Donation Trends

of CA Campaigns, 2011-2016

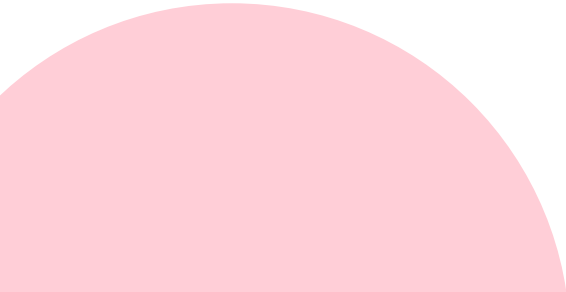Asha Dhakad and Rithika Devarakonda

Outline of Presentation

Introduction

- Polarization is increasing in many aspects of politics
- Networks of the top 50 donors to California's House and Senate campaigns, 2011-2016
- Which industries donate to which parties? Are these networks becoming more polarized?
- Data is aggregate donations to California's state legislative House and Senate elections 2011-2016 where actors are donors and edges mean both donated to the same political candidate from National Institute on Money in Politics (NIMP)

Literature Review

- Why California: influential, wealthy blue state with a wealth gap
- Labor groups mostly donate to Democrats, while business groups mostly donate to Republicans
- Networks of interest group campaign donors have been found to be polarized
- Past research supports both of our theories

Expectations

Expectation 1

Polarization increases as years progress in how donors donate to campaigns, as donors will be consistent to one political party

Higher level of network modularity (more ingoing ties than outgoing ones); communities formed by party affiliations

Expectation 2

Republican donors = financial, business, and agricultural groups and party affiliated committees

Democratic donors = labor groups, the public health sector, and grassroots organizations

Both will have closer networks, or more ties with each other
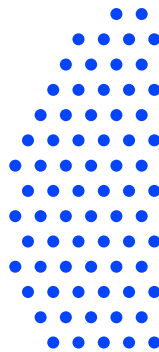
Research Design

Optimal Community Detection Algorithm

Top 50 donors who contributed over 50% of their funds to either party

Modularity

Higher modularity score: community detection algorithm was more successful in isolating the various sub-communities bolstered by the inherent structure of shared ties between donors in our entire network

Probability Matrix

Frequency of ties present between **Health, Labor, Finance & Real Estate, Business,** and **Agriculture** groups separated into Democrat and Republican matrices to see difference influences of industry among donor circles

Network Regression

DV: if ties exist
IV: continuous variables: PerDem difference, PerRep difference, absolute difference in total contributions + binary variable if same group
Finds tangible results to **determine if donors formed ties which means backing the same candidate**, based on whether or not they **came from the same industry, had similar total contributions, and had similar percent breakdowns of their funds donated to either party**

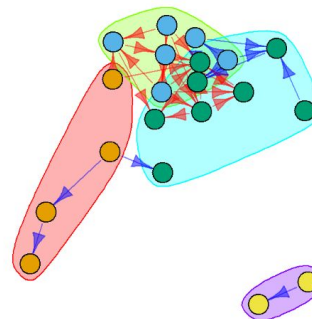**CA Senate 15-16 Network Modularity:**
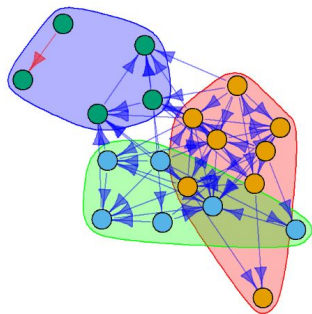
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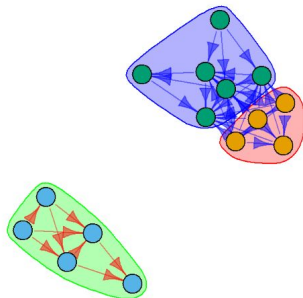
CA Senate 13-14 Network Modularity:
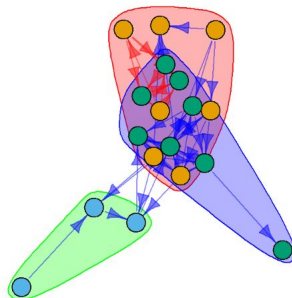
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CA Senate 11-12 Network Modularity:

0.199526627218935

CA House 15-16 Network Modularity:

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CA House 13-14 Network Modularity:
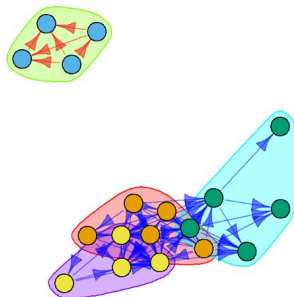
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CA House 11-12 Network Modularity:
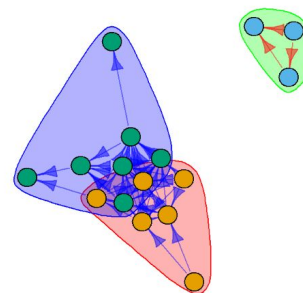
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Modularity and Community Detection Algorithm Results

- Networks became more polarized between 2011 and 2016
- 2 separate networks: a Democratic and a Republican one
- Democratic networks are closely connected; Republican network is only one community
- Modularity increased in the House networks; so did number of Republican donors
- Both the House and Senate donor networks increased in polarization
- Modularity in the Senate network was constant
- Within the larger Democratic party, there were other subgroups present due to other factors

Descriptive Statistics: Proportion Matrix Results

CA House 11-12

Democrat Pairings	D
Labor-Labor	0.13
Finance-Health	0.12
Health-Labor	0.11
Finance-Labor	0.10
Finance-Business	0.10

CA House 13-14

Democrat Pairings	D
Health-Labor	0.12
Finance-Health	0.11
Labor-Labor	0.11
Finance-Labor	0.10
Finance-Business	0.09

CA House 15-16

Democrat Pairings	D
Health-Labor	0.13
Finance-Health	0.11
Finance-Labor	0.10
Labor-Labor	0.10
Business-Health	0.09

The **top five most frequent pairings** for the **Democratic party for California House 2011-16**

The **top five most frequent pairings** for the **Republican party for California House 2011-16**

CA House 13-14

Republican Pairings	R
Finance-Business	0.16
Finance-Agriculture	0.14
Business-Agriculture	0.12
Agriculture-Agriculture	0.11
Finance-Health	0.10

CA House 13-14

Republican Pairings	R
Business-Agriculture	0.16
Finance-Business	0.14
Finance-Agriculture	0.11
Agriculture-Agricultur	0.09
Finance-Health	0.09

CA House 15-16

Republican Pairings	R
Finance-Business	0.19
Business-Agriculture	0.14
Finance-Agriculture	0.12
Finance-Finance	0.12
Finance-Health	0.09

CA Senate 11-12

Democrat Pairings	D
Labor-Labor	0.16
Health-Labor	0.14
Finance-Labor	0.14
Business-Labor	0.11
Finance-Health	0.09

CA Senate 13-14

Democrat Pairings	D
Health-Labor	0.15
Finance-Health	0.14
Finance-Labor	0.11
Labor-Labor	0.10
Health-Health	0.10

CA Senate 15-16

Democrat Pairings	D
Health-Labor	0.12
Finance-Health	0.11
Finance-Labor	0.10
Business-Health	0.10
Business-Labor	0.09

The **top five most frequent pairings** for the **Democratic party for California Senate 2011-16**

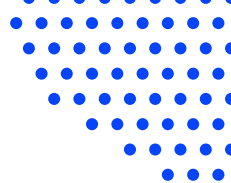## CA Senate 11-12

Republican Pairings	R
Finance-Business	0.18
Finance-Health	0.15
Finance-Finance	0.13
Finance-Agriculture	0.12
Business-Health	0.10

CA Senate 13-14

Republican Pairings	R
Business-Agriculture	0.18
Finance-Agriculture	0.18
Finance-Business	0.16
Agriculture-Agricultur	0.12
Finance-Finance	0.08

CA Senate 15-16

Republican Pairings	R
Finance-Business	0.33
Finance-Finance	0.21
Business-Business	0.14
Finance-Health	0.09
Business-Health	0.09

The **top five most frequent pairings** for the **Republican party for California Senate 2011-16**

Descriptive Statistics Results: House

- Democratic House donor network is more diverse than Republican one
- Top Democratic pairings: Labor-Labor (11-12), Health-Labor (13-14), Health-Labor (15-16)
- Top Republican pairings: Finance-Business (11-12), Business-Agriculture (13-14), Finance-Business (15-16)
- Business-Health was prominent in 2015-2016
- Highest proportion was Finance-Business in 2015-2016
- Consistent Democratic donors: Health and Labor groups
- Consistent Republican donors: Business, Finance, and Agriculture groups
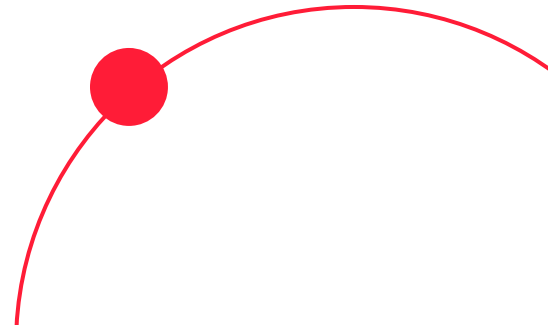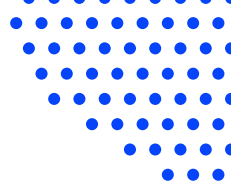
Descriptive Statistics Results: Senate

- Democratic Senate donor network is more diverse than Republican one
- Top Democratic pairings: Labor-Labor (11-12), Health-Labor (13-14), Health-Labor (15-16)
- Top Republican pairings: Finance-Business (11-12), Business-Agriculture (13-14), Finance-Business (15-16)
- Highest proportion was Finance-Business in 2015-2016
- Consistent Democratic donors: Health and Labor groups
- Consistent Republican donors: Business and Finance groups
- Decreased prominence of Agriculture groups in 2015-2016 especially in the Senate race

Network Regression Results

Network Regression Model Estimates for California House 2011-16 and California Senate 2011-16

Estimates	CA House 11-12	CA House 13-14	CA House 15-16
Intercept	0.04	0.06	0.06
Same Group	0.48	**0.50**	0.46
Difference in Contributions	0.00	0.00	0.00
Difference in PerDem%	0.01	0.02	0.02
Difference in PerRep%	0.01	NA	NA

Estimates	CA Senate 11-12	CA Senate 13-14	CA Senate 15-16
Intercept	0.08	0.10	**0.14**
Same Group	0.45	0.45	0.46
Difference in Contributions	0.00	0.00	0.00
Difference in PerDem%	0.01	0.01	0.02
Difference in PerRep%	NA	NA	NA

Network Regression Results

- **Dependent variable**: if ties exist in an adjacency matrix
- **Independent variables**: perDem difference, perRep difference, absolute difference in total contributions, binary variable; also in adjacency matrices
- When 2 donors are of the same industry, they're more likely to have a tie
- Used both an ERGM and netlogit
- 45-50% higher likelihood of 2 donors in the same group funding the same candidates
- No Republican majority industry; most donors were in Health + Labor groups
- Majority of top donors come from political or party orgs
- Party affiliations run so deep in our chosen groups
- Small donors cling to larger, more influential donors

Conclusion/Further Research

- Polarization has increased → **proved first hypothesis**
- Donors from the same industry were connected because they donated to the same candidates
- Health and Labor groups were consistent Democratic donors; Business and Finance groups were consistent Republican donors → **proved second hypothesis**
- Studying donor networks is important because it gives insight into donor motivations
- This paper furthers past research on interest group donation trends
- **Future research:** might study a less dominant-party state, or do a comparative analysis

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