HYPOTHESIS 2: DACs have lower eigenvector centrality than non-disadvantaged communities

```
# t text for eigenvector centrality
eig_t <- t.test(all_place_nodes$eig_std ~ all_place_nodes$DAC); eig_t
```

```
##
##  Welch Two Sample t-test
##
## data:  all_place_nodes$eig_std by all_place_nodes$DAC
## t = 2.1033, df = 448.6, p-value = 0.036
## alternative hypothesis: true difference in means between group 0 and group 1 is not equal to 0
## 95 percent confidence interval:
##  0.01166402 0.34390872
## sample estimates:
## mean in group 0 mean in group 1
##      0.09046374     -0.08732263
```

```
lead_t <- t.test(all_place_nodes$leader_std ~ all_place_nodes$DAC); lead_t
```

```
##
##  Welch Two Sample t-test
##
## data:  all_place_nodes$leader_std by all_place_nodes$DAC
## t = 2.1757, df = 278.41, p-value = 0.03042
## alternative hypothesis: true difference in means between group 0 and group 1 is not equal to 0
## 95 percent confidence interval:
##  0.02441709 0.48835625
## sample estimates:
## mean in group 0 mean in group 1
##       0.1201252      -0.1362614
```

```
lead_t <- t.test(all_place_nodes$leader_dist_min ~ all_place_nodes$DAC); lead_t
```

```
##
##  Welch Two Sample t-test
##
## data:  all_place_nodes$leader_dist_min by all_place_nodes$DAC
## t = 2.1757, df = 278.41, p-value = 0.03042
## alternative hypothesis: true difference in means between group 0 and group 1 is not equal to 0
## 95 percent confidence interval:
##  0.0275962 0.5519403
## sample estimates:
## mean in group 0 mean in group 1
##        2.453947        2.164179
```

HYPOTHESIS 3: DACs have lower leader closeness than non-disadvantaged communities

```
eig_mod <- lm(eig_std ~ MHI_std+
                POP_std+
```

```
                  incorporated+
                  per_latino,
                data = all_place_nodes)

eig_mod_2 <- lm(eig_std ~ DAC+
                  POP_std+
                  incorporated+
                  per_latino,
                data = all_place_nodes)


stargazer(eig_mod, eig_mod_2, type='latex')
```

% Table created by stargazer v.5.2.3 by Marek Hlavac, Social Policy Institute. E-mail: marek.hlavac at gmail.com % Date and time: Thu, May 30, 2024 - 11:41:05

Table 1:

	Dependent variable:	
	eig_std	
	(1)	(2)
MHI_std	0.047***	
	(0.017)	
DAC		−0.178**
		(0.089)
POP_std	−0.167	−0.194
	(0.223)	(0.222)
incorporated	0.426***	0.381***
	(0.090)	(0.086)
per_latino	0.004**	0.002
	(0.002)	(0.001)
Constant	−0.674***	−0.159*
	(0.181)	(0.088)
Observations	519	565
R^2	0.055	0.045
Adjusted R^2	0.047	0.038
Residual Std. Error	0.992 (df = 514)	0.981 (df = 560)
F Statistic	7.422*** (df = 4; 514)	6.621*** (df = 4; 560)
Note:		*p<0.1; **p<0.05; ***p<0.01

```
eig_a <- lm(eig_std ~ MHI_std+
              POP_std+
              incorporated+
              per_latino+
              admin_per,
```

```
              data = all_place_nodes)


eig_b <- lm(eig_std ~ MHI_std+
               POP_std+
               incorporated+
               per_latino+
               basin_plan_per,
             data = all_place_nodes)


eig_c <- lm(eig_std ~ MHI_std+
               POP_std+
                 incorporated+
                 per_latino+
                 sust_criteria_per,
             data = all_place_nodes)


eig_d <- lm(eig_std ~ MHI_std+
               POP_std+
                 incorporated+
                 per_latino+
                 monitoring_networks_per,
             data = all_place_nodes)


eig_e <- lm(eig_std ~ MHI_std+
               POP_std+
                 incorporated+
                 per_latino+
                 projects_mgmt_actions_per,
             data = all_place_nodes)

stargazer(eig_a, eig_b, eig_c, eig_d, eig_e, type='latex')
```

% Table created by stargazer v.5.2.3 by Marek Hlavac, Social Policy Institute. E-mail: marek.hlavac at gmail.com % Date and time: Thu, May 30, 2024 - 11:41:06

```
lead_mod <- lm(leader_std ~ MHI_std+
                  POP_std+
                  incorporated+
                  per_latino,
             data = all_place_nodes)


lead_mod_2 <- lm(leader_std ~ DAC+
                  POP_std+
                  incorporated+
                  per_latino,
             data = all_place_nodes)
```

Table 2:

	Dependent variable:				
	eig_std				
	(1)	(2)	(3)	(4)	(5)
MHI_std	0.063**	0.065***	0.064***	0.065***	0.063**
	(0.025)	(0.025)	(0.024)	(0.025)	(0.025)
POP_std	−0.210	−0.220	−0.208	−0.209	−0.211
	(0.267)	(0.266)	(0.266)	(0.266)	(0.267)
incorporated	0.337***	0.345***	0.322**	0.338***	0.342***
	(0.130)	(0.130)	(0.130)	(0.130)	(0.130)
per_latino	0.005**	0.005*	0.005**	0.005**	0.005**
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
admin_per	−0.0001				
	(0.002)				
basin_plan_per		−0.002			
		(0.002)			
sust_criteria_per			0.005		
			(0.004)		
monitoring_networks_per				0.005	
				(0.004)	
projects_mgmt_actions_per					0.002
					(0.005)
Constant	−0.625**	−0.571**	−0.674**	−0.668**	−0.644**
	(0.286)	(0.277)	(0.274)	(0.274)	(0.274)
Observations	347	347	347	347	347
R^2	0.038	0.042	0.042	0.041	0.038
Adjusted R^2	0.024	0.028	0.028	0.027	0.024
Residual Std. Error (df = 341)	1.171	1.168	1.168	1.169	1.170
F Statistic (df = 5; 341)	2.688**	2.964**	2.997**	2.924**	2.727**
Note:					*p<0.1; **p<0.05; ***p<0.01

```
stargazer(lead_mod, lead_mod_2, type='latex')
```

% Table created by stargazer v.5.2.3 by Marek Hlavac, Social Policy Institute. E-mail: marek.hlavac at gmail.com % Date and time: Thu, May 30, 2024 - 11:41:06

Table 3:

	Dependent variable:	
	leader_std	
	(1)	(2)
MHI_std	−0.003	
	(0.024)	
DAC		−0.062
		(0.119)
POP_std	0.013	−0.011
	(0.487)	(0.487)
incorporated	−0.380***	−0.401***
	(0.120)	(0.117)
per_latino	−0.013***	−0.013***
	(0.002)	(0.002)
Constant	0.829***	0.836***
	(0.263)	(0.125)
Observations	272	286
R^2	0.167	0.176
Adjusted R^2	0.154	0.164
Residual Std. Error	0.917 (df = 267)	0.914 (df = 281)
F Statistic	13.372*** (df = 4; 267)	14.959*** (df = 4; 281)
Note:		*p<0.1; **p<0.05; ***p<0.01

```
lead_a <- lm(leader_std ~ MHI_std+
               POP_std+
               incorporated+
               per_latino+
               admin_per,
             data = all_place_nodes)


lead_b <- lm(leader_std ~ MHI_std+
               POP_std+
               incorporated+
               per_latino+
               basin_plan_per,
             data = all_place_nodes)
```

```
lead_c <- lm(leader_std ~ MHI_std+
               POP_std+
                 incorporated+
                 per_latino+
                 sust_criteria_per,
               data = all_place_nodes)


lead_d <- lm(leader_std ~ MHI_std+
               POP_std+
                 incorporated+
                 per_latino+
                 monitoring_networks_per,
               data = all_place_nodes)


lead_e <- lm(leader_std ~ MHI_std+
               POP_std+
                 incorporated+
                 per_latino+
                 projects_mgmt_actions_per,
               data = all_place_nodes)

stargazer(lead_a, lead_b, lead_c, lead_d, lead_e, type='latex')
```

% Table created by stargazer v.5.2.3 by Marek Hlavac, Social Policy Institute. E-mail: marek.hlavac at gmail.com % Date and time: Thu, May 30, 2024 - 11:41:06

Table 4:

	Dependent variable:				
	leader_std				
	(1)	(2)	(3)	(4)	(5)
MHI_std	−0.021	−0.024	−0.016	−0.015	−0.014
	(0.024)	(0.024)	(0.024)	(0.024)	(0.024)
POP_std	−0.103	−0.054	−0.085	−0.099	−0.114
	(0.460)	(0.459)	(0.462)	(0.463)	(0.462)
incorporated	−0.363***	−0.369***	−0.341***	−0.348***	−0.341***
	(0.116)	(0.116)	(0.117)	(0.117)	(0.117)
per_latino	−0.013***	−0.013***	−0.013***	−0.013***	−0.013***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
admin_per	−0.003*				
	(0.002)				
basin_plan_per		0.004**			
		(0.002)			
sust_criteria_per			−0.003		
			(0.004)		
monitoring_networks_per				0.001	
				(0.005)	
projects_mgmt_actions_per					0.004
					(0.004)
Constant	1.050***	0.822***	0.898***	0.867***	0.840***
	(0.273)	(0.256)	(0.259)	(0.258)	(0.259)
Observations	256	256	256	256	256
R^2	0.183	0.185	0.174	0.172	0.175
Adjusted R^2	0.167	0.169	0.158	0.156	0.159
Residual Std. Error (df = 250)	0.861	0.860	0.865	0.866	0.865
F Statistic (df = 5; 250)	11.195***	11.348***	10.536***	10.417***	10.620***
Note:					*p<0.1; **p<0.05; ***p<0.01