Discussion of Interpretation/mediation using draft HW8-24 Cal from PPIC June 2023 data

Complete Interpretation



Partial Interpretation



California syntax: *mediation*. regression variables=RawImm4 Democrat5 liberal5 /statistics anova coeff r tol /descriptives = n corr /dependent = RawImm4 /method = enter Democrat5 /method = enter liberal5.

California Output

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.597 ^a	.357	.356	1.15288		
2	.640 ^b	.409	.408	1.10523		
a. Predictors: (Constant), Democrat5						

b. Predictors: (Constant), Democrat5, liberal5

Coefficients^a

		Unstandardize	d Coefficients	Standardized Coefficients			Collinearity	Statistics
Mode	L	В	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	1.261	.069		18.357	<.001		
	Democrat5	2.559	.102	.597	25.157	<.001	1.000	1.000
2	(Constant)	.944	.073		12.933	<.001		
	Democrat5	1.716	.129	.401	13.351	<.001	.576	1.737
	liberal5	1.502	.149	.302	10.074	<.001	.576	1.737

a. Dependent Variable: Rawlmm4

In Model 1 of the PPIC June 2023 California data set, the regression coefficient (b) for Democrat5 = 2.559 with standard error = .102. With the introduction of liberal5 as a second predictor (or control variable) in Model 2, the regression coefficient for Democrat5 is reduced by more than 2 standard errors (2*.102= .204; 2.559 -.204 = 2.355) to 1.716. In other words, the b coefficient for Democrat5 is significantly reduced by the introduction of liberal 5 as a control variable in Model 2. In line with the Elaboration Paradigm, this is consistent with a finding of interpretation or mediation. Since Democrat5 remains significant in Model 2, however, this is partial, not complete, interpretation or mediation.

In short, the analysis of the California 2023 data shows clear indications of partial interpretation (or mediation) in predicting attitudes toward immigration. This contrasts with the complete interpretation/mediation shown in Example #3 in DataLab 19a which uses the PPIC 2016 data with RawMj3 as the dependent variable.

In a separate analysis (not shown here), the introduction of additional control variables in Model 3 does not significantly reduce the b value of either Democrat5 or liberal5 indicating replication for both variables. Graphic Display of California 2023 results with RawImm4 as the DV

Partial Interpretation with direct coefficients Unstandardized coefficients



Standardized Coefficients



*** indicates p < .001

This approach can be extended into the most basic form of path analysis.

Path Analysis (per Data Lab 21)

Four Steps

- 1. Create a path diagram
- 2. Run two regressions one predicting x2 and one predicting y (as done above)
- 3. Enter unstandardized and standardized coefficients on separate path diagrams
- 4. Calculate and present direct, indirect and total effects in an effect table
- 5. Summarize the results.

Use the California Syntax for June 2023 to create a path analysis, presenting both standardized and unstandardized results. It takes the following form.



X1= Democrat5 X2= liberal5 Y= RawImm4 2. Two regressions to create the path analysis 2a. Predict X2

regression variables= Covid Democrat5 liberal5

/statistics anova coeff r tol

/descriptives = n corr /dependent = liberal5

/method = enter Democrat5.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.651 ^a	.424	.424	.2194

a. Predictors: (Constant), Democrat5

Coefficients^a

		Unstandardize	d Coefficients	Standardized Coefficients			Collinearity	Statistics
Model		В	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.211	.013		16.141	<.001		
	Democrat5	.561	.019	.651	28.989	<.001	1.000	1.000

a. Dependent Variable: liberal5

2b. Predict Y (as done above) regression variables=Covid Dem3 liberal5

/statistics anova coeff r tol

- /descriptives = n corr
- /dependent = RawImm4

/method = enter Democrat5

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Coefficients^a

a. Dependent Variable: RawImm4

3. Use the California output file to create a path analysis, presenting both standardized and unstandardized results.

Unstandardized Coefficients



Standardized Coefficients



X2= liberal5 Y= Rawlmm4 4. Report the direct, indirect and total effects of partisanship (x1).

Type of Effect	Standardized Coefficient	Proportion of Total Effects	
Direct	.401	.671	
Indirect	.197	.329	
Total	.598	1.00	

Effects of Partisanship (Democrat5) on Attitudes re Immigration(RawImm)

Source: Derived from California Path model

5.

Comment briefly on the results.

The California path analysis depicts a partially mediated relationship. In other words, partisanship has both a direct and an indirect relationship on attitudes toward immigration. The indirect effect of partisanship is via political ideology.

The direct relationship suggests that simply identifying with the Democrats, makes respondents more likely to favor immigration. This is the meaning of the direct effect. The indirect effect implies that Democratic Party identification leads to a more liberal outlook generally. And this liberal outlook results in greater support for immigration.

Both direct and indirect effects appear to be statistically significant. However, the direct effect is markedly stronger. More specifically, in California the influence of partisanship on attitudes toward immigration is primarily (67%) direct and much less via ideology (.33%).