

IDENTIFY KEY BOARD MEMBERS

STARTUP COMPANY SALES

DEF 14A filings from US companies

A person in a dark suit is seen from behind, sitting on a rooftop ledge. They are looking out over a dense city skyline, likely New York City, with many skyscrapers visible. The sky is filled with soft, golden light from a low sun, creating a hazy, atmospheric effect. The person's reflection is visible on the surface they are sitting on.

ANALYSIS PURPOSE

The purpose of this analysis project is to identify key board members who have connections with potential buyers, thereby selling the company, Morris Inc. PLC.

Two datasets extracted from DEF 14A fillings from US companies and one complementary dataset were analyzed for this purpose, particularly using network analysis and clustering techniques.

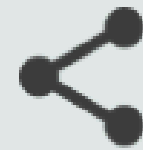
WHO ARE KEY BOARD MEMBERS?

NETWORK CENTRALITY

There are three network centrality measures

- Degree centrality
- Eigenvector centrality
- Betweenness centrality

WHICH CENTRALITY IS IMPORTANT?



Degree centrality measure is significant in identifying individuals who have broad networks



Eigenvector centrality measure is significant in identifying individuals who hold influential decision-making power



Betweenness centrality measure is significant in identifying potential brokers who can assist with selling the company

KEY MEMBER LIST 1

name	eigen	degree	age	log_compensation	company_name
BETH ANN BROWN	1.024389e-01	0.001585	56	6.803717	Invesco Advantage Municipal Income Trust II
STEVEN L. PACKEBUSH	3.256530e-07	0.000244	59	5.565864	LSB INDUSTRIES, INC.
MARRAN H. OGILVIE	3.250755e-07	0.000244	55	5.368631	Accelerate Diagnostics, Inc
MICHAEL J. HAPPE	3.210636e-07	0.000244	53	5.397942	FULLER H B CO
ROBERT E. ROBOTTI	1.148967e-09	0.000366	71	5.474181	AMREP CORP.
LEE M. CANAAN	1.147030e-09	0.000244	67	5.739419	EQT Corp
JOHN H. PINKERTON	1.146951e-09	0.000244	70	5.277742	PHX MINERALS INC.
M. JAY ALLISON	2.030343e-12	0.000244	68	6.996343	COMSTOCK RESOURCES INC
DICK FAGERSTAL	2.026920e-12	0.000244	63	5.507734	TIDEWATER INC
MARK W. SHEAHAN	1.919811e-12	0.000244	61	6.931258	GRACO INC
ANDREW K. SILVERNAIL	9.803617e-13	0.000244	54	7.324205	INTERNATIONAL PAPER CO /NEW/
KEVIN A. LOBO	9.803616e-13	0.000244	59	5.534092	Parker-Hannifin Corp
GIOVANNI CAFORIO, M.D.	9.803350e-13	0.000244	60	5.842350	BRISTOL MYERS SQUIBB CO
SHERI H. EDISON	9.801907e-13	0.000244	68	5.547510	CARDINAL HEALTH INC
AKHIL JOHRI	9.785471e-13	0.000244	63	5.588195	BOEING CO
DONALD R. PARFET	9.750886e-13	0.000244	71	5.732436	KELLY SERVICES INC
JAI SHAH	9.750715e-13	0.000244	58	5.527385	LEGGETT & PLATT INC
JOHN P. WIEHOFF	9.599169e-13	0.000366	63	5.775937	DONALDSON Co INC
JEFFREY C. CAMPBELL	9.583449e-13	0.000244	64	5.860222	Aon plc
DMITRI L. STOCKTON	6.791593e-15	0.000488	60	6.000030	DEERE & CO

TOP 20 Board Members

High eigenvector and degree centrality



The result shows key board members from different companies to contact for making connections with potential buyers. They have broad networks and significant impact on decision-makings.

name	betweenness	age	log_compensation	company_name
KERRI B. ANDERSON	0.030179	66	5.743909	LANCASTER COLONY CORP
PAUL D. DONAHUE	0.028527	68	6.916454	GENUINE PARTS CO
MARK A. BLINN	0.026345	63	5.774499	EMERSON ELECTRIC CO
MICHAEL J. HAPPE	0.025681	53	5.397942	FULLER H B CO
ALEXIS M. HERMAN	0.025558	74	5.823533	COCA COLA CO
DONNA W. HYLAND	0.022467	64	5.736612	COUSINS PROPERTIES INC
LINNIE M. HAYNESWORTH	0.021011	67	6.012356	AUTOMATIC DATA PROCESSING INC
J. STEVEN WHISLER	0.020681	70	5.856627	BRUNSWICK CORP
ALEXIS P. MICHAS	0.019988	67	5.758138	ALLIENT INC
MICHAEL H. KEOWN	0.019078	62	5.327373	FARMER BROTHERS CO
ALVARO GARCIA-TUNON	0.018649	71	5.544069	OWS INTERNATIONAL CORP
BRADLEY D. TILDEN	0.018643	63	5.644788	Matson, Inc.
DICK FAGERSTAL	0.018235	63	5.507734	TIDEWATER INC
SHARON A. DECKER	0.018121	68	5.505355	Coca-Cola Consolidated, Inc.
THOMAS L. WILLIAMS	0.018034	65	5.415799	GOODYEAR TIRE & RUBBER CO /OH/
CHARLES L. SZEWS	0.017995	68	5.773050	CACI INTERNATIONAL INC /DE/
LAWRENCE L. GELLERSTEDT III	0.017642	68	5.380092	BROWN & BROWN, INC.
EDWARD A. KANGAS	0.017018	80	5.609578	HOVNANIAN ENTERPRISES INC
MITCHELL I. QUAIN	0.016948	72	5.127050	AstroNova, Inc.
MARTIN MUCCI	0.016878	64	5.997455	CINTAS CORP

KEY MEMBER LIST 2

TOP 20 Board Members

High betweenness centrality



The result shows board members from different companies who can play as brokers. They may offer various options to sell the company. They have significant influence in their networks.

CONNECTABLE COMPANIES

M&A relationships may indicate
connections with potential buyers.

WHAT ARE ACQUIRED COMPANIES?



KEY MEMBER LIST 3

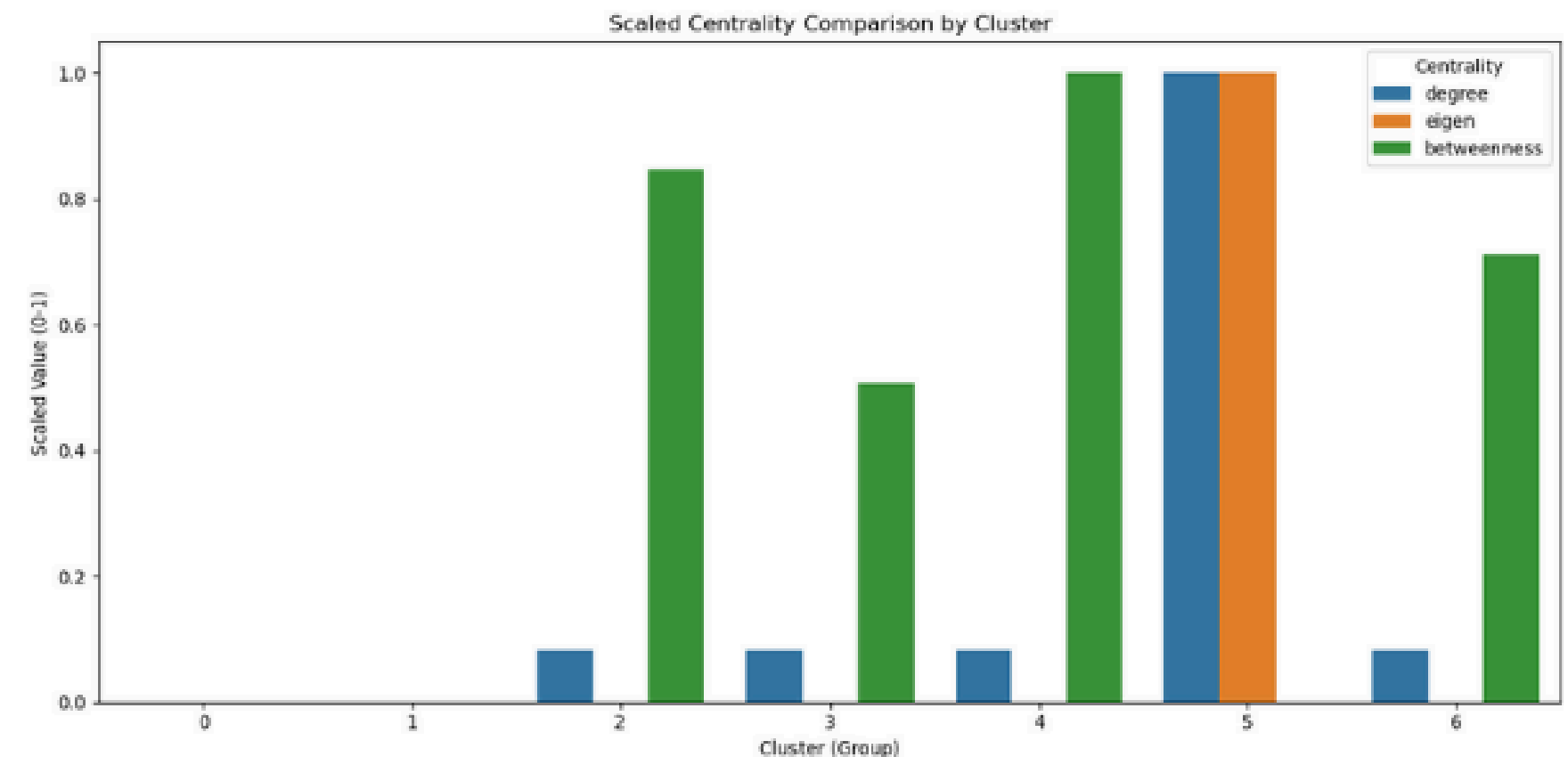
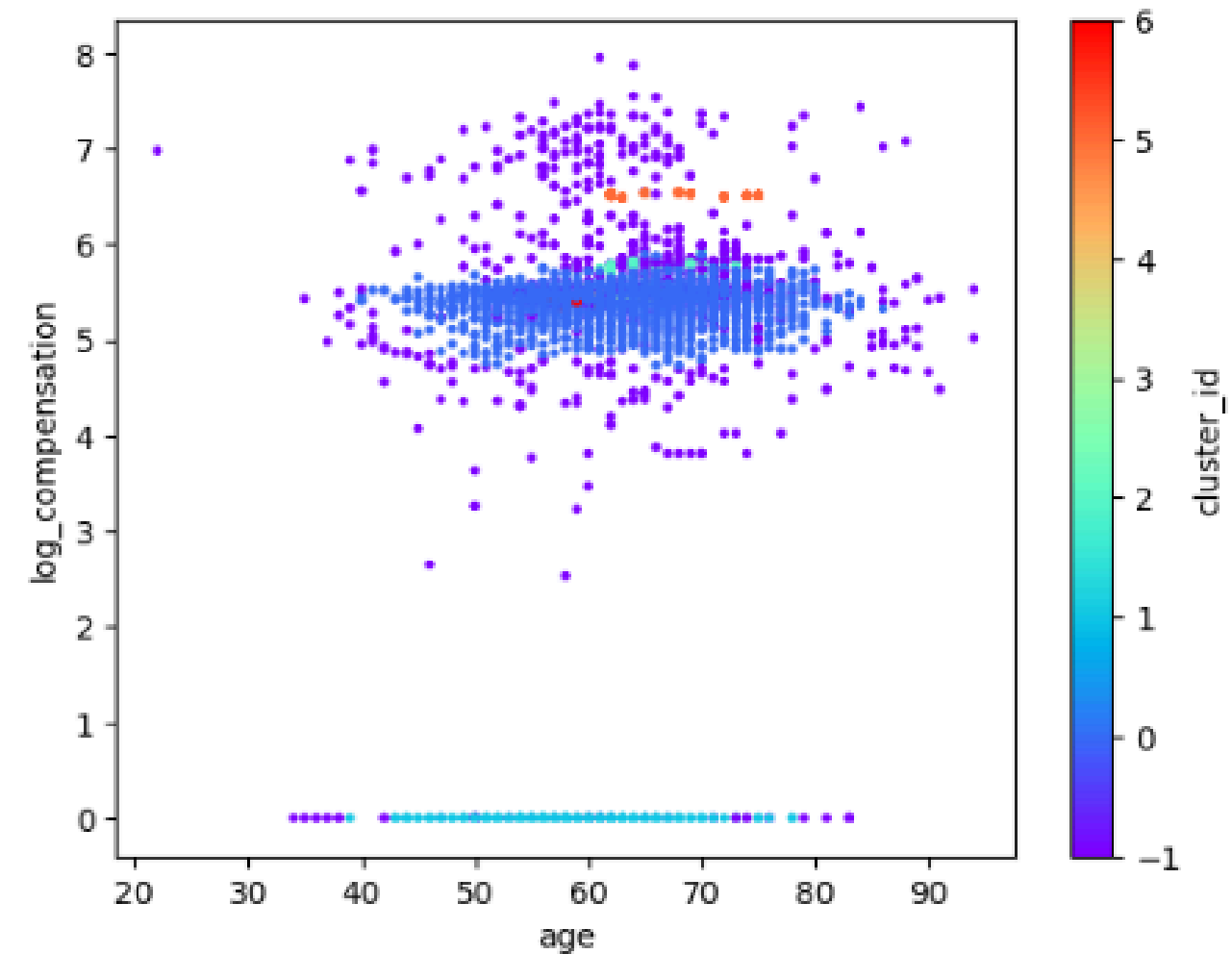
	Acquiring Company	Number of Acquisitions	Acquired Companies	Board Members
0	Apple	51	AlgoTrim, Anobit Technologies, AuthenTec, Beat...	RONALD D. SUGAR, ANDREA JUNG
1	Cisco Systems	162	Active Voice Corporation, Actona Technologies,...	ARUN SARIN, RODERICK C. MCGEARY
2	Dell	26	Acs (UK), Alienware, AppAssure Software, ASAP ...	SHANTANU NARAYEN
3	Facebook	49	Atlas Advertiser Suite, Beluga, Bolt Peters,...	DONALD E. GRAHAM
4	HP	88	3Com, 3PAR, ABB CADE, Apollo Computer, ApplQ, ...	PATRICIA F. RUSSO
5	IBM	121	Access360, Algorithmics, AlphaBlox Corporation...	DAVID M. THOMAS
6	Juniper Networks	10	Altor Networks, Ankeena Networks, Blackwave, C...	MERCEDES JOHNSON
7	Microsoft	136	90 Degree Software, ActiveViews, AdECN, Alacri...	DINA DUBLON
8	Symantec	17	@Stake, AppStream, Brightmail, Clearwell Syste...	SUZANNE M. VAUTRINOT
9	Verizon Communications	7	Alltel, CloudSwitch, EdgeCast Networks, Hughes...	CLARENCE OTIS JR.

The table shows key board members' companies and their acquired companies.
The key board members may lead to connections with the acquired companies that are potential buyers.

CLUSTERING

Eight groups were created with one noise group. Board members were grouped into distinct clusters that can be defined by centrality characteristics. The groups will offer various strategies depending on situations.

WHICH GROUP IS IMPORTANT?





Group 5



Group 2, 3, 4, 6



Group 0, 1

- The highest degree centrality
- The highest eigenvector centrality
- Broad networks
- Connections with influential individuals

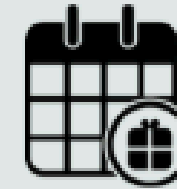
- Can play as brokers

- General members
- Low influence

SUPPORTIVE SELECTION CRITERIA

This analysis found three insights that are supportive in selecting board members to contact. Age, Gender, and Compensation can be supportive selection criteria.

WHAT ARE SELECTION CRITERIA?



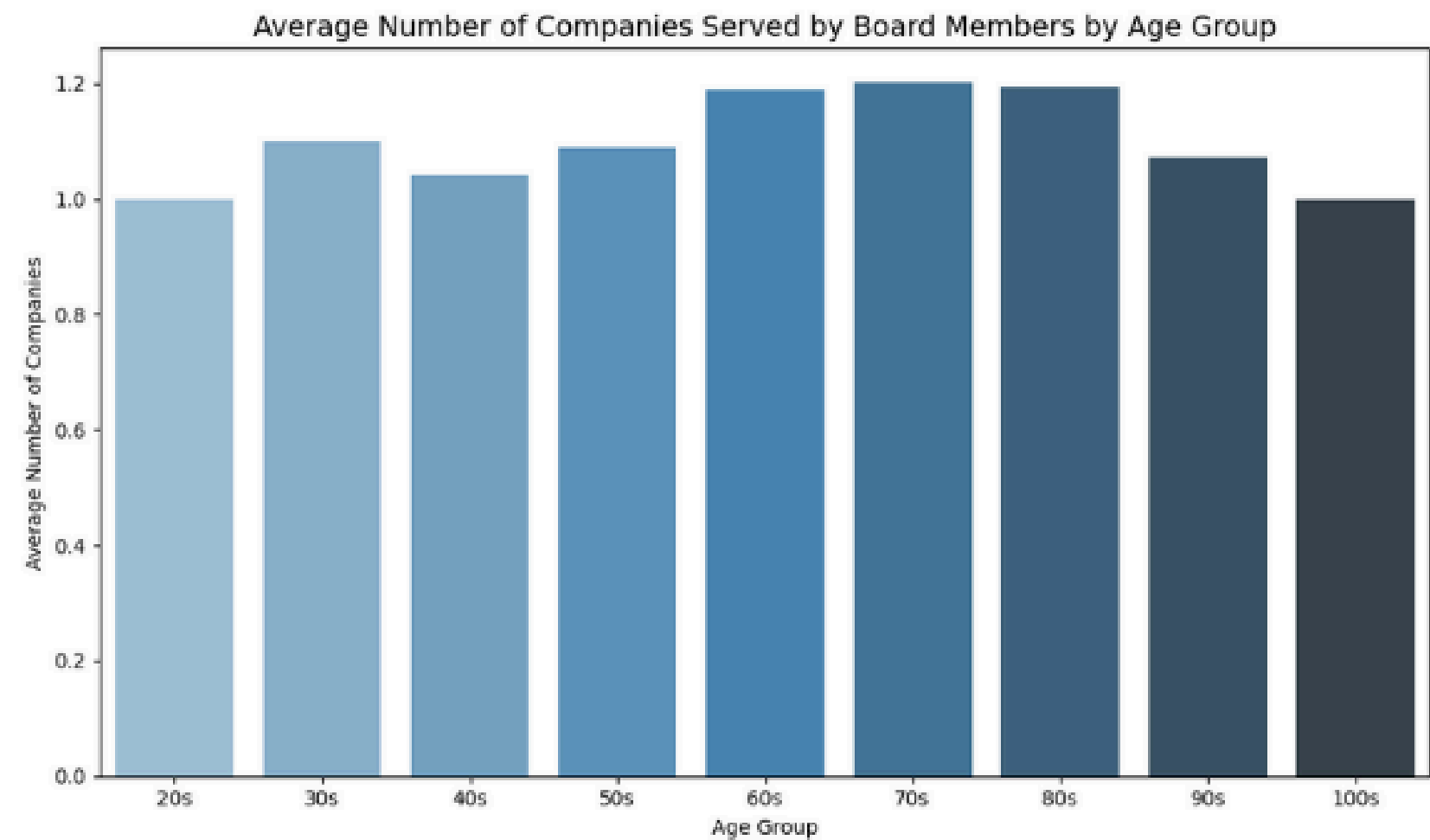
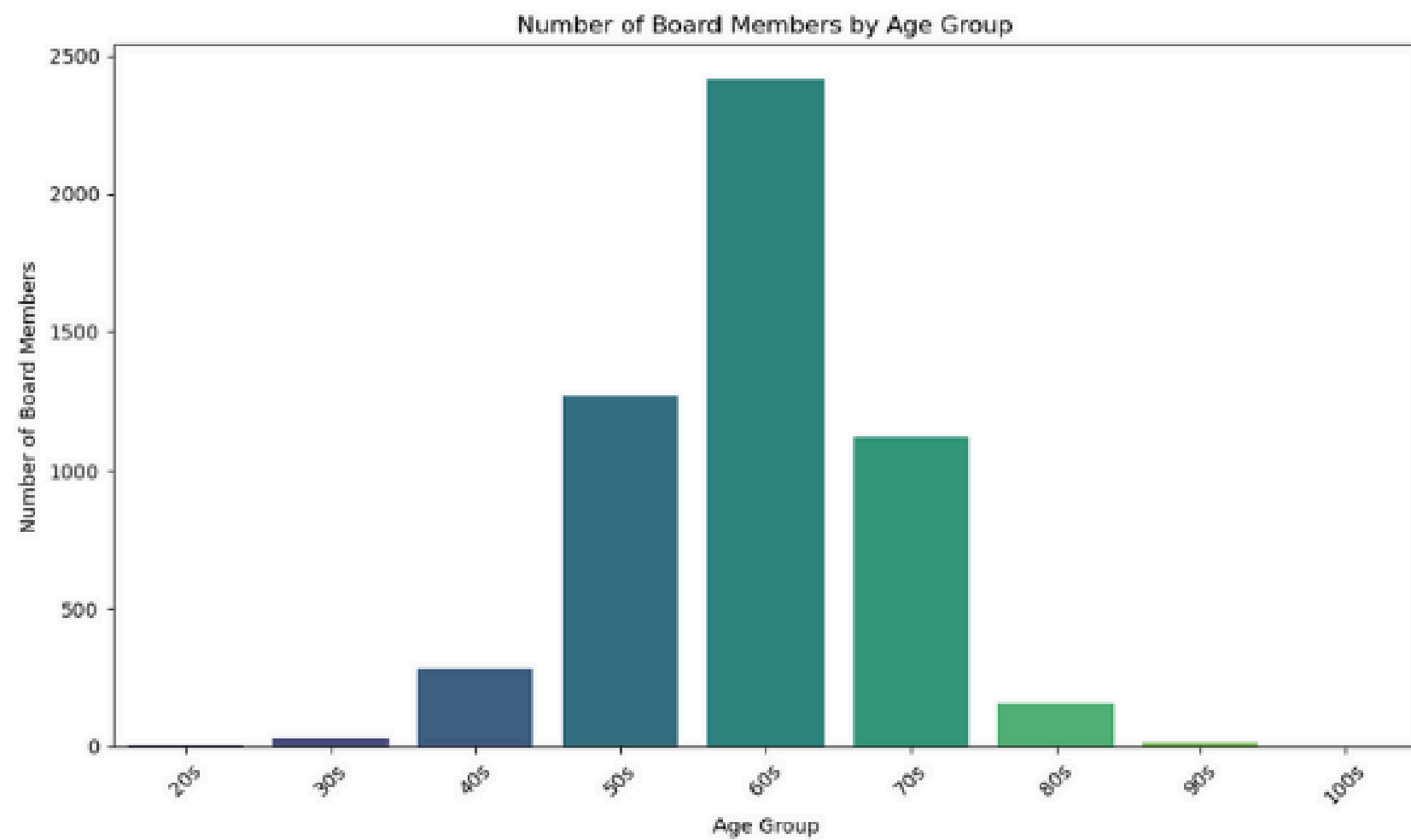
Association between age and
number of companies



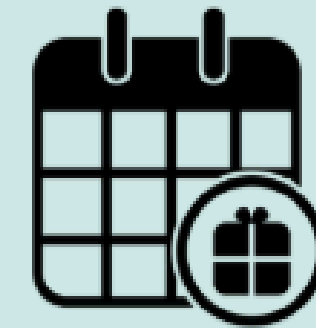
Centrality difference across gender



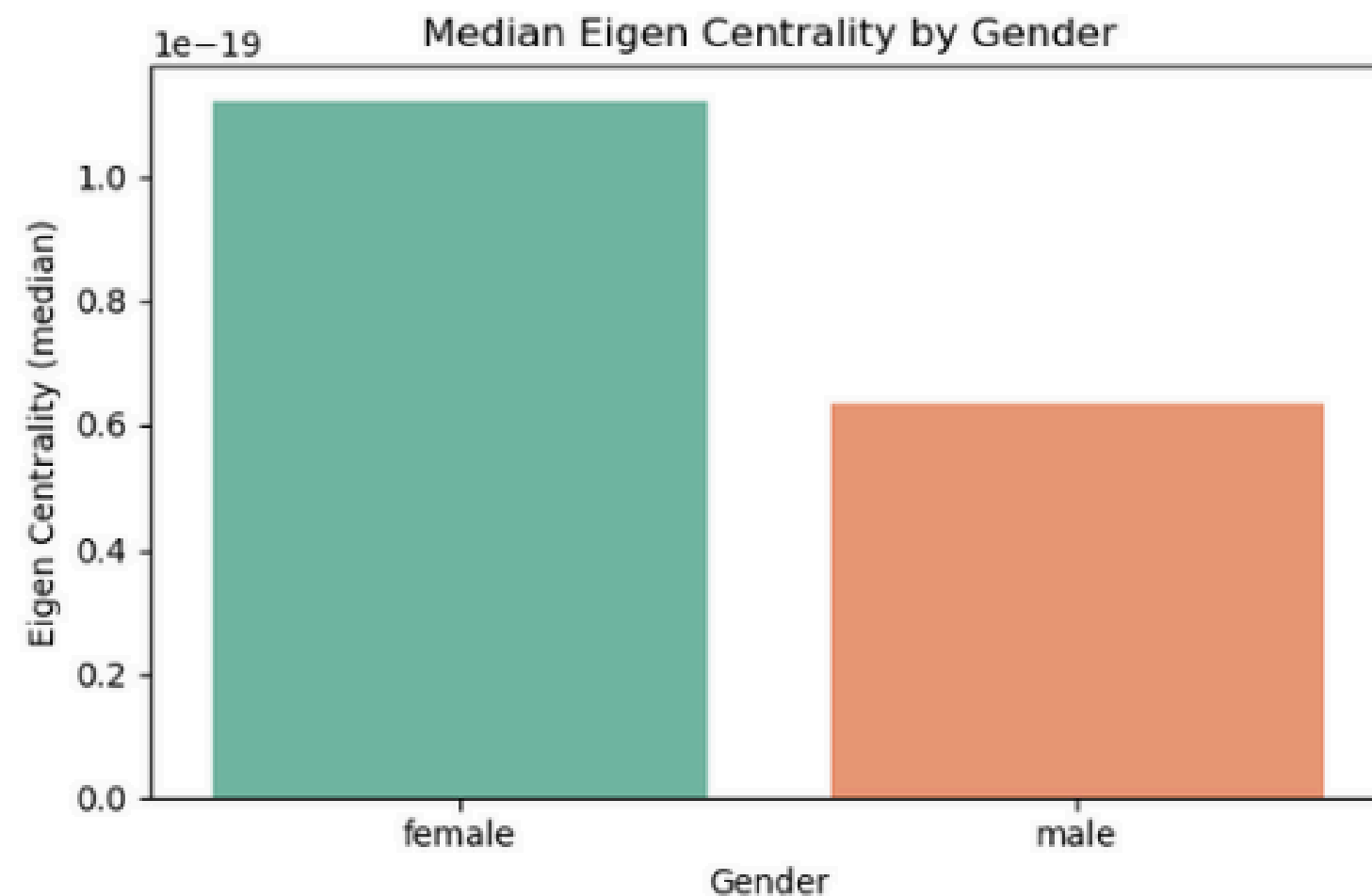
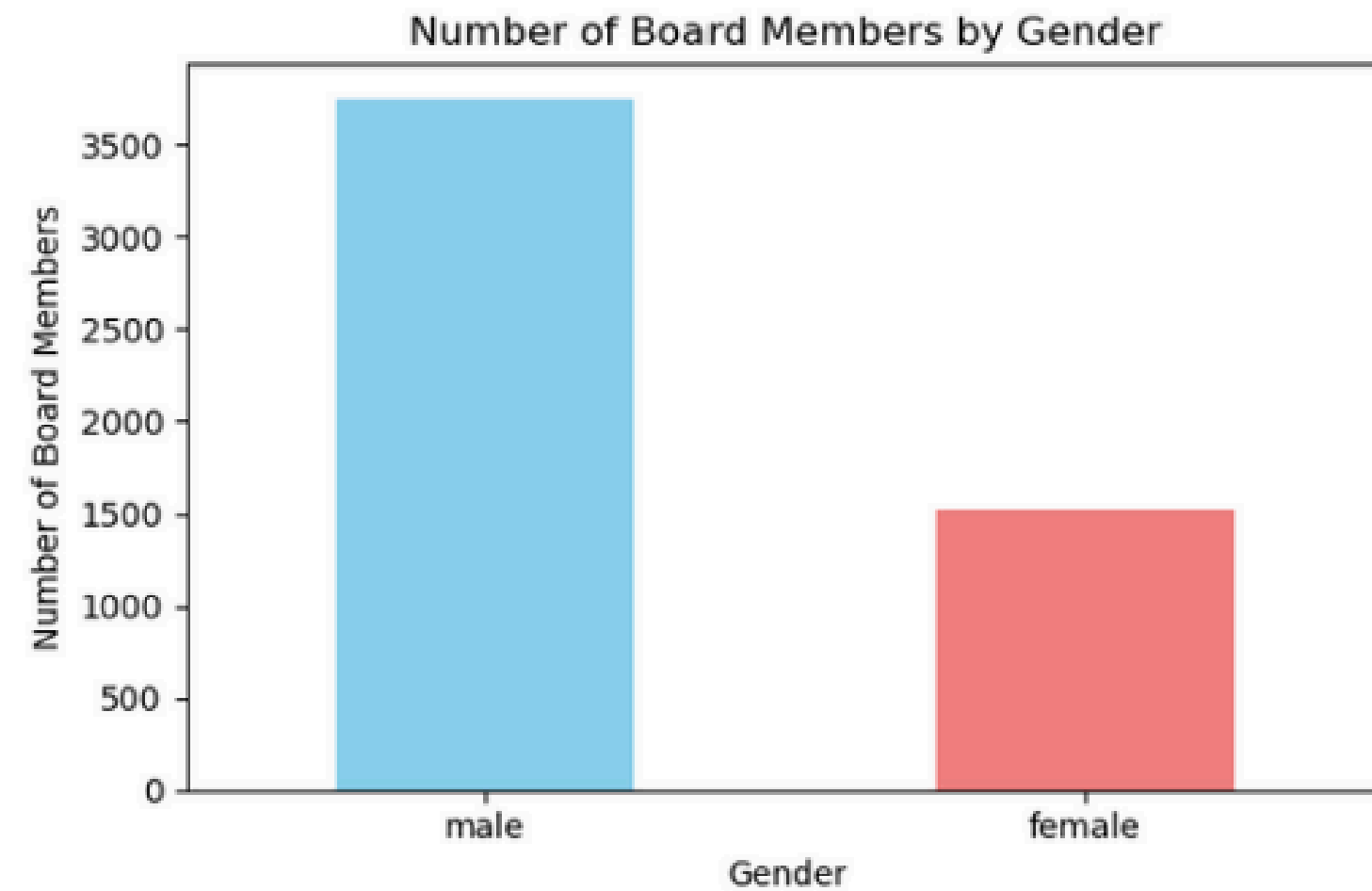
Asscoiation between compensation
and number of companies



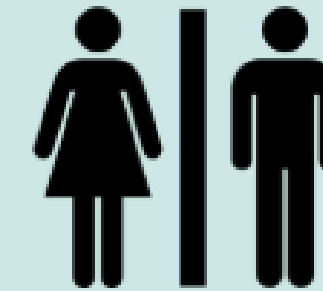
Age vs Number of Companies



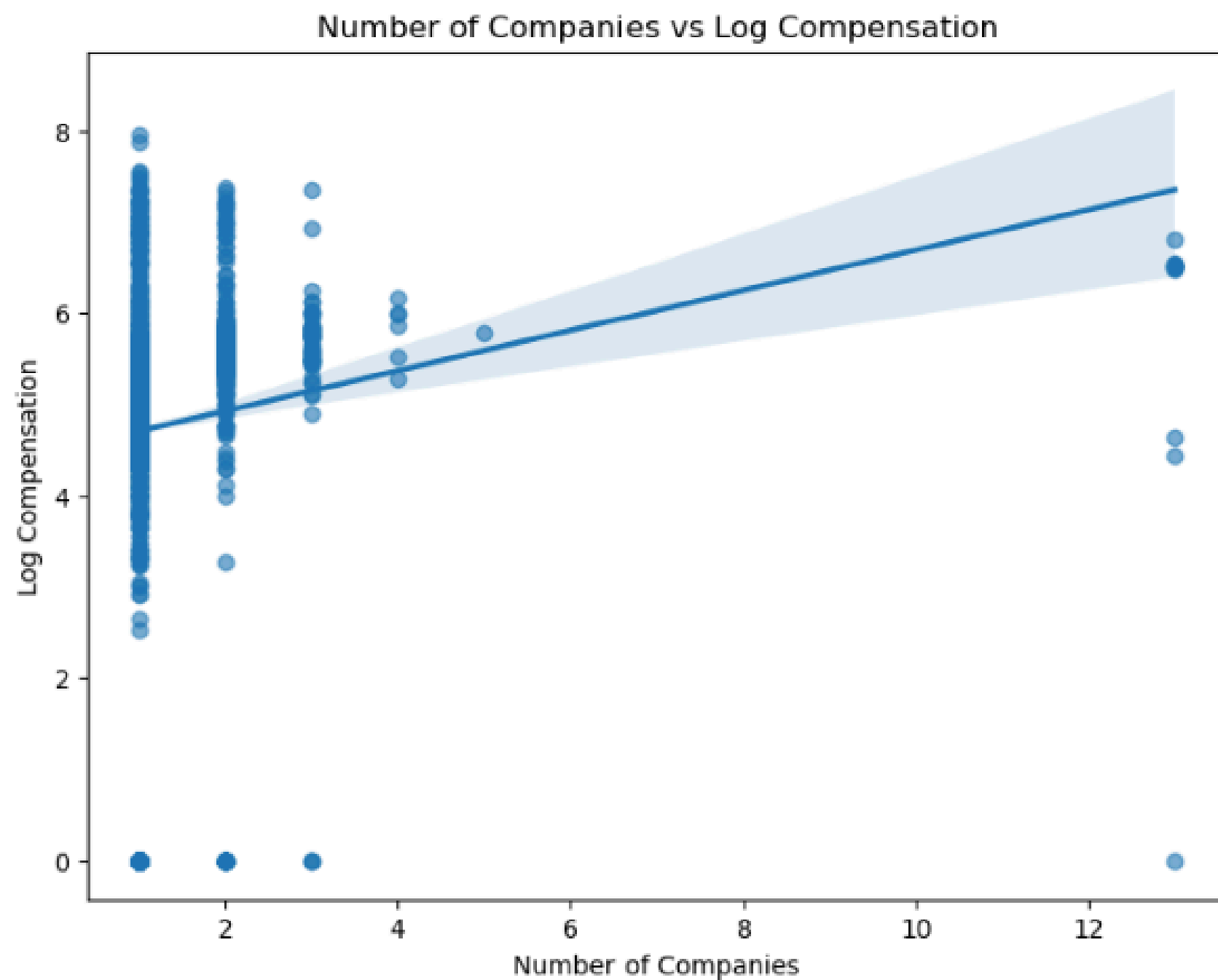
Board members aged between 60 and 79 serve at more companies, indicating there might be more opportunities to sell the company.



Gender vs Centrality



The median eigenvector centrality score for females is higher than that for the males. Female board members have more direct connections with influential individuals than male board members.



Compensation vs Number of Companies



There is a positive correlation between compensation and number of companies. In other words, board members with high compensations tend to serve at more companies.

SUMMARY

This analysis project identified three lists of key board members to contact who could support the sale of a startup company. Their centrality characteristics and their companies' M&A lists were the primary criteria for selection. Additionally, their age, gender, and compensation can be considered as supporting factors.