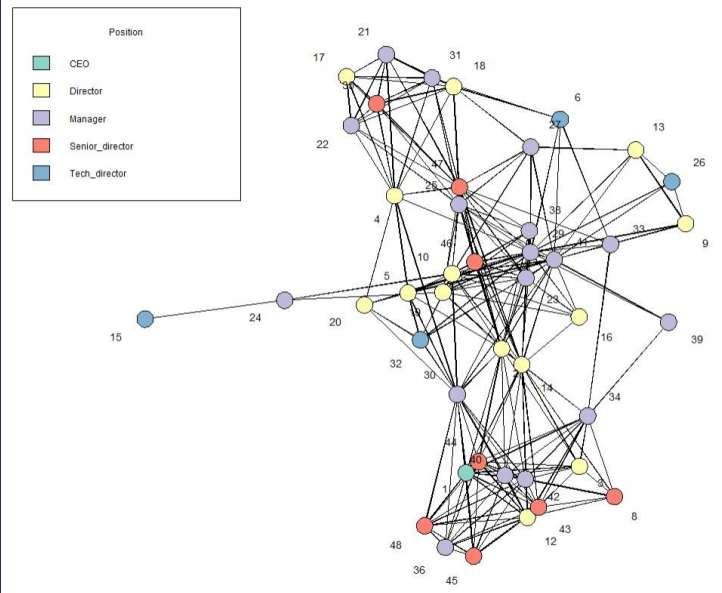
Industry-University Collaboration Research

Is 4-day work policy profitable?

- took place in the UK from June to December 2022
- comprising **61 companies** and around 2,900 workers
- companies' revenue stayed broadly the same, rising by 1.4% on average.
- declined 57% in the likelihood that an employee would quit, dramatically improving job retention.
- 65% reduction in the number of sick days
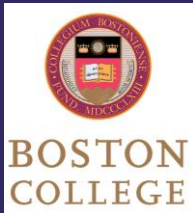
Are Diversity, Equity, Inclusion and Belonging (DEIB) related to employees' performance?

national highways

highways england

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Leeds University Business School

*Source: The Result Are In: The UK's Four-day Week Pilot (2023)

*Collection of
HR analytics
learning materials (Korean)

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