

Trust in First Nations

Report by: Martha Essak

June 15, 2016

Trust at different levels

Trust statement	Type of trust	Mean	SD
"Trust is strong in my First Nation."	General trust (Community-level)	2.764	1.093
"I have full confidence in my First Nations council's ability to make the right decision for its people."	Political trust (Council-level)	3.096	0.973
"I could rely on my community and council members in case of a crisis or emergency."	Trust in emergency	3.592	1.062
"I am confident that the Government of British Columbia works very hard to protect our First Nations' rights."	Political trust (Provincial-level)	1.918	0.965

Trust is highest at the community/council level in an emergency, followed by council-level, community-level and provincial-level.

Trust in different First Nations

Is the overall pattern consistent within each FN?

Trust level	Overall	FIRST NATION A	FIRST NATION B	FIRST NATION B
Community/council (emergency)	3.592	3.598	3.483	3.840
Council	3.096	2.778	3.517	3.000
Community	2.764	2.486	3.067	2.840
Provincial	1.918	1.972	--	1.760
Sample size	157 (97*)	72	60	25

* Sample size for provincial-level trust is 97 because FIRST NATION B chose not to answer this question

This pattern is consistent for FIRST NATION A and FIRST NATION B. FIRST NATION B has slightly higher council-level trust compared to community/council-level trust in an emergency (this is not a statistically significant difference).

Correlation between trust at different levels

Pearson correlation co-efficients between trust at different levels

	Community trust	Community/ Council trust (emergency)	Council trust	Provincial trust
Community trust	--	0.2094626	0.5159008	0.4283389
Community/ Council trust (emergency)	--	--	0.2489787	0.08211081
Council trust	--	--	--	0.2567256
Provincial trust	--	--	--	--

Recall from p.1 that trust at the community/council-level in an emergency is highest, followed by council-level trust, community-level trust and provincial-level trust.

All correlation co-efficients are positive, which suggests that, on average, individuals who have greater trust at one level will have greater trust at other levels.

The strongest correlation is between community-level trust and council-level trust, followed by the correlation between community-level trust and provincial-level trust.

Summary of explanatory variables

Age

Minimum = 18

Maximum = 84

Mean = 44.9 years

SD = 16.0 years

Gender

	FIRST NATION A	FIRST NATION B	FIRST NATION B	
Female	35	40	11	86
Male	37	20	14	71
	72	60	25	157

Education

Education Level	Frequency
None	9
Up to grade 10	42
Grade 12	51
Undergraduate	29
Graduate	7
Certificate	10

Community-level trust

Note that sample size for these models is 156 because one respondent did not provide age

Model 1: Candidate explanatory variables include age, gender and education

Explanatory variable	df	Co-efficient	SE	F-value	p-value
Intercept		3.700861	0.249564		
Age	1	-0.020914	0.005241	15.924	0.0001017

Model 2: Add First Nation to model 1

Explanatory variable	df	Co-efficient	SE	F-value	p-value
Intercept		3.243679	0.280400		
Age	1	-0.019612	0.005153	14.4832	0.000205
Gender	1	See least squares means		3.7608	0.054333
FN	2	See least squares means		4.6049	0.011448

Multiple R² = 0.1577 Adjusted R² = 0.1354

Although gender was not significant in the model with age only, it is significant in the model with FN

FN	lsmean	SE	df	lower.CL	upper.CL
FIRST NATION A	2.525909	0.1206867	151	2.326172	2.725646
FIRST NATION B	3.079605	0.1356911	151	2.855035	3.304174
FIRST NATION B	2.788165	0.2042833	151	2.450075	3.126256

Gender	lsmean	SE	df	lower.CL	upper.CL
Female	2.636018	0.1199315	151	2.437531	2.834506
Male	2.959767	0.1263345	151	2.750683	3.168852

Community-level trust decreases as age increases

Women have lower community-level trust than men

Given age, and gender, there is a statistical difference between FIRST NATION A and FIRST NATION B ($t_{151, 1-0.033/2} = -3.09$, p-value = 0.0024), where FIRST NATION B has higher trust than FIRST NATION A

Model 3: Add on/off reserve to model 1 or model 2

Adding reserve to either model did not improve the model; reserve was not significant

Council-level trust

Note that sample size for these models is 156 because one respondent did not provide age

Model 1: Candidate explanatory variables include age, gender and education

None of these candidate variables explain a significant amount of variation

Model 2: Add First Nation to model 1

Explanatory variable	df	Co-efficient	SE	F-value	p-value
Intercept		2.7778	0.1083		
FN	2	See least squares means		10.899	3.756e-05

Multiple R² = 0.1247

Adjusted R² = 0.1133

FN	lsmean	SE	df	lower.CL	upper.CL	
FIRST NATION A	2.777778	0.1082794	153	2.598589	2.956967	
FIRST NATION B	3.525424	0.1196151	153	3.327476	3.723372	
FIRST NATION B	3.000000	0.1837562	153	2.695907	3.304093	

There is a statistical difference between FIRST NATION B and FIRST NATION A ($t_{153, 1-0.033/2} = 4.63$, $p\text{-value} < 0.0001$) and between FIRST NATION B and FIRST NATION B ($t_{153, 1-0.033/2} = 2.40$, $p\text{-value} = 0.018$).

FIRST NATION B has higher council-level trust than both FIRST NATION A and FIRST NATION B.

Model 3: Add on/off reserve to model 1 or model 2

Adding reserve to model 2 did not improve the model; reserve was not significant

Trust in emergency

Model 1: Candidate explanatory variables include age, gender and education

None of these candidate variables explain a significant amount of variation

Model 2: Add First Nation to model 1

First Nation did not explain a significant amount of variation

Model 3: Add on/off reserve to model 1 or model 2

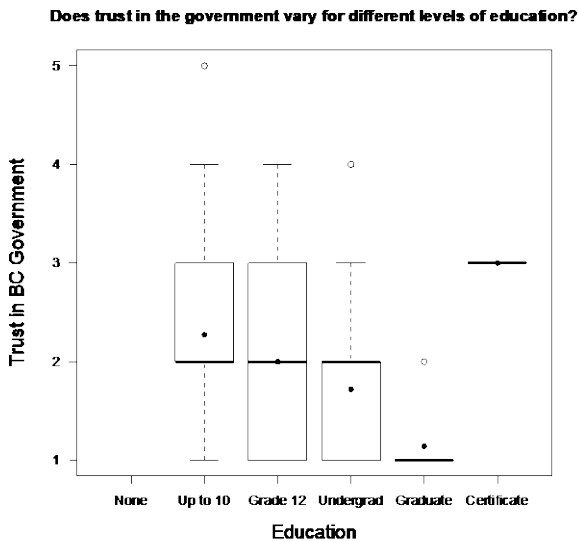
Reserve did not explain a significant amount of variation

Provincial-level trust

Provincial trust was only measured for FIRST NATION A and FIRST NATION B. So for these FNs, this is the frequency of each education category

Education →	None	Up to 10	Grade 12	Undergrad	Graduate	Certificate
Sample Size	0	22	33	25	7	1

Model 1: Candidate explanatory variables include age, gender and education



Multiple R-squared: 0.09918,
Adjusted R-squared: 0.06662
 $F_{3,83} = 3.046$, p-value = 0.03324

A significant amount of variation in provincial-level trust is explained by education (education categories “none” and “certificate” were excluded from this model because they had a small number of observations).

education	lsmean	SE	df	lower.CL	upper.CL
Up to 10	2.272727	0.2016645	83	1.937275	2.608180
Grade 12	2.000000	0.1646583	83	1.726104	2.273896
Undergrad	1.720000	0.1891780	83	1.405317	2.034683
Graduate	1.142857	0.3575129	83	0.548163	1.737551

The only statistically significant difference is between the “up to Grade 10” education level and the “Graduate” education level ($t_{83, 1-0.0167/2} = 2.75$, p-value = 0.0073).

Model 2: Add First Nation to model 1

We cannot include education and First Nation in the same model because there are several combinations of categories that have very low sample sizes

Model 3: Add on/off reserve to model 1 or 2

We cannot include education and reserve in the same model because there are several combinations of categories that have very low sample sizes