



DFG Task 1

Creating and Testing Dependent Variables
NYC Capital Project Dashboard Data Analysis

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Task 1 a) create project duration/schedule

AN Actual / Forecast Design Start	AU Actual / Forecast Close out End	AV Project Duration/Schedul e (days)
<u>6/16/2003</u>	8/21/2015	4449
<u>1/10/2005</u>	8/10/2016	4230
<u>1/25/2012</u>	1/9/2020	2906
<u>1/1/2002</u>	4/4/2014	4476
<u>9/1/2005</u>	5/11/2018	4635
<u>10/18/2004</u>	8/2/2014	3575
<u>8/22/2003</u>	11/27/2013	3750
<u>12/28/2012</u>	3/29/2019	2282
<u>7/31/2012</u>	1/4/2018	1983
<u>9/1/2012</u>	11/9/2018	2260

- located in column AV

Task 1 b) create cost growth percentage #1

CH	CI
Cost Growth Percentage #1	Cost Growth #1 w/ Change Order
18%	0%
-36%	14%
-37%	17%
7%	0%
-1%	35%
-3%	0%
-16%	0%
-37%	1%
-37%	15%
16%	5%

Column CH:

- $(\text{expenditure} - \text{preliminary}) / \text{preliminary}$

Column CI:

- change order / preliminary

Conclusion:

- 2 measures are not similar

Task 1 c) create cost growth percentage #2

CJ	CK
Cost Growth Percentage #2	Cost Growth # 2 w/ Change Order
29%	0%
9%	24%
8%	30%
27%	0%
47%	52%
16%	0%
6%	0%
-1%	2%
5%	24%
4%	4%

Column CJ:

- $(\text{expenditure} - \text{original}) / \text{original}$

Column CK:

- $\text{change order} / \text{original}$

Conclusion:

- 2 measures are not similar

Task 1 d) compare cost growths

CM	CN
Cost Growth #1 Comparison	Cost Growth #2 Comparison
Preliminary	Original
Change Order	Change Order
Change Order	Change Order
Preliminary	Original
Change Order	Change Order
Change Order	Original
Change Order	Original
Change Order	Change Order
Change Order	Change Order
Preliminary	Change Order

Column CM + CN:

- indicates the greater of two CG's

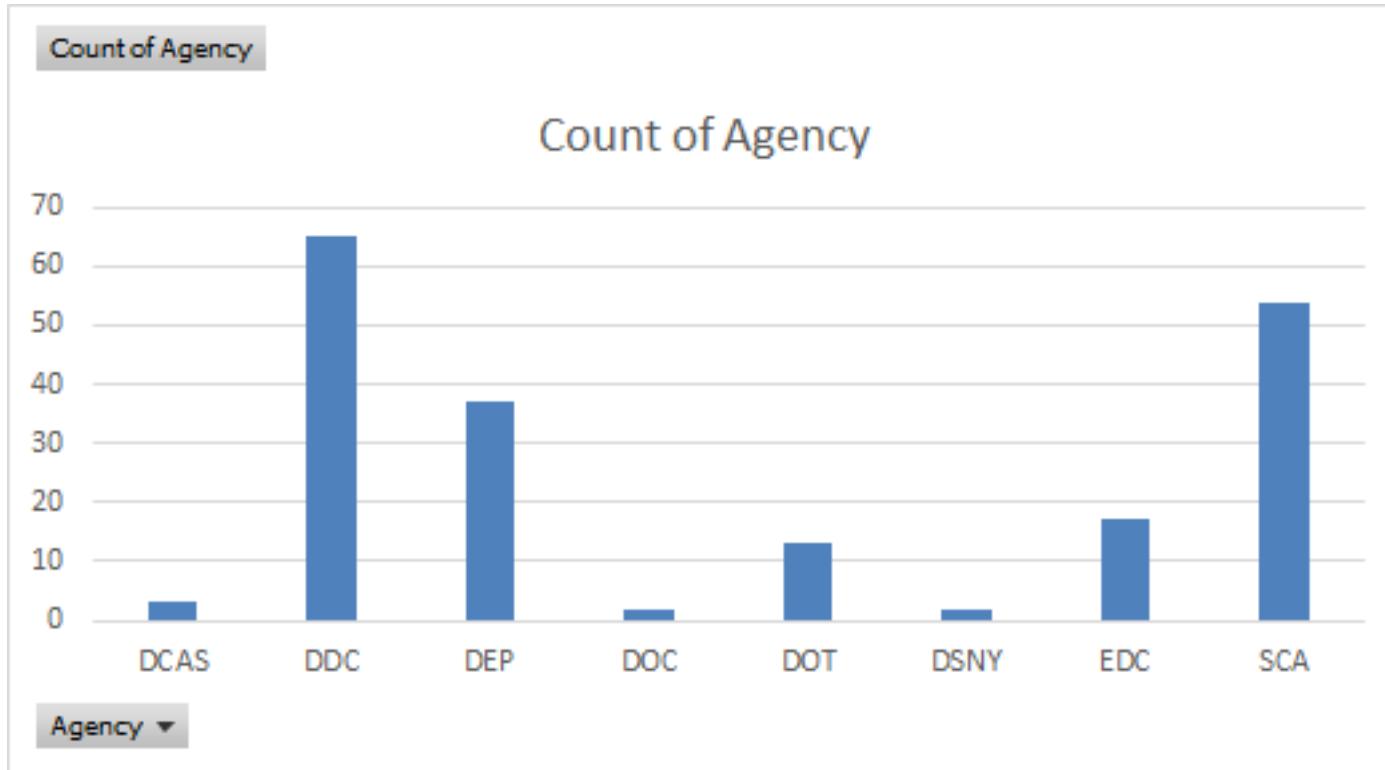
Conclusion:

- 134/193 projects: CG1 w/ CO is greater
- 132/193 projects: CG2 w/ CO is greater

DFG Task 2

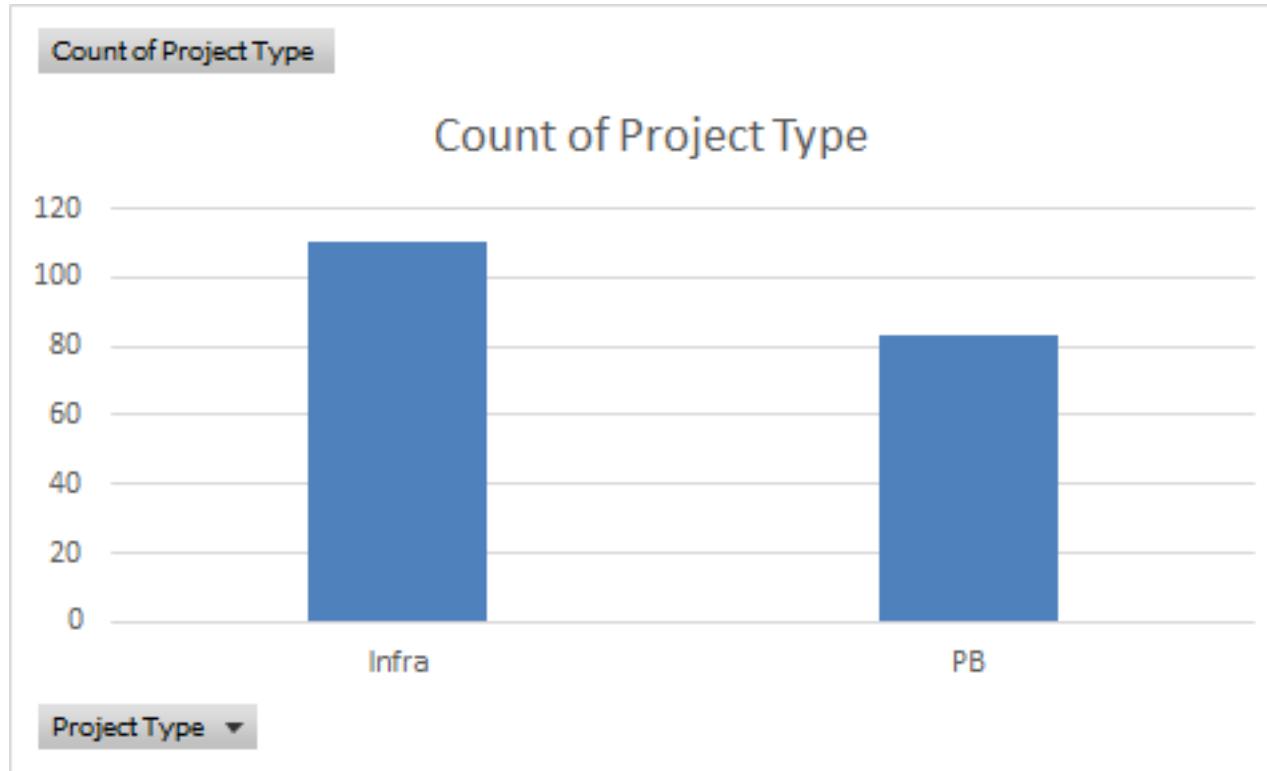
Creating Dependent Variables for Completed Projects

Task 2 a) categorize by agency



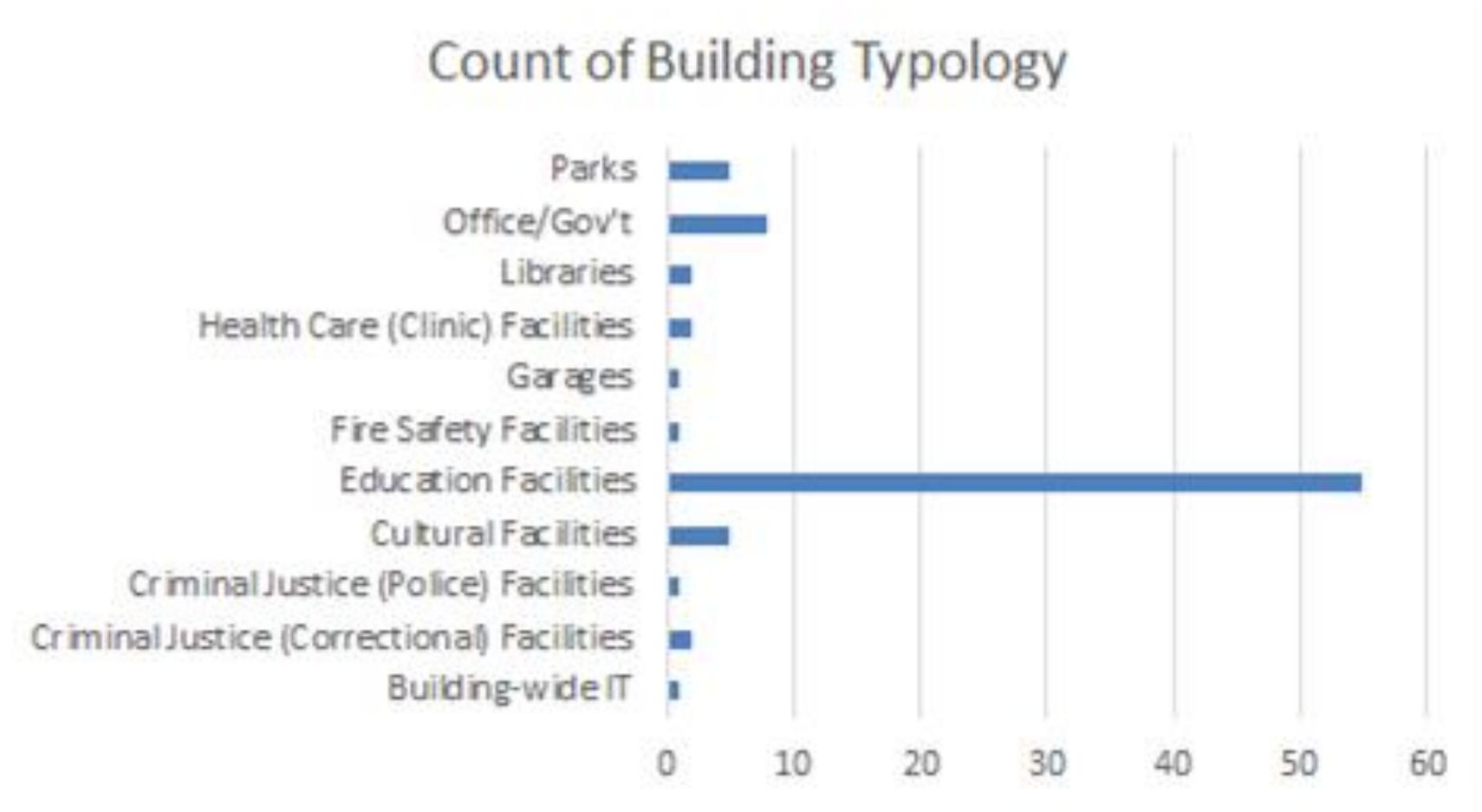
Agency	Count of Agency
DCAS	3
DDC	65
DEP	37
DOC	2
DOT	13
DSNY	2
EDC	17
SCA	54

Task 2 b) categorize by infra + PB



Project Type	Count of Project Type
Infra	110
PB	83

Task 2 c) categorize PB by building typology



Task 2 c)

categorize PB by
building typology

Building Typology	#
Building-wide IT	1
Criminal Justice (Correctional) Facilities	2
Criminal Justice (Police) Facilities	1
Cultural Facilities	5
Education Facilities	55
Fire Safety Facilities	1
Garages	1
Health Care (Clinic) Facilities	2
Libraries	2
Office/Gov't	8
Parks	5

DFG Tasks 1 + 2

Extra Tasks

Extra Task a) create 3rd CG using Forecast

CK	CM
Cost Growth #1 w/ Forecast	Cost Growth #2 w/ Forecast
49%	62%
-18%	40%
-19%	39%
20%	43%
12%	65%
21%	44%
2%	28%
-29%	12%
-20%	33%
22%	8%

- located in columns CK + CM
- NOTE: CG1 = preliminary, CG2 = original

Extra Task b) i) Cost Growth 1 Comparisons

CQ	CR	CS
Cost Growth #1 Comparison 1 (Expenditure vs CO)	Cost Growth #1 Comparison 2 (Forecast vs CO)	Cost Growth #1 Comparison 3 (Expenditure vs Forecast)
Expenditure	Forecast	Forecast
CO	CO	Forecast
CO	CO	Forecast
Expenditure	Forecast	Forecast
CO	CO	Forecast
CO	Forecast	Forecast
CO	Forecast	Forecast
CO	CO	Forecast
CO	CO	Forecast
Expenditure	Forecast	Forecast

Cost Growth #1 Comparison 1

- 134/193 projects: CO > Expenditure
- 59/193 projects: CO < Expenditure

Cost Growth #1 Comparison 2

- 96/193 projects: CO > Forecast
- 84/193 projects: CO < Forecast
- 13/193 projects: CO = Forecast

Cost Growth #1 Comparison 3

- 176/193 projects: Forecast > Expenditure
- 16/193 projects: Forecast = Expenditure
- 1/193 projects: Forecast < Expenditure

Extra Task b) ii) Cost Growth 2 Comparisons

CT	CU	CV
Cost Growth #2 Comparison 1 (Expenditure vs CO)	Cost Growth #2 Comparison 2 (Forecast vs CO)	Cost Growth #2 Comparison 3 (Expenditure vs Forecast)
Expenditure	Forecast	Forecast
Change Order	Forecast	Forecast
Change Order	Forecast	Forecast
Expenditure	Forecast	Forecast
Change Order	Forecast	Forecast
Expenditure	Forecast	Forecast
Expenditure	Forecast	Forecast
Change Order	Forecast	Forecast
Change Order	Forecast	Forecast
Change Order	Forecast	Forecast

Cost Growth #2 Comparison 1

- 132/193 projects: CO > Expenditure
- 57/193 projects: CO < Expenditure

Cost Growth #2 Comparison 2

- 145/193 projects: Forecast > CO
- 43/193 projects: Forecast < CO
- 1/193 projects: Forecast = CO

Cost Growth #2 Comparison 3

- 173/193 projects: Forecast > Expenditure
- 15/193 projects: Forecast = Expenditure
- 1/193 projects: Forecast < Expenditure

NOTE: 4/194 projects have division errors

Extra Task c) create budget differential

CP
Budget Differential (Preliminary - Original)
\$10,522,700
\$26,575,476
\$68,387,325
\$46,411,284
\$57,981,239
\$21,300,000
\$5,893,831
\$19,045,117
\$15,667,566
(\$5,923,595)

- located in column CP
- 127/193 projects: Preliminary > Original

Extra Task d) convert duration to year

AV Project Duration/Schedul e (days)	AW Project Duration/Schedul e (year)
4449	12.2
4230	11.6
2906	8.0
4476	12.3
4635	12.7
3575	9.8
3750	10.3
2282	6.3
1983	5.4
2260	6.2

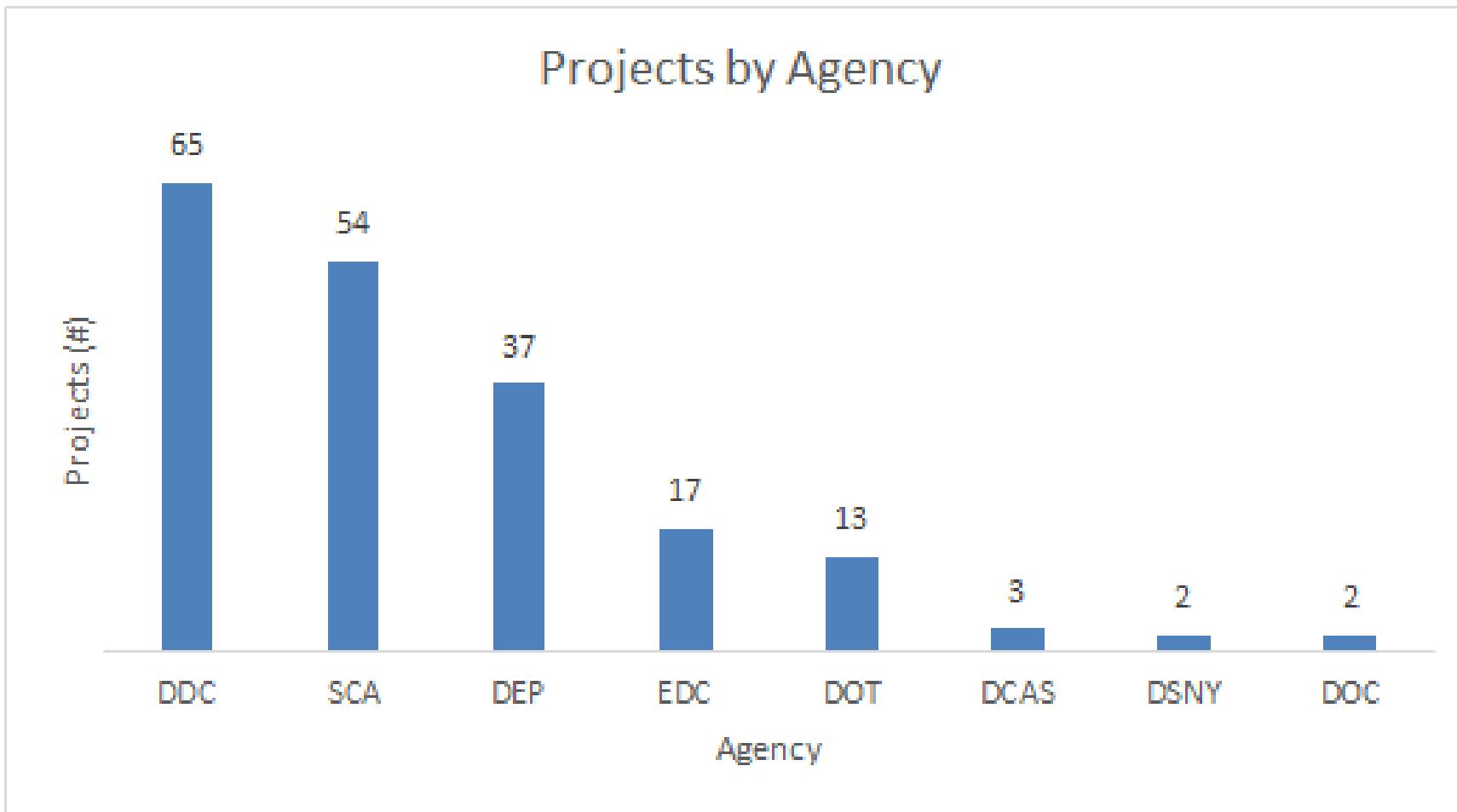
- located in column AW

DFG Task 3

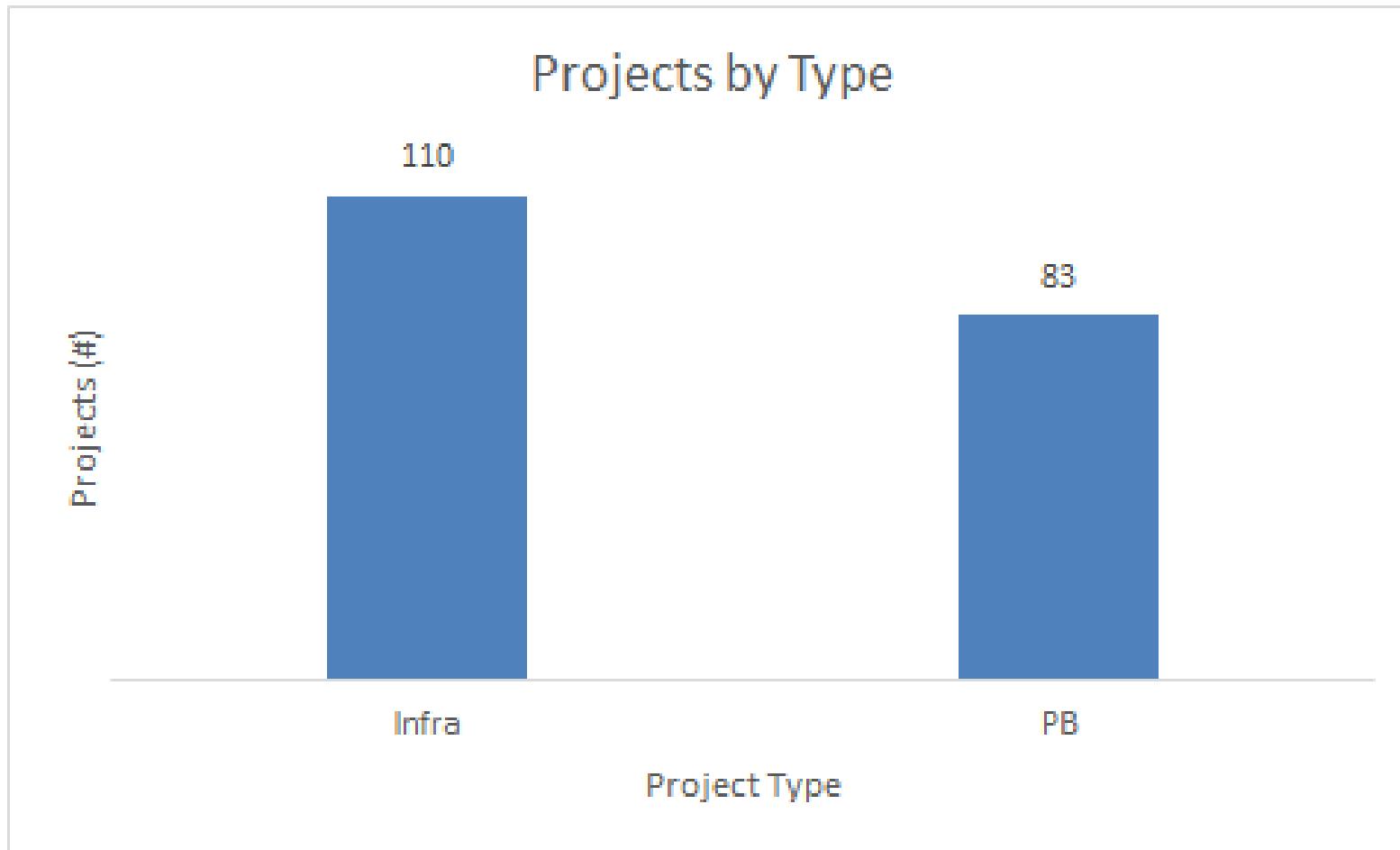
Descriptive Statistics

(now using Cost Growth calculated with Change Orders)

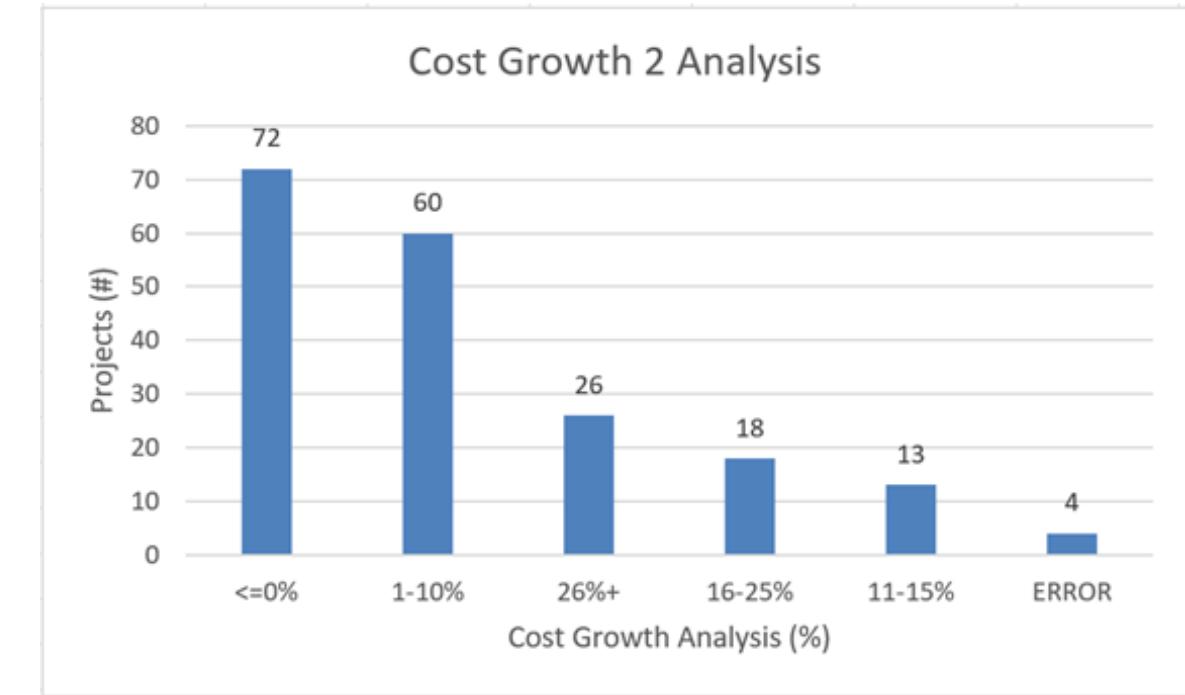
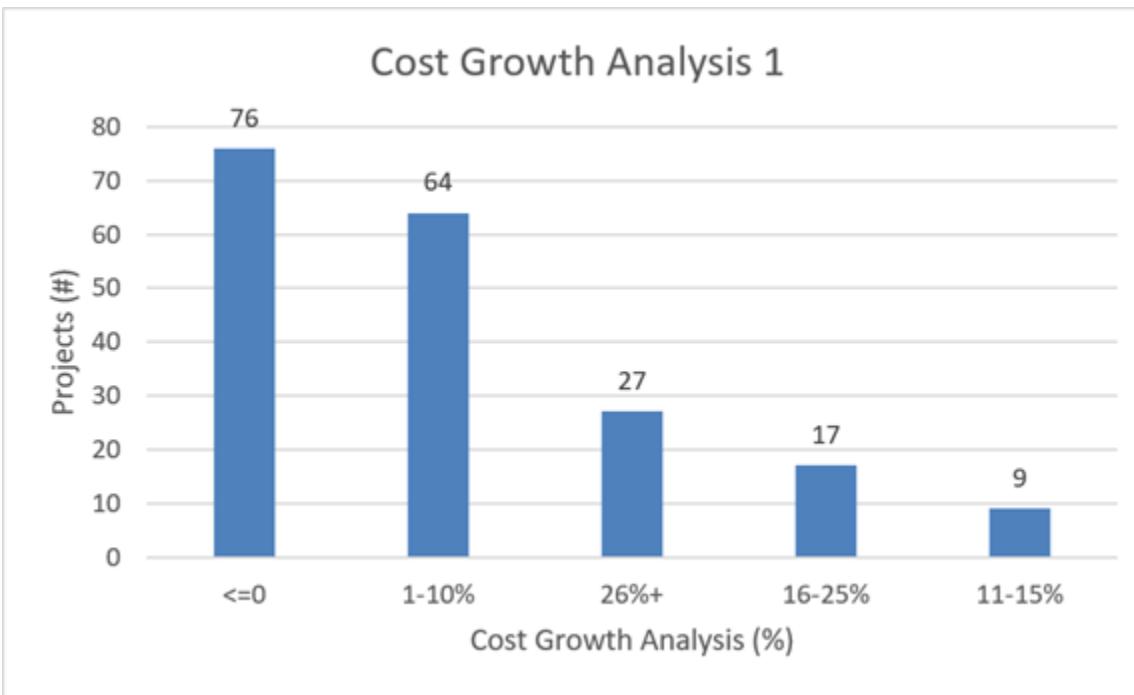
All Projects by Agency



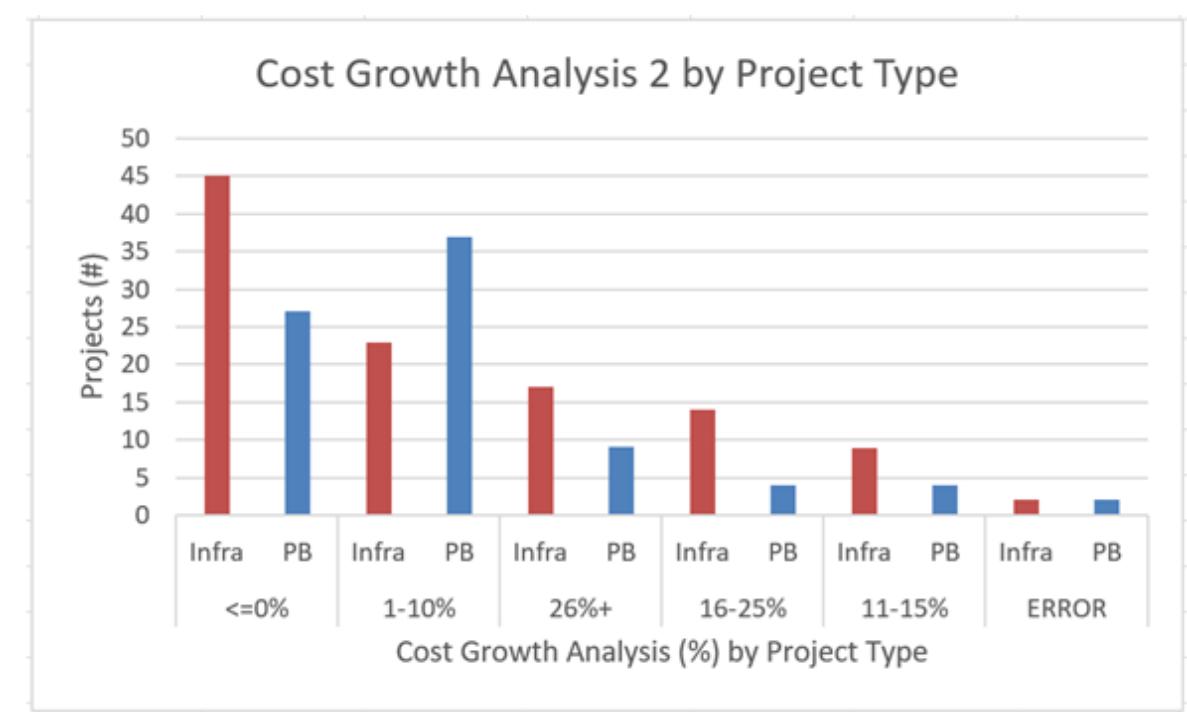
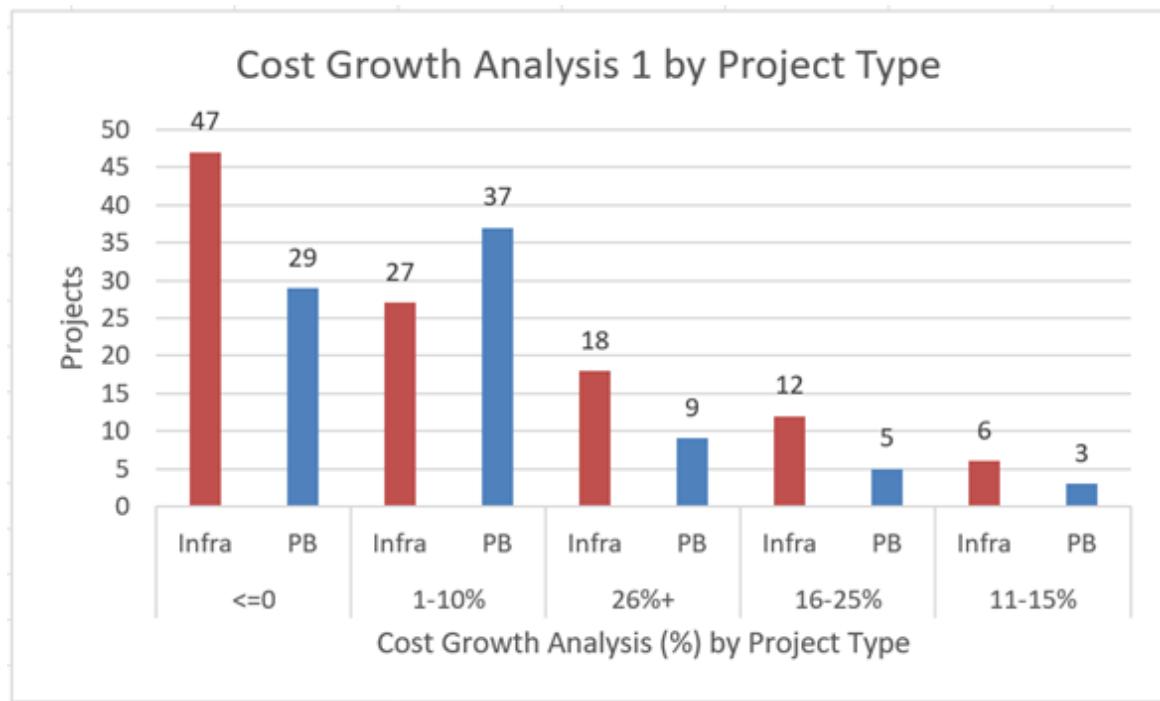
All Projects by Type



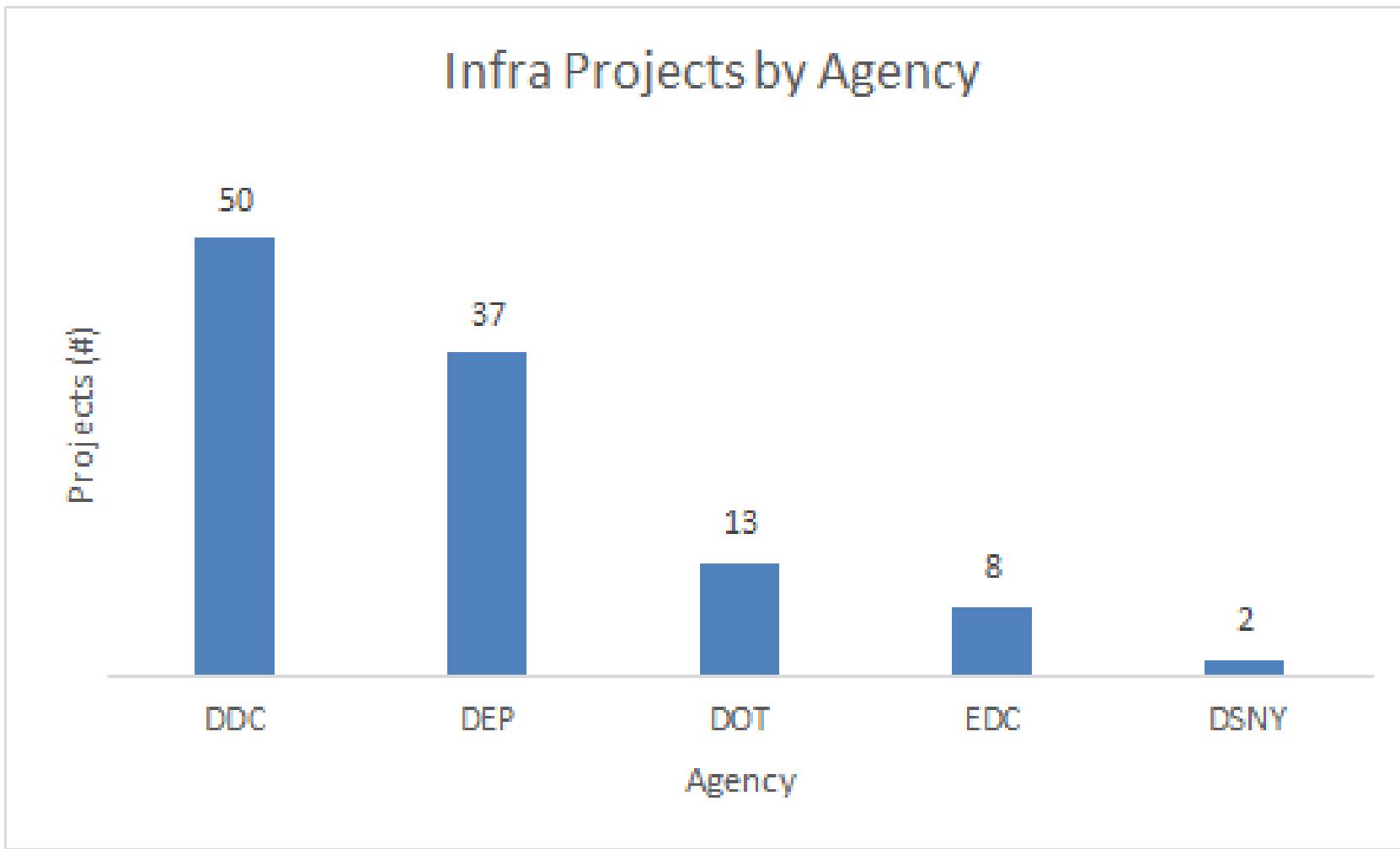
All Projects: Cost Growth Analysis



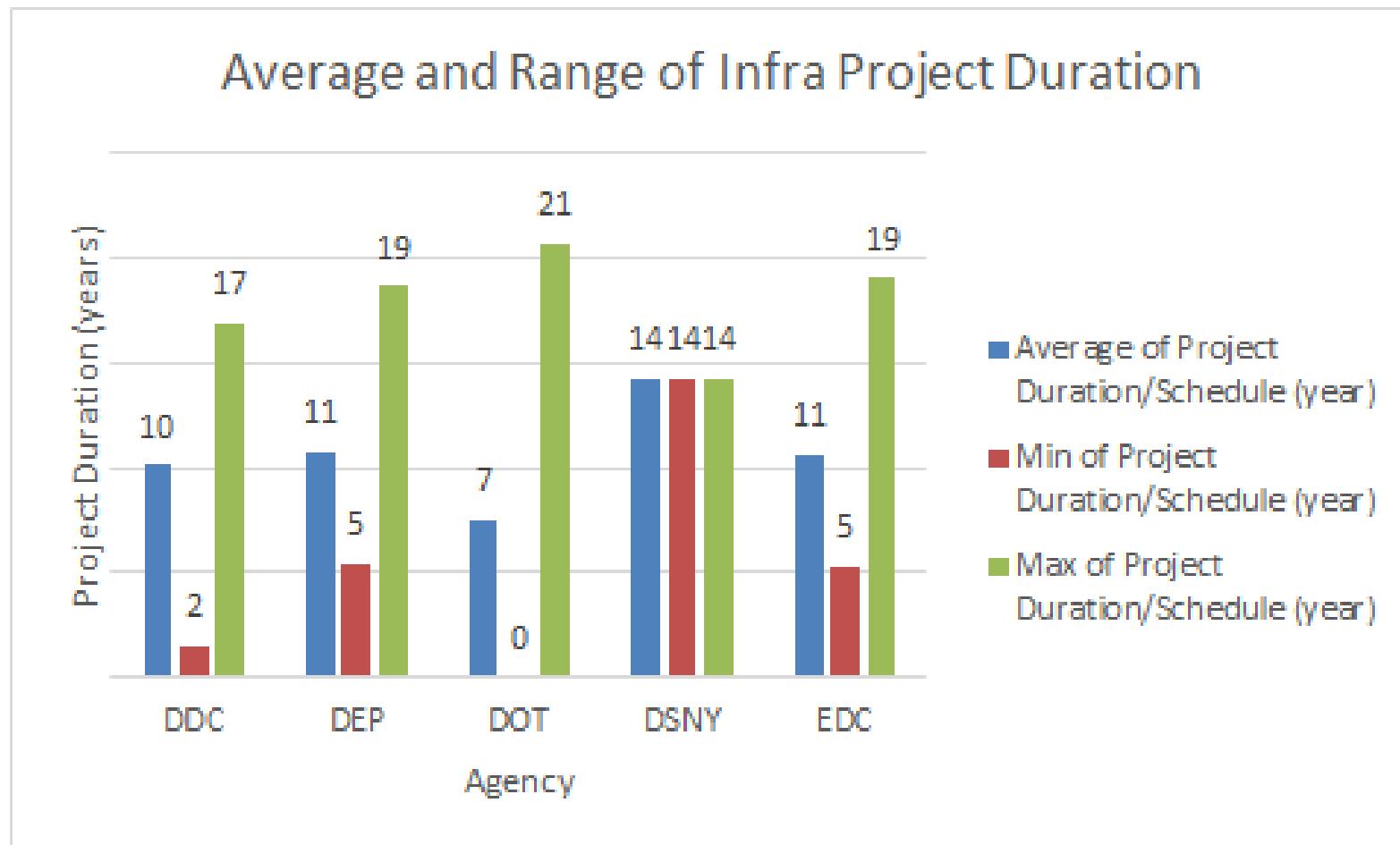
All Projects: Cost Growth Analysis by Project Type



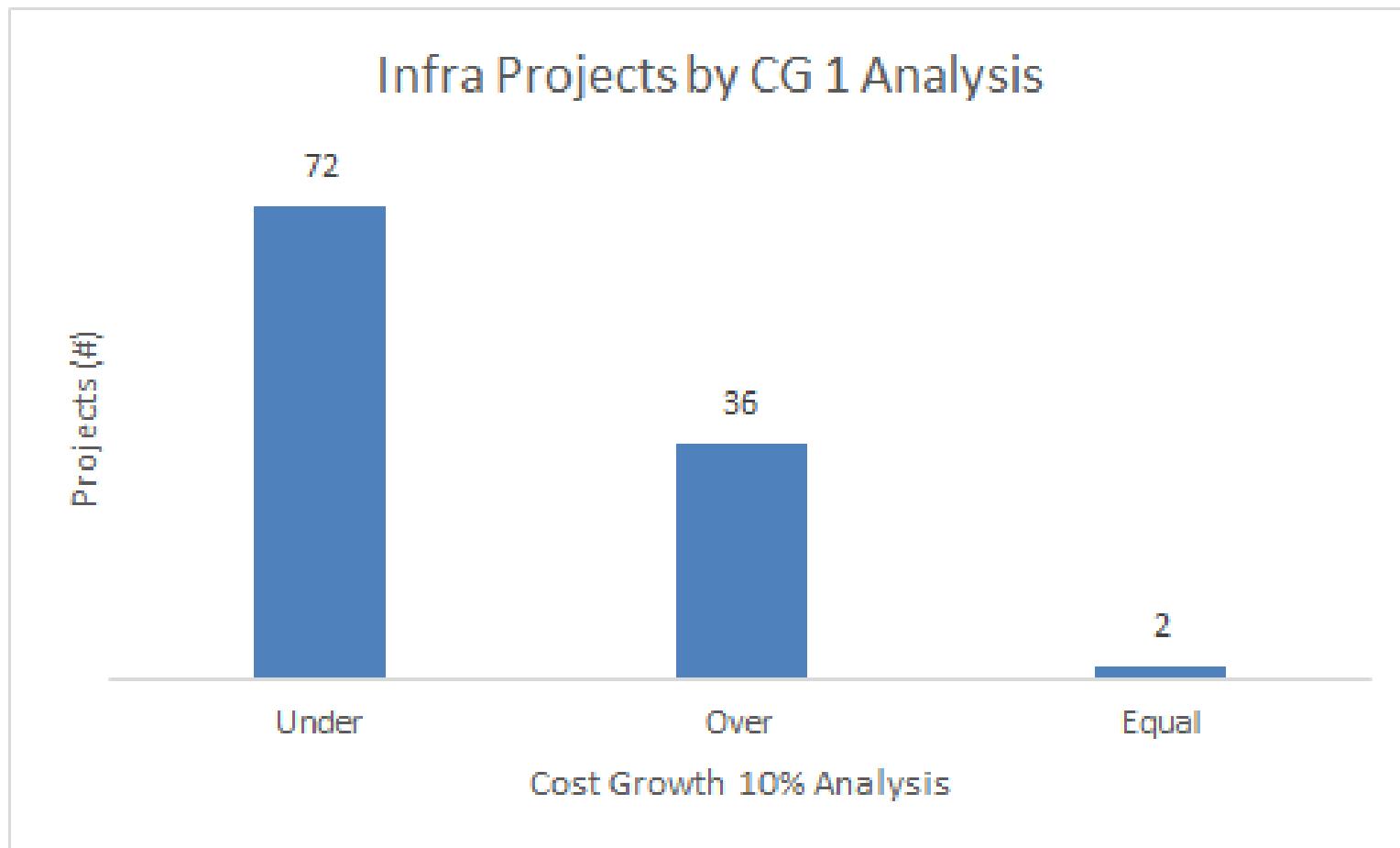
Infra Projects by Agency



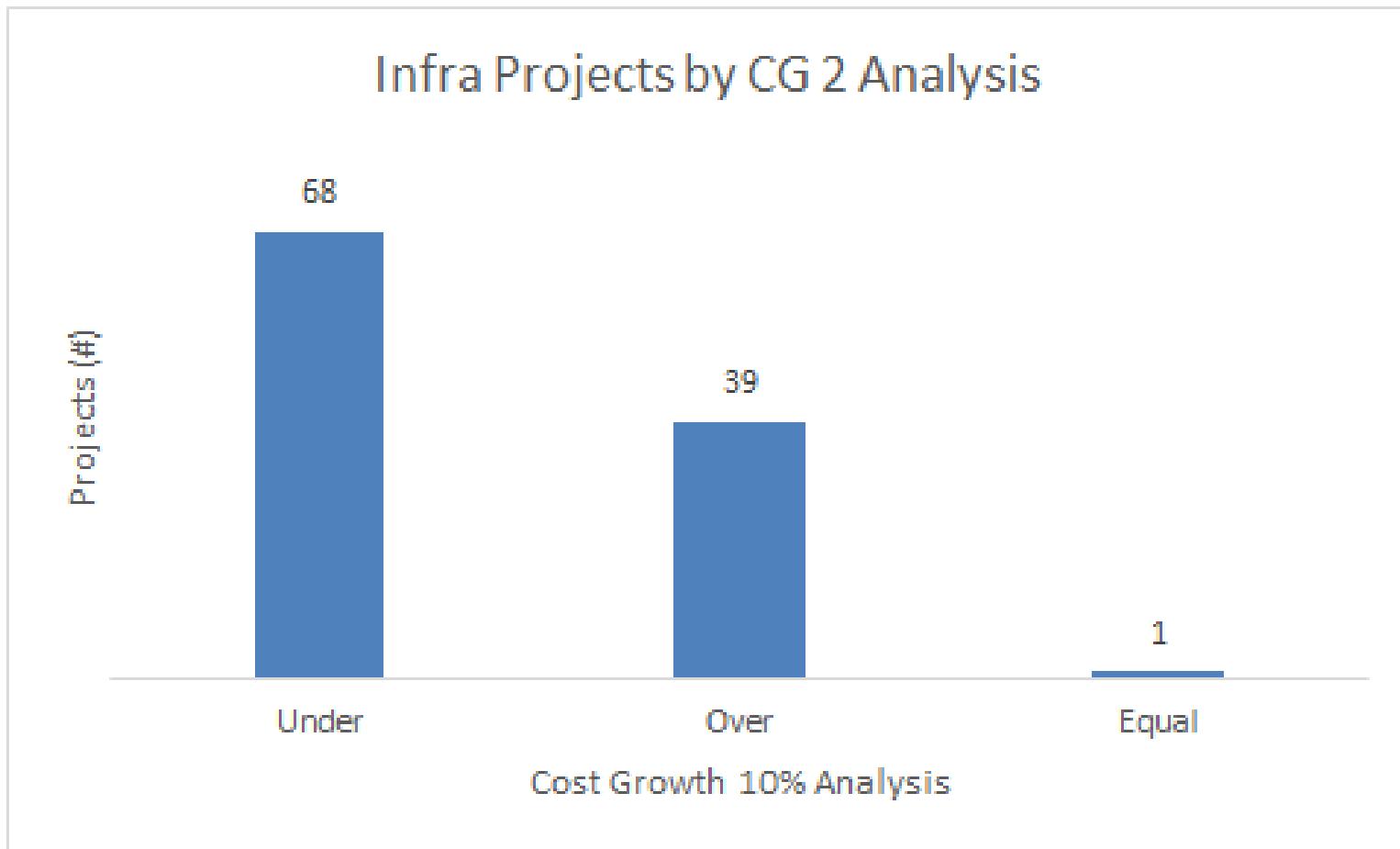
Infra Projects by Average + Range of Duration



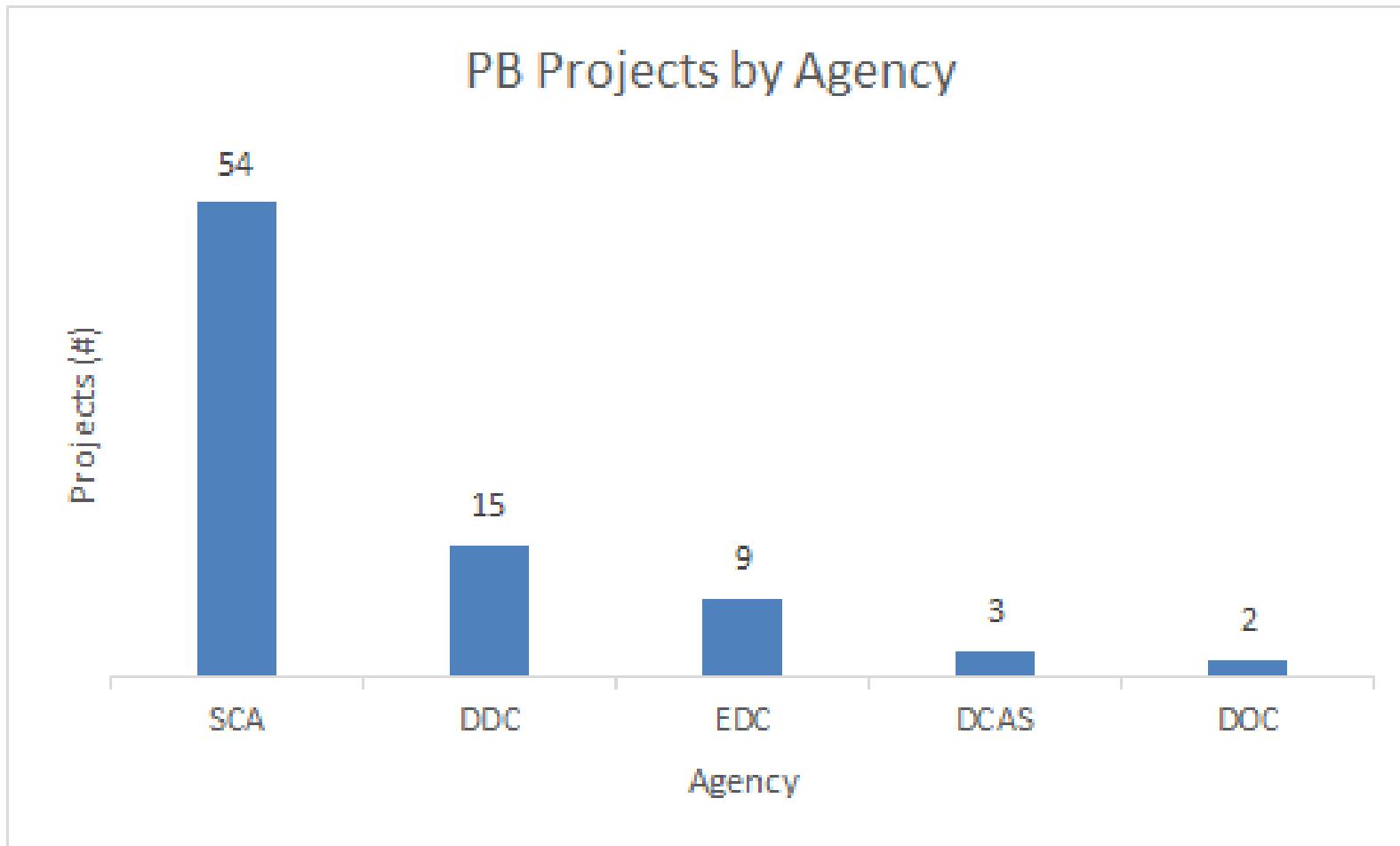
Infra Projects by CG 1 10% Analysis



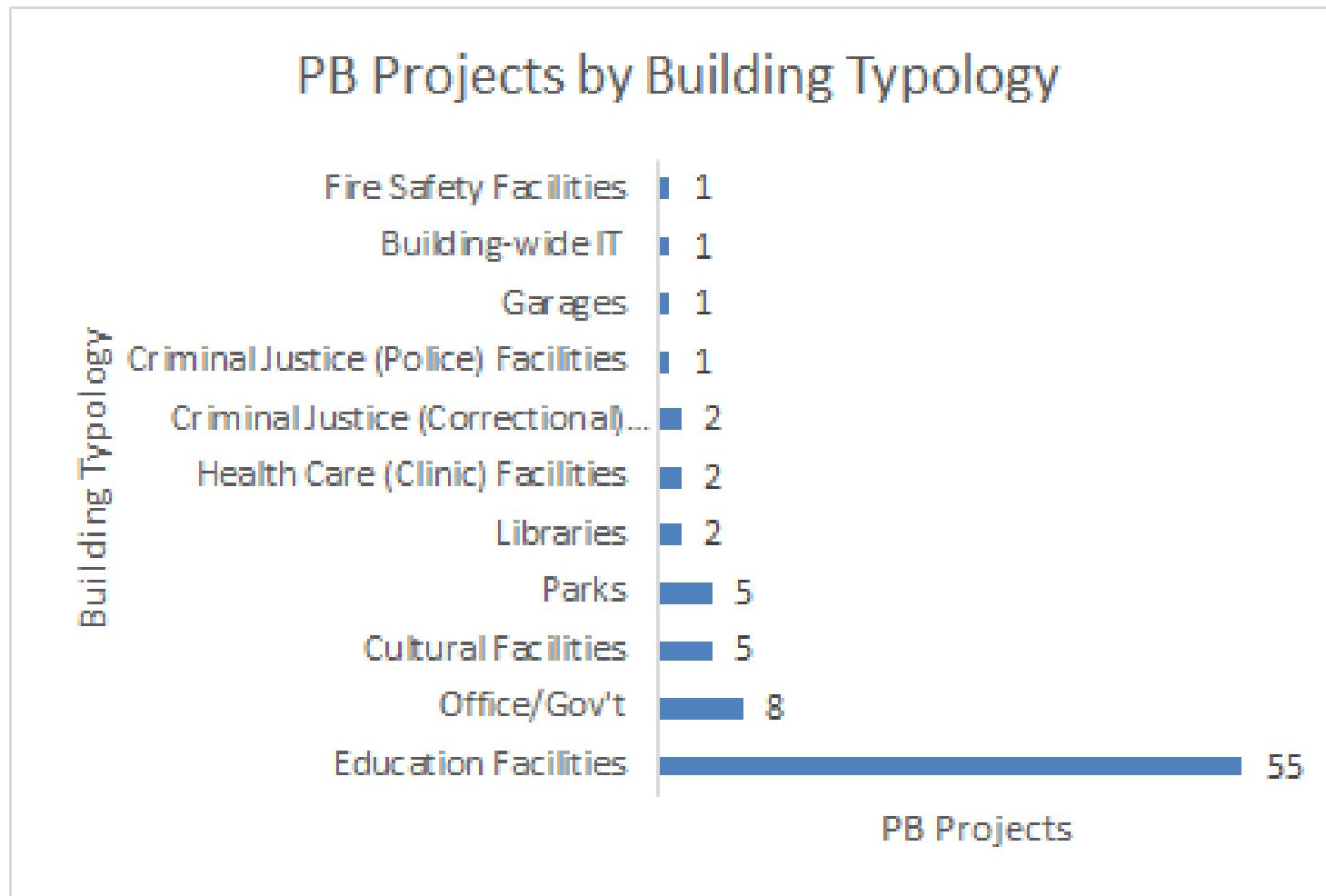
Infra Projects by CG 2 10% Analysis



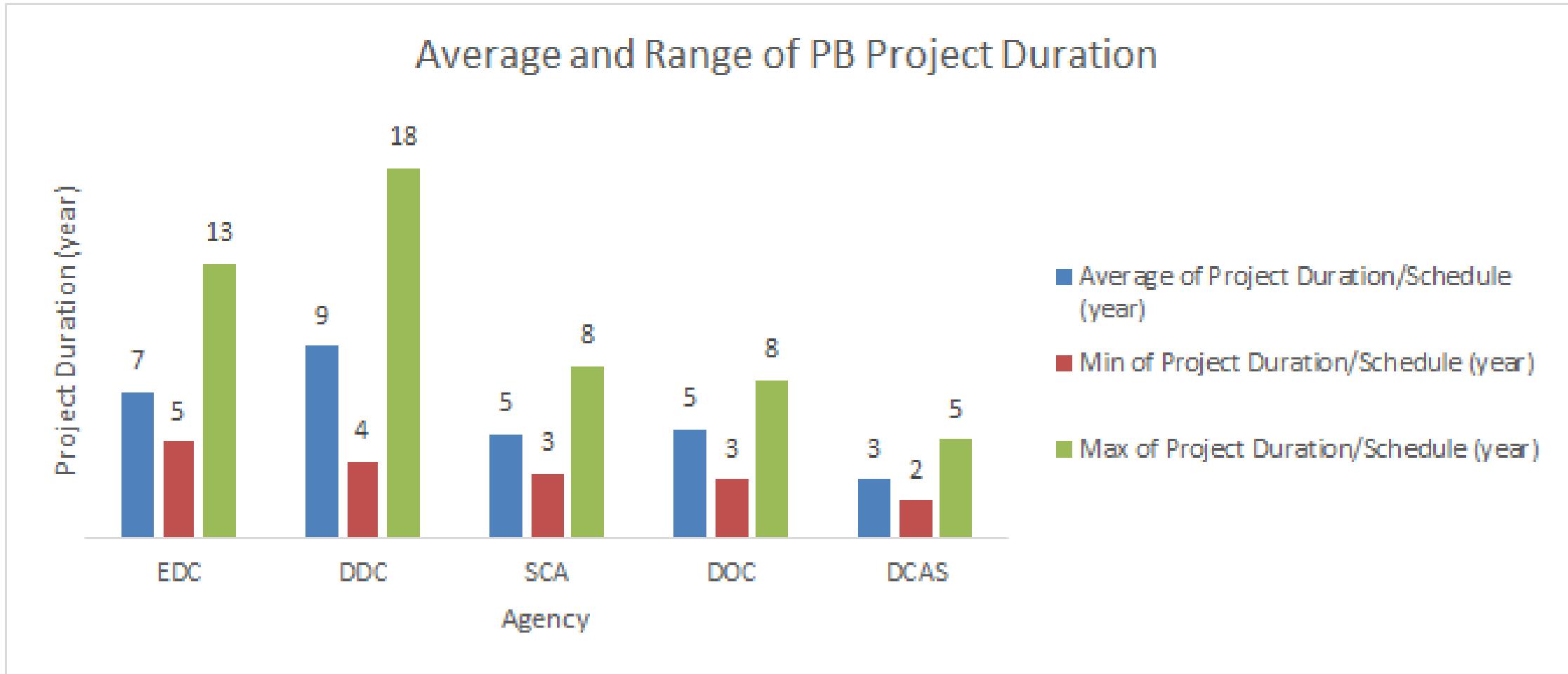
Public Building Projects by Agency



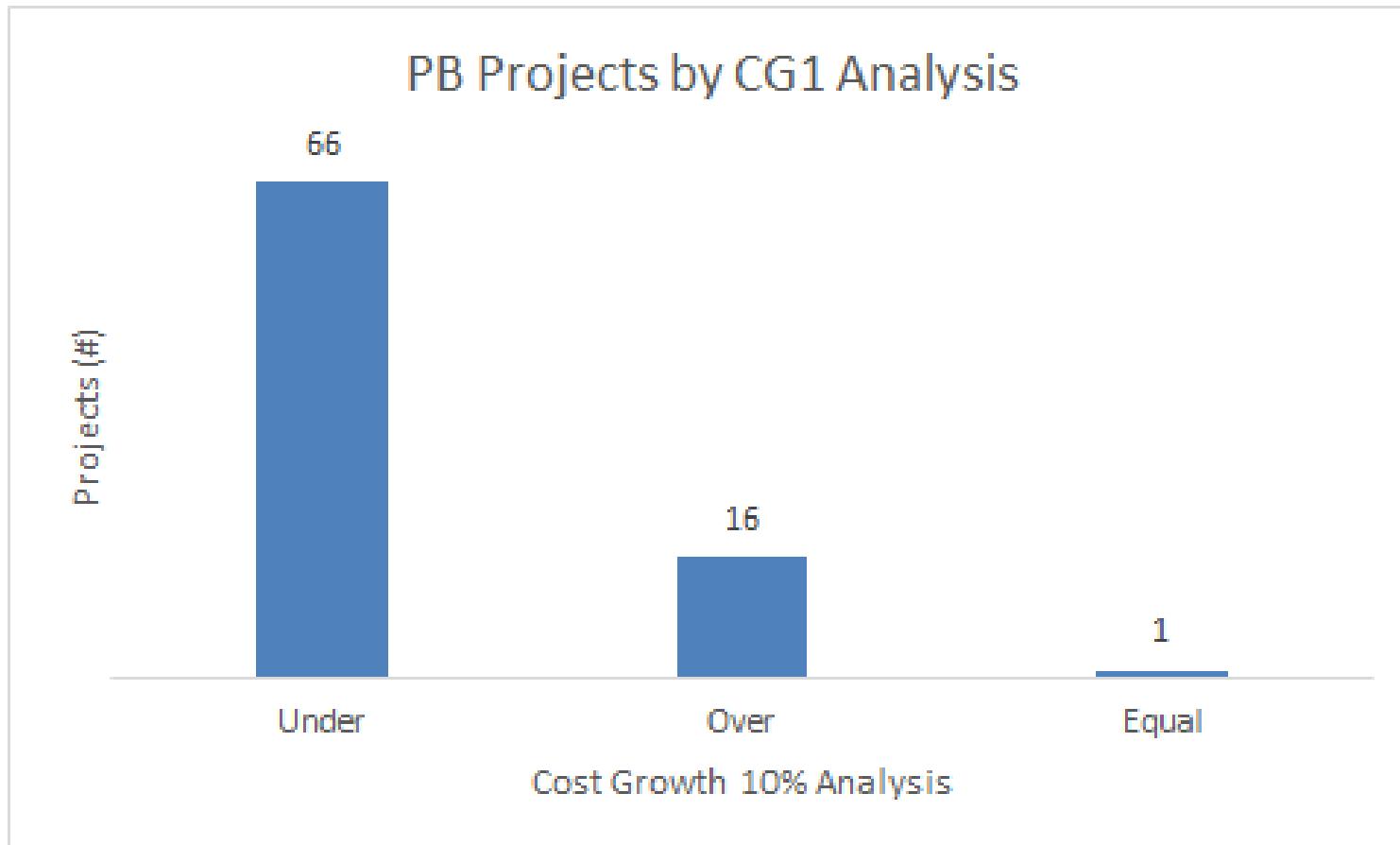
Public Building Projects by Building Typology



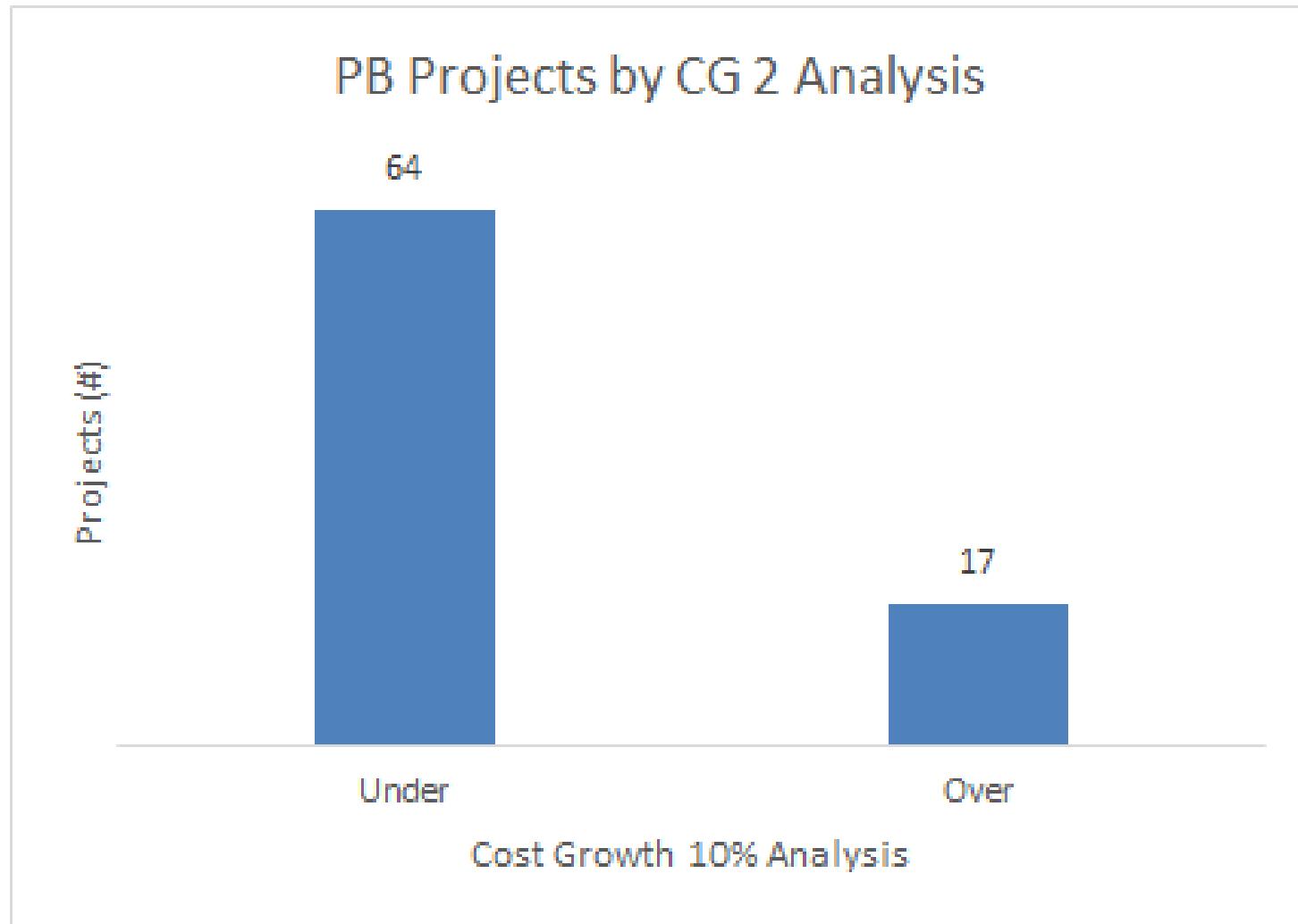
Public Building Projects by Average + Range of Duration



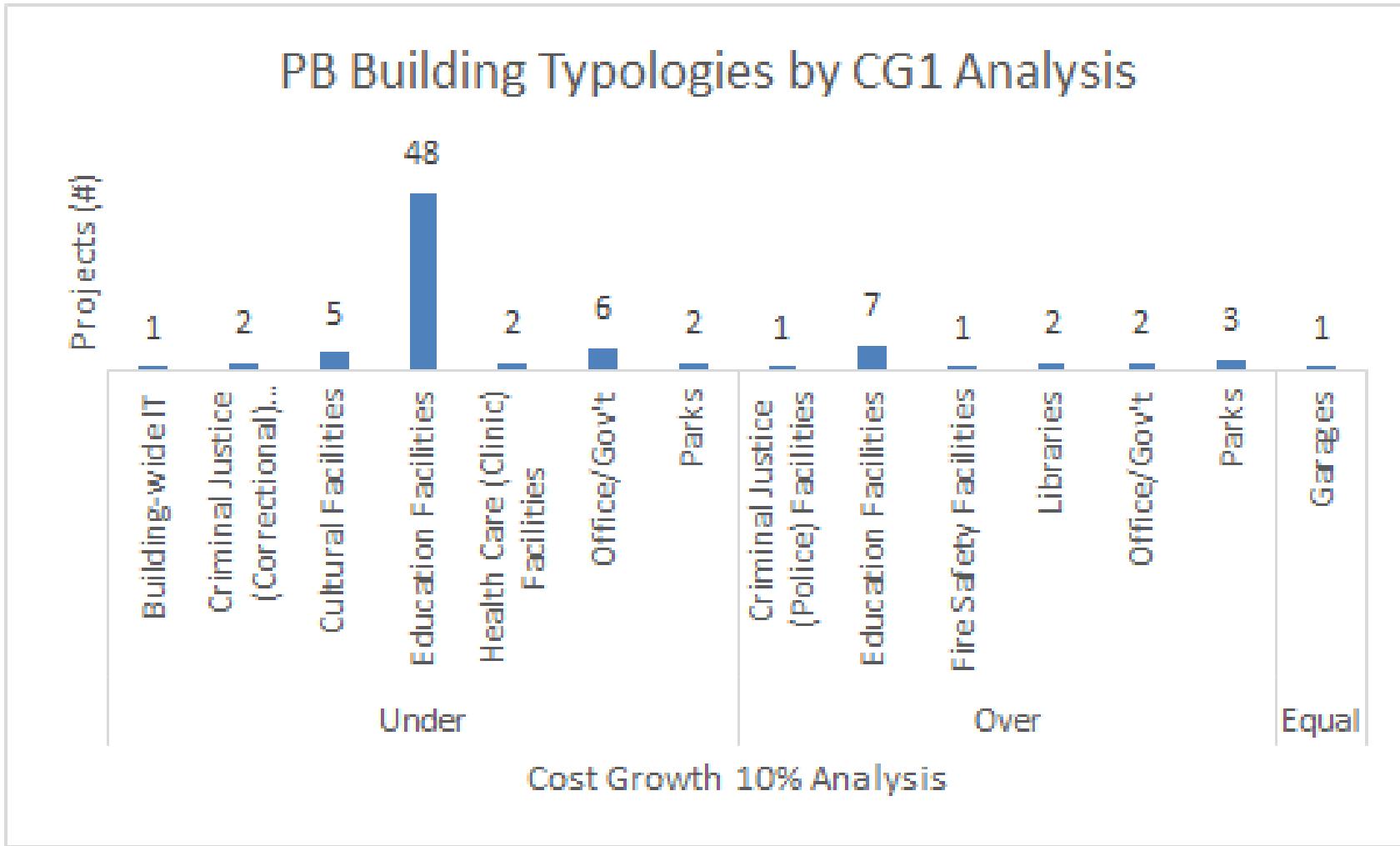
Public Building Projects by CG 1 10% Analysis



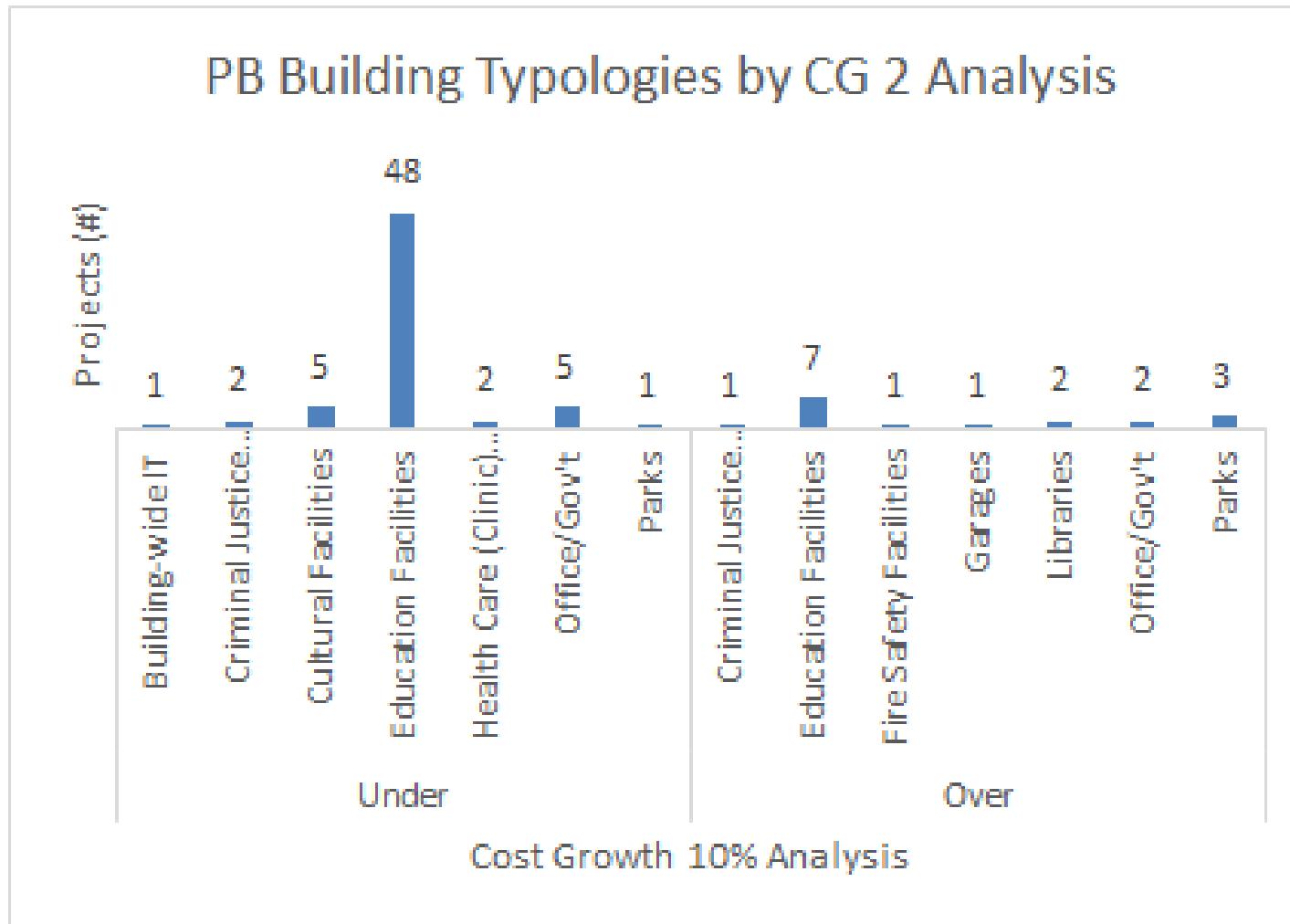
Public Building Projects by CG 2 10% Analysis



Public Building Typologies by CG 1 10% Analysis



Public Building Typologies by CG 2 10% Analysis



DFG Task 4

Internal Data Correlation Analyses

Correlation Analysis Variables

Numerical Variables
Project Type (Infrastructure or Public Buildings)
Project Duration
Project Cost (Construction)
Project Cost (Budget)

- Correlation coefficients will be calculated between Cost Growth (1 , 2) and numerical variables
 - The same calculations will be done by limiting projects by **type, typology, agency, and size**
 - A correlation coefficient is statistically significant if its p value is less than the significance level of 0.05
- More insights can be gathered through regression analyses (task 6) and other methods to avoid calculation errors

Correlation Analysis: All Projects

Cost Growth 1	Correlation Coefficient	p value
Project Type	0.01	0.87
Project Duration	0.31	0.00
Project Cost (Construction)	-0.06	0.41
Project Cost (Budget)	-0.05	0.53

Cost Growth 2	Correlation Coefficient	p value
Project Type	-0.09	0.24
Project Duration	0.00	0.96
Project Cost (Construction)	0.02	0.81
Project Cost (Budget)	-0.07	0.31

Correlation Analysis: Infrastructure Projects

Cost Growth 1	Correlation Coefficient	p value
Project Type	ERROR	ERROR
Project Duration	0.26	0.00
Project Cost (Construction)	-0.11	0.13
Project Cost (Budget)	-0.03	0.63

Cost Growth 2	Correlation Coefficient	p value
Project Type	ERROR	ERROR
Project Duration	-0.02	0.79
Project Cost (Construction)	-0.04	0.57
Project Cost (Budget)	-0.07	0.33

Correlation Analysis: Public Building Projects

Cost Growth 1	Correlation Coefficient	p value
Project Type	0.07	0.36
Project Duration	0.40	0.00
Project Cost (Construction)	-0.03	0.69
Project Cost (Budget)	-0.04	0.54

Cost Growth 2	Correlation Coefficient	p value
Project Type	ERROR	ERROR
Project Duration	0.13	0.06
Project Cost (Construction)	0.12	0.11
Project Cost (Budget)	-0.12	0.11

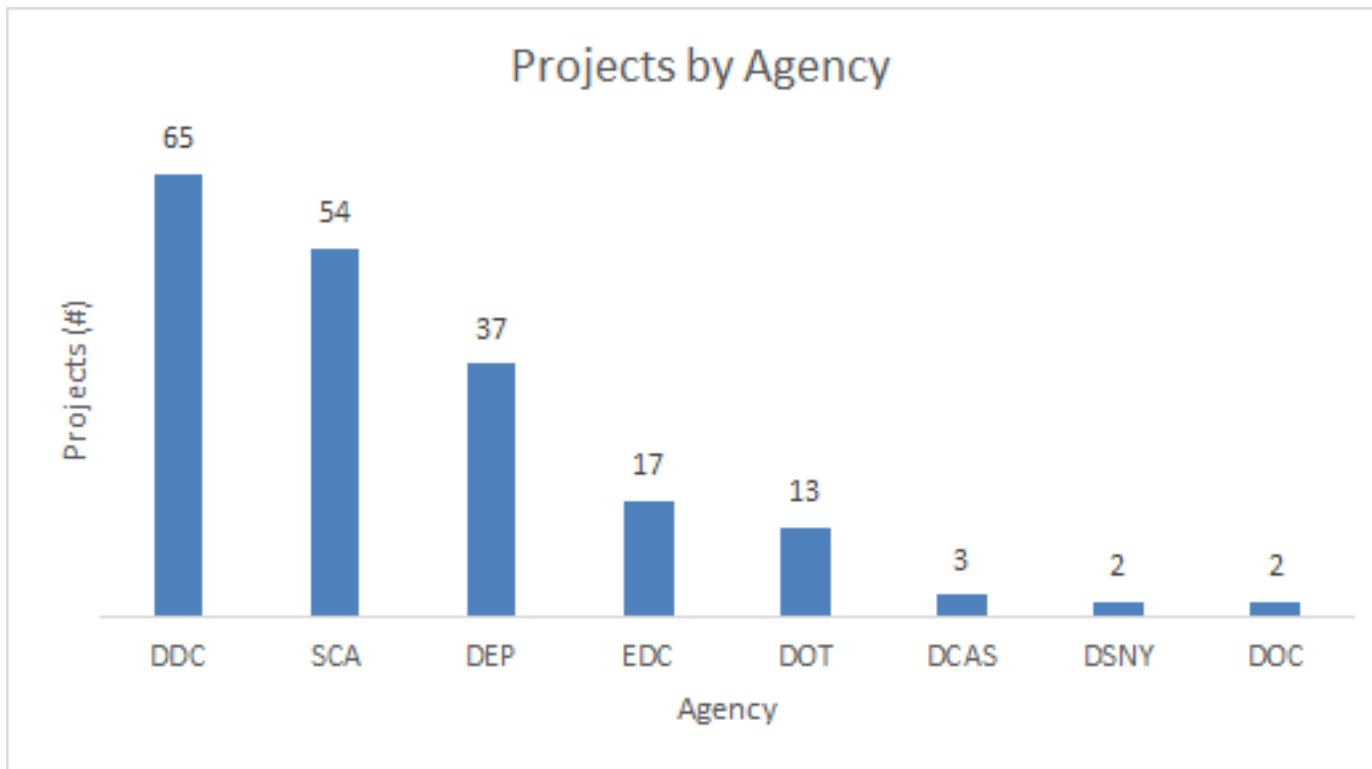
Correlation Analysis: Building Typology (PB)

Cost Growth 1	Correlation Coefficient	p value
Project Type	0.07	0.36
Project Duration	0.40	0.00
Project Cost (Construction)	-0.03	0.69
Project Cost (Budget)	-0.04	0.54

Cost Growth 2	Correlation Coefficient	p value
Project Type	-0.05	0.52
Project Duration	0.02	0.76
Project Cost (Construction)	0.12	0.10
Project Cost (Budget)	-0.11	0.13

Correlation Analysis: Agency

- Correlation analyses were not performed for DCAS, DSNY, and DOC due to the limited amount of data available for those agencies



Correlation Analysis: Agency (DDC)

Cost Growth 1	Correlation Coefficient	p value
Project Type	0.16	0.02
Project Duration	0.22	0.00
Project Cost (Construction)	0.00	0.95
Project Cost (Budget)	-0.01	0.90

Cost Growth 2	Correlation Coefficient	p value
Project Type	-0.26	0.00
Project Duration	0.01	0.90
Project Cost (Construction)	0.00	0.95
Project Cost (Budget)	-0.07	0.31

Correlation Analysis: Agency (SCA)

Cost Growth 1	Correlation Coefficient	p value
Project Type	ERROR	ERROR
Project Duration	-0.08	0.30
Project Cost (Construction)	0.15	0.03
Project Cost (Budget)	0.28	0.00

Cost Growth 2	Correlation Coefficient	p value
Project Type	ERROR	ERROR
Project Duration	-0.09	0.23
Project Cost (Construction)	0.20	0.01
Project Cost (Budget)	0.29	0.00

Correlation Analysis: Agency (DEP)

Cost Growth 1	Correlation Coefficient	p value
Project Type	ERROR	ERROR
Project Duration	0.22	0.00
Project Cost (Construction)	-0.20	0.01
Project Cost (Budget)	-0.20	0.01

Cost Growth 2	Correlation Coefficient	p value
Project Type	ERROR	ERROR
Project Duration	0.22	0.00
Project Cost (Construction)	-0.19	0.01
Project Cost (Budget)	-0.21	0.00

Correlation Analysis: Agency (EDC)

Cost Growth 1	Correlation Coefficient	p value
Project Type	0.07	0.31
Project Duration	0.07	0.30
Project Cost (Construction)	0.32	0.00
Project Cost (Budget)	-0.21	0.00

Cost Growth 2	Correlation Coefficient	p value
Project Type	-0.06	0.42
Project Duration	-0.18	0.01
Project Cost (Construction)	0.45	0.00
Project Cost (Budget)	-0.23	0.00

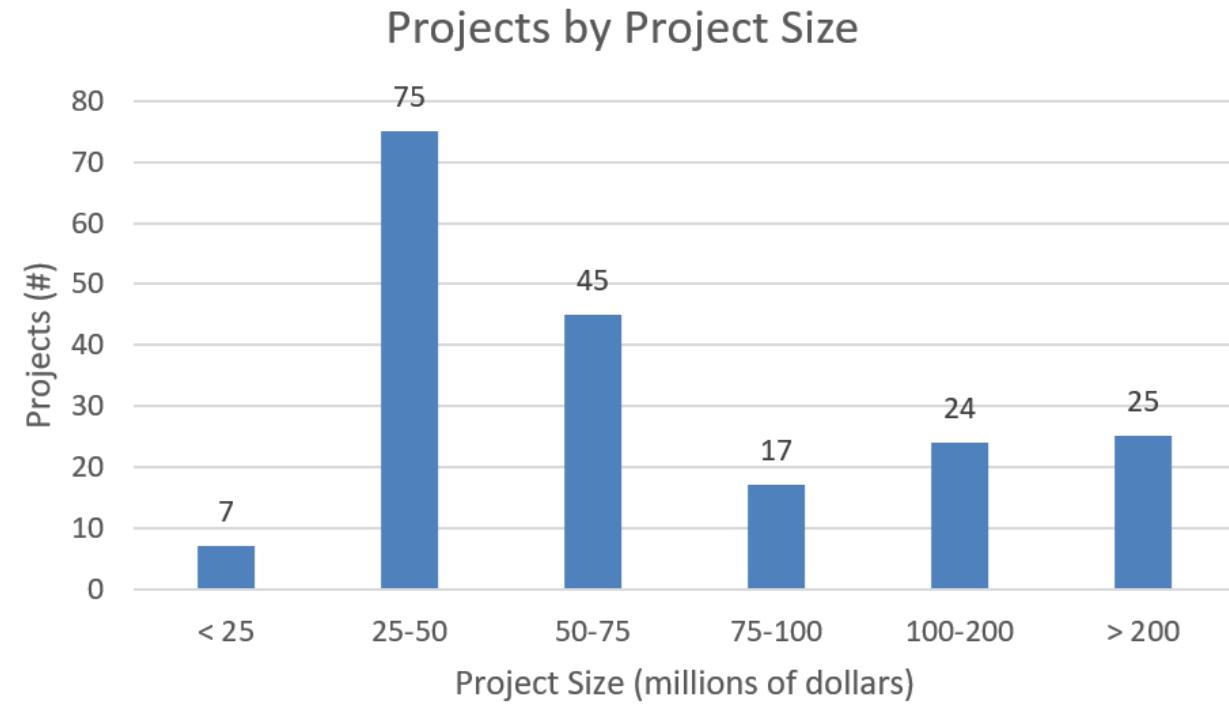
Correlation Analysis: Agency (DOT)

Cost Growth 1	Correlation Coefficient	p value
Project Type	ERROR	ERROR
Project Duration	0.26	0.00
Project Cost (Construction)	-0.04	0.62
Project Cost (Budget)	0.80	0.00

Cost Growth 2	Correlation Coefficient	p value
Project Type	ERROR	ERROR
Project Duration	0.32	0.00
Project Cost (Construction)	-0.11	0.14
Project Cost (Budget)	0.15	0.04

Correlation Analysis: Project Size

- Project Size ranges were created based on Project Budgets



Correlation Analysis: Project Size (< \$25 million)

Cost Growth 1	Correlation Coefficient	p value
Project Type	0.70	0.00
Project Duration	-0.28	0.00
Project Cost (Construction)	0.17	0.02
Project Cost (Budget)	0.05	0.47

Cost Growth 2	Correlation Coefficient	p value
Project Type	0.73	0.00
Project Duration	-0.22	0.00
Project Cost (Construction)	0.30	0.00
Project Cost (Budget)	0.14	0.05

Correlation Analysis: Project Size (\$25 - \$50 million)

Cost Growth 1	Correlation Coefficient	p value
Project Type	-0.07	0.34
Project Duration	-0.14	0.06
Project Cost (Construction)	0.21	0.00
Project Cost (Budget)	0.09	0.24

Cost Growth 2	Correlation Coefficient	p value
Project Type	0.06	0.38
Project Duration	-0.02	0.76
Project Cost (Construction)	0.02	0.83
Project Cost (Budget)	-0.06	0.43

Correlation Analysis: Project Size (\$50 - \$75 million)

Cost Growth 1	Correlation Coefficient	p value
Project Type	-0.29	0.00
Project Duration	-0.04	0.60
Project Cost (Construction)	-0.15	0.04
Project Cost (Budget)	-0.29	0.00

Cost Growth 2	Correlation Coefficient	p value
Project Type	-0.12	0.10
Project Duration	-0.08	0.25
Project Cost (Construction)	-0.15	0.04
Project Cost (Budget)	0.02	0.78

Correlation Analysis: Project Size (\$75 - \$100 million)

Cost Growth 1	Correlation Coefficient	p value
Project Type	0.19	0.01
Project Duration	0.26	0.00
Project Cost (Construction)	0.04	0.58
Project Cost (Budget)	0.01	0.93

Cost Growth 2	Correlation Coefficient	p value
Project Type	-0.11	0.12
Project Duration	0.02	0.73
Project Cost (Construction)	0.01	0.90
Project Cost (Budget)	0.13	0.07

Correlation Analysis: Project Size (\$100 - \$200 million)

Cost Growth 1	Correlation Coefficient	p value
Project Type	-0.11	0.15
Project Duration	-0.15	0.03
Project Cost (Construction)	0.38	0.00
Project Cost (Budget)	0.32	0.00

Cost Growth 2	Correlation Coefficient	p value
Project Type	-0.23	0.00
Project Duration	-0.21	0.00
Project Cost (Construction)	0.20	0.00
Project Cost (Budget)	0.29	0.00

Correlation Analysis: Project Size (> \$200 million)

Cost Growth 1	Correlation Coefficient	p value
Project Type	0.19	0.01
Project Duration	-0.03	0.70
Project Cost (Construction)	-0.21	0.00
Project Cost (Budget)	-0.15	0.04

Cost Growth 2	Correlation Coefficient	p value
Project Type	0.18	0.01
Project Duration	-0.03	0.65
Project Cost (Construction)	-0.20	0.01
Project Cost (Budget)	-0.14	0.05

DFG Task 5

External Data: New Independent Variables

External Data: Independent Variables

LIBOR Rates

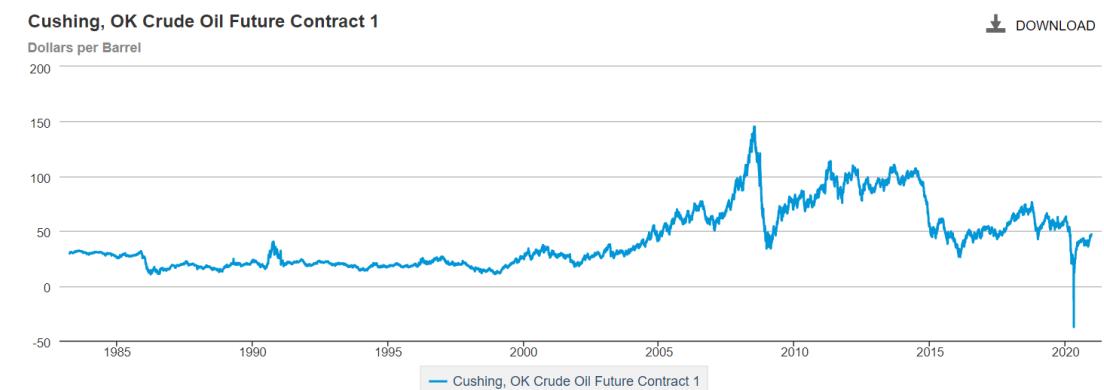
- 12 Month LIBOR (USD) on the “Design Plan Procurement End” date



Source: [Federal Reserve Bank of St. Louis](#)

Crude Oil

- Crude Oil (USD/Barrel) on the “Design Plan Procurement End” date



Source: [U.S. Energy Information Administration](#)

DFG Task 6

Regression Analyses

Regression 1

Main:

- Managing Agency (8)*
- LIBOR Rates
- Crude Oil
- Project Type
- Project Duration

Regression 2

Building Typology (10):*

- Building-wide IT
- Criminal Justice Facilities
- Cultural Facilities
- Education Facilities
- Fire Safety Facilities
- Garages
- Healthcare Facilities
- Libraries
- Office/government
- Parks

Regression 3

Location (6):*

- Bronx
- Brooklyn
- Manhattan
- Queens
- Staten Island
- Citywide

*the regression coefficients of categorical variables are calculated against a baseline of the DOC (Managing Agency), Building-wide IT (Building Typology), and Citywide (Location). Those independent variables are therefore not included in the regression table.

Regression 1: Cost Growth 1

Insights:

- As LIBOR Rates increase, CG is likely to increase
- If a Project Type is a Public Building, CG is likely to increase
- As Project Duration increases, CG is likely to increase

Regression Statistics		ANOVA						
			df	SS	MS	F	Significance F	
Multiple R	0.437							
R Square	0.191	Regression	11	8.33128	0.75739	3.88031		0.00005
Adjusted R Square	0.142	Residual	181	35.32897	0.19519			
Standard Error	0.442	Total	192	43.66025				
Observations	193							

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-0.493	0.352	-1.403	0.162	-1.187	0.201	-1.187	0.201
Agency_DCAS	-0.003	0.406	-0.007	0.995	-0.803	0.798	-0.803	0.798
Agency_DDC	0.245	0.332	0.738	0.461	-0.409	0.899	-0.409	0.899
Agency_DEP	0.144	0.344	0.419	0.676	-0.534	0.822	-0.534	0.822
Agency_DOT	0.158	0.358	0.443	0.658	-0.547	0.864	-0.547	0.864
Agency_DSNY	-0.023	0.461	-0.049	0.961	-0.933	0.887	-0.933	0.887
Agency_EDC	0.328	0.336	0.974	0.331	-0.336	0.991	-0.336	0.991
Agency_SCA	0.030	0.319	0.095	0.925	-0.598	0.659	-0.598	0.659
LIBOR Rates (USD)	0.085	0.031	2.724	0.007	0.023	0.146	0.023	0.146
Crude Oil Future Contract 1 (Dollars per Barrel)	0.000	0.001	-0.091	0.927	-0.003	0.003	-0.003	0.003
Project Type	0.272	0.113	2.406	0.017	0.049	0.495	0.049	0.495
Project Duration	0.031	0.010	3.287	0.001	0.013	0.050	0.013	0.050

* important values are bolded and statistically significant ones are also highlighted

Regression 1: Cost Growth 2

Insights:

- If a Project Type is a Public Building, CG is likely to increase

Regression Statistics		ANOVA						
			df	SS	MS	F	Significance F	
Multiple R	0.311							
R Square	0.097	Regression	11	300.34	27.30	1.77		0.06
Adjusted R Square	0.042	Residual	181	2796.30	15.45			
Standard Error	3.931	Total	192	3096.63				
Observations	193							
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-3.066	3.128	-0.980	0.328	-9.238	3.106	-9.238	3.106
Agency_DCAS	-0.037	3.609	-0.010	0.992	-7.159	7.085	-7.159	7.085
Agency_DDC	2.445	2.950	0.829	0.408	-3.375	8.265	-3.375	8.265
Agency_DEP	2.507	3.059	0.820	0.414	-3.529	8.542	-3.529	8.542
Agency_DOT	2.445	3.181	0.769	0.443	-3.832	8.722	-3.832	8.722
Agency_DSNY	2.296	4.103	0.560	0.576	-5.800	10.393	-5.800	10.393
Agency_EDC	4.668	2.990	1.561	0.120	-1.232	10.568	-1.232	10.568
Agency_SCA	-0.074	2.834	-0.026	0.979	-5.665	5.518	-5.665	5.518
LIBOR Rates (USD)	-0.059	0.277	-0.212	0.833	-0.604	0.487	-0.604	0.487
Crude Oil Future Contract 1 (Dollars per Barrel)	0.011	0.013	0.849	0.397	-0.015	0.037	-0.015	0.037
Project Type	2.388	1.005	2.375	0.019	0.404	4.372	0.404	4.372
Project Duration	0.000	0.085	0.005	0.996	-0.167	0.168	-0.167	0.168

* important values are bolded and statistically significant ones are also highlighted

Regression 2: Cost Growth 1

Insights:

- If the Public Building is a Fire Facility, Library, or Park, CG is more likely to increase than the baseline of Building-Wide IT

Regression Statistics		ANOVA					
			df	SS	MS	F	Significance F
Multiple R	0.946						
R Square	0.895	Regression	9	20.990	2.332	69.297	3.72E-32
Adjusted R Square	0.882	Residual	73	2.457	0.034		
Standard Error	0.183	Total	82	23.447			
Observations	83						

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.010	0.183	0.052	0.959	-0.356	0.375	-0.356	0.375
Criminal Justice Facilities	0.042	0.212	0.200	0.842	-0.380	0.464	-0.380	0.464
Cultural Facilities	-0.003	0.201	-0.016	0.987	-0.404	0.397	-0.404	0.397
Education Facilities	0.027	0.185	0.146	0.885	-0.342	0.396	-0.342	0.396
Fire Safety Facilities	4.443	0.259	17.124	0.000	3.926	4.960	3.926	4.960
Garages	0.091	0.259	0.352	0.726	-0.426	0.608	-0.426	0.608
Health Care Facilities	-0.010	0.225	-0.042	0.966	-0.457	0.438	-0.457	0.438
Libraries	0.824	0.225	3.668	0.000	0.376	1.272	0.376	1.272
Office/Gov't	0.145	0.195	0.747	0.458	-0.243	0.533	-0.243	0.533
Parks	0.498	0.201	2.479	0.016	0.098	0.899	0.098	0.899

* important values are bolded and statistically significant ones are also highlighted

Regression 2: Cost Growth 2

Insights:

- If the Public Building is a Library, CG is more likely to increase than the baseline of Building-Wide IT

Regression Statistics		ANOVA						
			df		SS	MS	F	Significance F
Multiple R	0.600							
R Square	0.360	Regression	9	974.6854	108.2984	4.5702	0.0001	
Adjusted R Square	0.282	Residual	73	1729.8429	23.6965			
Standard Error	4.868	Total	82	2704.5283				
Observations	83							

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.009	4.868	0.002	0.998	-9.693	9.711	-9.693	9.711
Criminal Justice Facilities	0.045	5.621	0.008	0.994	-11.157	11.248	-11.157	11.248
Cultural Facilities	-0.001	5.333	0.000	1.000	-10.629	10.626	-10.629	10.626
Education Facilities	0.024	4.912	0.005	0.996	-9.766	9.813	-9.766	9.813
Fire Safety Facilities	3.414	6.884	0.496	0.621	-10.306	17.134	-10.306	17.134
Garages	0.101	6.884	0.015	0.988	-13.619	13.822	-13.619	13.822
Health Care Facilities	-0.009	5.962	-0.002	0.999	-11.891	11.873	-11.891	11.873
Libraries	19.479	5.962	3.267	0.002	7.597	31.361	7.597	31.361
Office/Gov't	0.158	5.163	0.031	0.976	-10.132	10.448	-10.132	10.448
Parks	7.576	5.333	1.421	0.160	-3.051	18.204	-3.051	18.204

* important values are bolded and statistically significant ones are also highlighted

Regression 3: Cost Growth 1

Regression Statistics		ANOVA						
			df	SS	MS	F	Significance F	
Multiple R	0.230							
R Square	0.053	Regression	5	1.277	0.255	1.582		0.169
Adjusted R Square	0.019	Residual	142	22.923	0.161			
Standard Error	0.402	Total	147	24.200				
Observations	148							

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.162	0.111	1.456	0.148	-0.058	0.383	-0.058	0.383
Bronx	-0.082	0.141	-0.586	0.559	-0.360	0.196	-0.360	0.196
Brooklyn	-0.075	0.137	-0.547	0.585	-0.347	0.196	-0.347	0.196
Manhattan	0.171	0.132	1.296	0.197	-0.090	0.433	-0.090	0.433
Queens	-0.031	0.126	-0.248	0.804	-0.279	0.217	-0.279	0.217
Staten Island	-0.009	0.181	-0.052	0.958	-0.366	0.347	-0.366	0.347

* important values are bolded and statistically significant ones are also highlighted

Regression 3: Cost Growth 2

Regression Statistics		ANOVA						
			df	SS	MS	F	Significance F	
Multiple R	0.137							
R Square	0.019	Regression	5	57.929	11.586	0.546	0.741	
Adjusted R Square	-0.016	Residual	142	3011.670	21.209			
Standard Error	4.605	Total	147	3069.599				
Observations	148							
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.147	1.277	0.115	0.909	-2.378	2.672	-2.378	2.672
Bronx	-0.049	1.611	-0.031	0.976	-3.234	3.135	-3.234	3.135
Brooklyn	0.143	1.575	0.091	0.928	-2.970	3.256	-2.970	3.256
Manhattan	0.571	1.515	0.377	0.707	-2.424	3.565	-2.424	3.565
Queens	1.474	1.440	1.024	0.308	-1.372	4.321	-1.372	4.321
Staten Island	0.087	2.069	0.042	0.967	-4.004	4.177	-4.004	4.177

* important values are bolded and statistically significant ones are also highlighted

Regression Summary:

Independent Variables with statistically significant regression coefficients

Regression 1

Cost Growth 1

- LIBOR Rates
- Project Type (public building, higher CG)
- Project Duration

Cost Growth 2

- Project Type (public building, higher CG)

Regression 2

Cost Growth 1:

- Fire Safety Facilities
- Libraries
- Parks

Cost Growth 2:

- Libraries

Regression 3

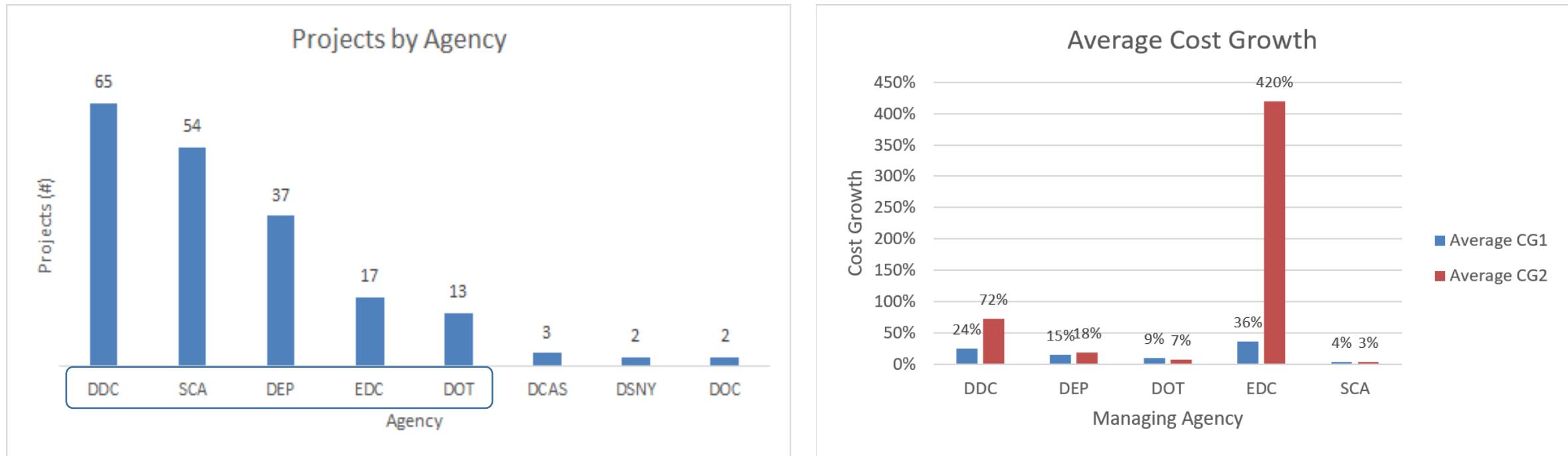
Cost Growth 1, 2:

- none

DFG Task 6 - Extended

Descriptive Statistics and Regression Analyses for Select Managing Agencies

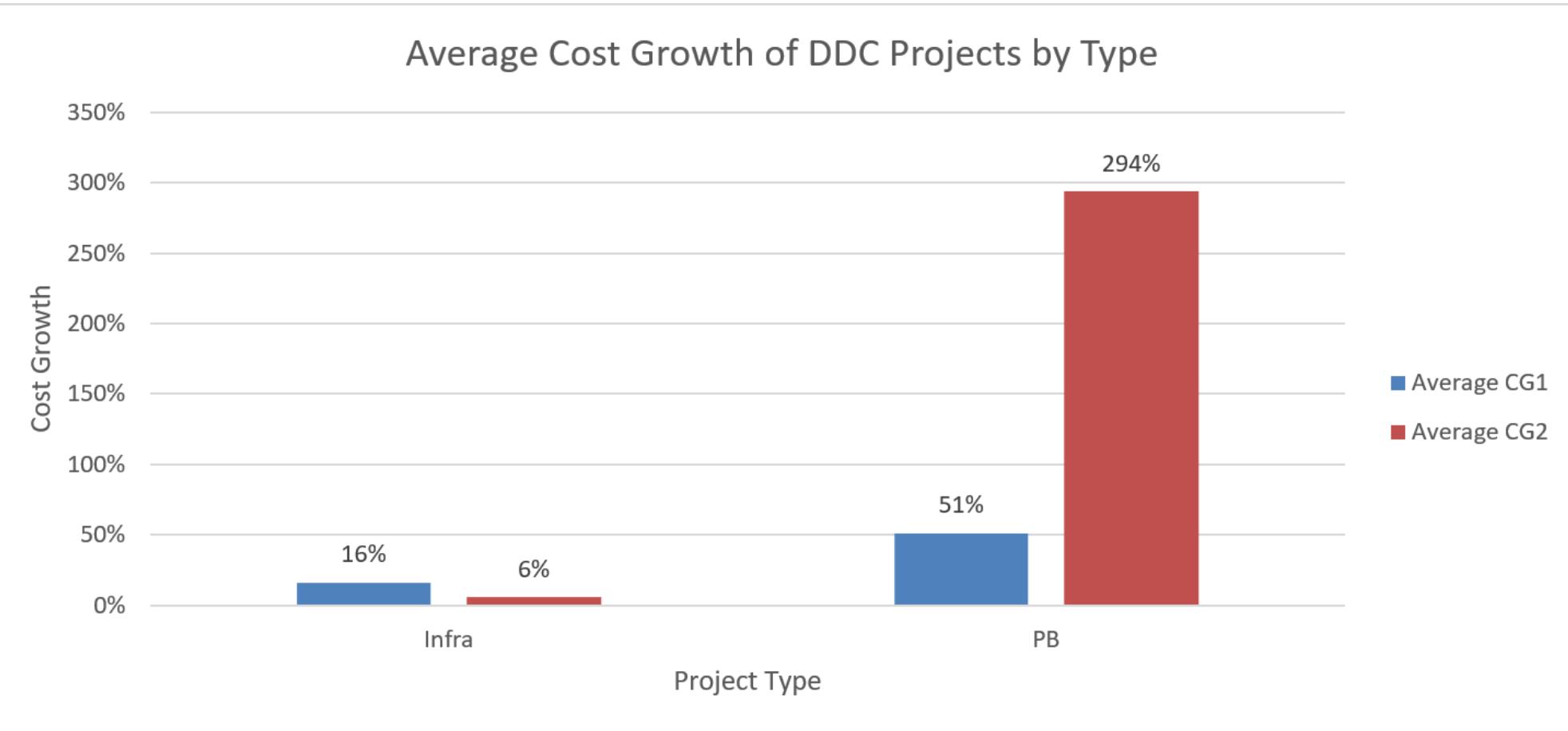
Managing Agencies



Notes:

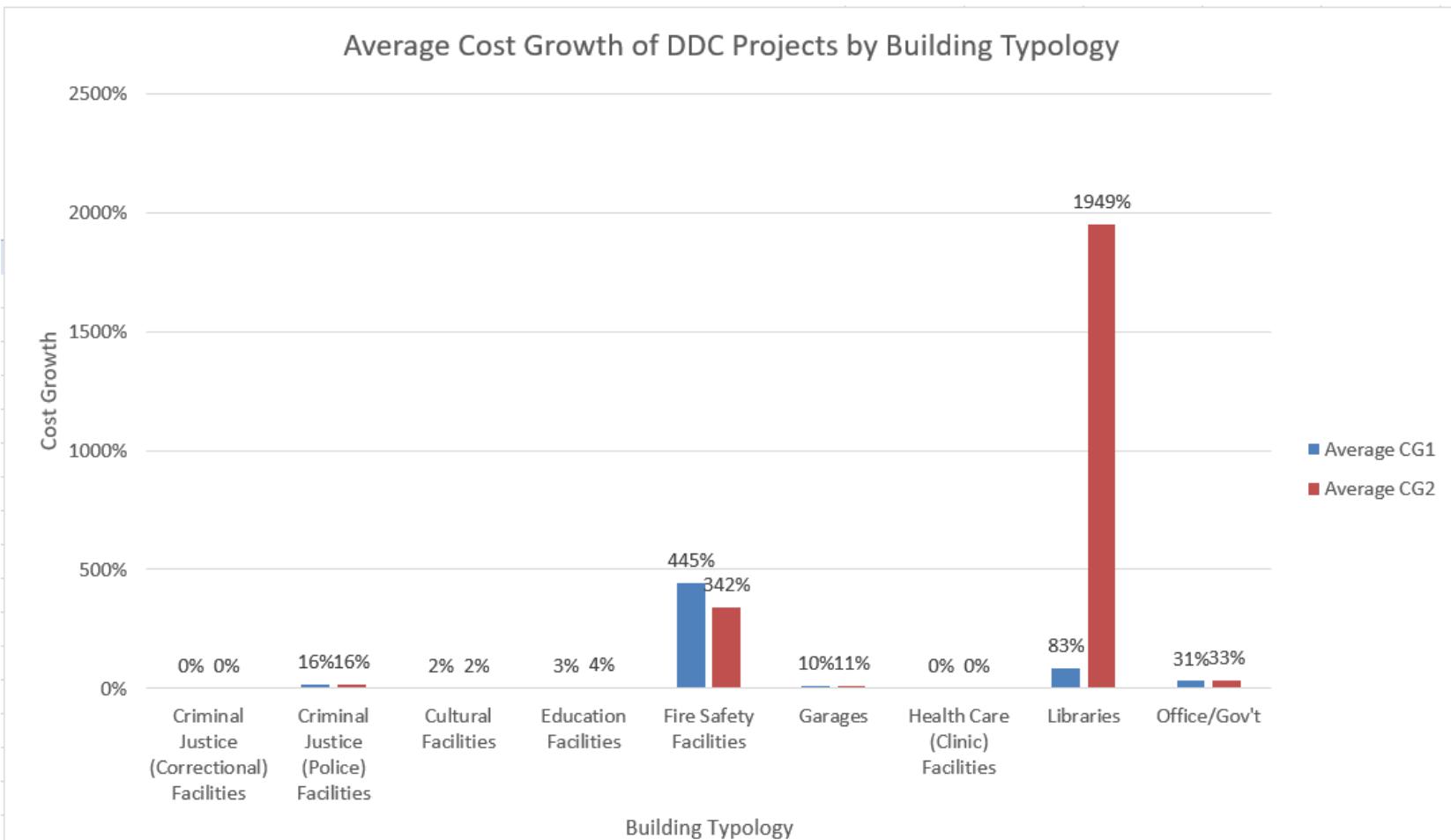
- Analyses are performed for the five agencies with the most number of projects
- DDC + EDC have more descriptive statistics because they have both Infrastructure and Public Building Projects
- Regressions: Citywide and/or Staten Island projects are not included in analyses due to lack of data/need for a baseline

DDC Descriptive Statistics: Project Type*



* additional descriptive statistics because more than one project type

DDC Descriptive Statistics: Building Typology*



* additional descriptive statistics because more than one project type

DDC Regression: Cost Growth 1

Insights:

- As Project Duration increases, CG1 is likely to increase for DDC projects

Regression Statistics		ANOVA						
			df		SS	MS	F	Significance F
Multiple R	0.500							
R Square	0.250	Regression	9		4.313	0.479	1.441	0.205
Adjusted R Square	0.076	Residual	39		12.974	0.333		
Standard Error	0.577	Total	48		17.287			
Observations	49							

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-0.290	0.531	-0.546	0.588	-1.365	0.784	-1.365	0.784
Crude Oil (\$/Barrel)	0.001	0.004	0.259	0.797	-0.007	0.009	-0.007	0.009
LIBOR Rates (\$)	0.025	0.070	0.362	0.720	-0.117	0.168	-0.117	0.168
Location_Bronx	-0.485	0.513	-0.945	0.351	-1.524	0.553	-1.524	0.553
Location_Brooklyn	-0.502	0.498	-1.009	0.319	-1.508	0.504	-1.508	0.504
Location_Manhattan	-0.047	0.465	-0.102	0.919	-0.987	0.893	-0.987	0.893
Location_Queens	-0.257	0.467	-0.551	0.585	-1.203	0.688	-1.203	0.688
Location_Staten Island	-0.390	0.730	-0.535	0.596	-1.867	1.086	-1.867	1.086
Project Duration (yr)	0.063	0.029	2.133	0.039	0.003	0.123	0.003	0.123
Project Type	-0.019	0.214	-0.091	0.928	-0.452	0.413	-0.452	0.413

* important values are bolded and statistically significant ones are also highlighted

DDC Regression: Cost Growth 2

Insights:

- If a Project Type is a Public Building, CG2 is likely to increase for DDC projects

Regression Statistics		ANOVA						
			df		SS	MS	F	Significance F
Multiple R	0.396							
R Square	0.157	Regression	9	226.130	25.126	0.806	0.614	
Adjusted R Square	-0.038	Residual	39	1216.405	31.190			
Standard Error	5.585	Total	48	1442.535				
Observations	49							

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-3.756	5.145	-0.730	0.470	-14.162	6.650	-14.162	6.650
Crude Oil (\$/Barrel)	0.020	0.038	0.520	0.606	-0.057	0.096	-0.057	0.096
LIBOR Rates (\$)	-0.415	0.682	-0.609	0.546	-1.794	0.964	-1.794	0.964
Location_Bronx	1.094	4.971	0.220	0.827	-8.961	11.150	-8.961	11.150
Location_Brooklyn	1.300	4.818	0.270	0.789	-8.445	11.045	-8.445	11.045
Location_Manhattan	-0.550	4.499	-0.122	0.903	-9.651	8.551	-9.651	8.551
Location_Queens	3.214	4.525	0.710	0.482	-5.940	12.367	-5.940	12.367
Location_Staten Island	1.014	7.068	0.143	0.887	-13.282	15.309	-13.282	15.309
Project Duration (yr)	0.156	0.286	0.547	0.588	-0.422	0.734	-0.422	0.734
Project Type	4.245	2.069	2.052	0.047	0.060	8.430	0.060	8.430

* important values are bolded and statistically significant ones are also highlighted

SCA Regression: Cost Growth 1

Insights:

- There are no statistically significant regression coefficients for SCA Projects (CG1)

Regression Statistics		ANOVA						
			df	SS	MS	F	Significance F	
Multiple R	0.441							
R Square	0.195	Regression	7	0.041	0.006	1.140	0.363	
Adjusted R Square	0.024	Residual	33	0.171	0.005			
Standard Error	0.072	Total	40	0.213				
Observations	41							

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.221	0.134	1.647	0.109	-0.052	0.494	-0.052	0.494
Crude Oil (\$/Barrel)	-0.001	0.001	-1.559	0.128	-0.003	0.000	-0.003	0.000
LIBOR Rates (\$)	-0.055	0.039	-1.412	0.167	-0.135	0.024	-0.135	0.024
Location_Bronx	0.023	0.057	0.409	0.685	-0.093	0.139	-0.093	0.139
Location_Brooklyn	-0.010	0.077	-0.128	0.899	-0.166	0.147	-0.166	0.147
Location_Manhattan	0.082	0.061	1.351	0.186	-0.041	0.205	-0.041	0.205
Location_Queens	0.011	0.053	0.210	0.835	-0.097	0.120	-0.097	0.120
Project Duration (yr)	-0.009	0.015	-0.614	0.543	-0.040	0.022	-0.040	0.022

* important values are bolded and statistically significant ones are also highlighted

SCA Regression: Cost Growth 2

Insights:

- There are no statistically significant regression coefficients for SCA Projects (CG2)

Regression Statistics		ANOVA					
			df	SS	MS	F	Significance F
Multiple R	0.480						
R Square	0.231	Regression	7	0.043	0.006	1.414	0.233
Adjusted R Square	0.068	Residual	33	0.142	0.004		
Standard Error	0.066	Total	40	0.185			
Observations	41						

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.206	0.122	1.681	0.102	-0.043	0.455	-0.043	0.455
Crude Oil (\$/Barrel)	-0.001	0.001	-1.874	0.070	-0.003	0.000	-0.003	0.000
LIBOR Rates (\$)	-0.047	0.036	-1.311	0.199	-0.119	0.026	-0.119	0.026
Location_Bronx	0.019	0.052	0.358	0.723	-0.087	0.124	-0.087	0.124
Location_Brooklyn	-0.015	0.070	-0.208	0.836	-0.157	0.128	-0.157	0.128
Location_Manhattan	0.083	0.055	1.512	0.140	-0.029	0.196	-0.029	0.196
Location_Queens	0.010	0.049	0.212	0.833	-0.089	0.109	-0.089	0.109
Project Duration (yr)	-0.007	0.014	-0.487	0.629	-0.035	0.022	-0.035	0.022

* important values are bolded and statistically significant ones are also highlighted

DEP Regression: Cost Growth 1

Insights:

- There are no statistically significant regression coefficients for DEP Projects (CG1)

Regression Statistics		ANOVA						
			df		SS	MS	F	Significance F
Multiple R	0.566							
R Square	0.320	Regression	8		0.345	0.043	0.823	0.596
Adjusted R Square	-0.069	Residual	14		0.734	0.052		
Standard Error	0.229	Total	22		1.079			
Observations	23							

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-0.107	0.367	-0.292	0.774	-0.895	0.681	-0.895	0.681
Crude Oil (\$/Barrel)	-0.001	0.003	-0.376	0.713	-0.006	0.004	-0.006	0.004
LIBOR Rates (\$)	0.085	0.071	1.189	0.254	-0.068	0.237	-0.068	0.237
Location_Bronx	0.076	0.222	0.341	0.738	-0.401	0.552	-0.401	0.552
Location_Brooklyn	0.211	0.190	1.107	0.287	-0.198	0.620	-0.198	0.620
Location_Citywide	0.189	0.214	0.880	0.394	-0.271	0.649	-0.271	0.649
Location_Manhattan	0.177	0.246	0.718	0.485	-0.351	0.705	-0.351	0.705
Location_Queens	-0.036	0.253	-0.144	0.888	-0.578	0.505	-0.578	0.505
Project Duration (yr)	0.016	0.019	0.815	0.429	-0.025	0.057	-0.025	0.057

* important values are bolded and statistically significant ones are also highlighted

DEP Regression: Cost Growth 2

Insights:

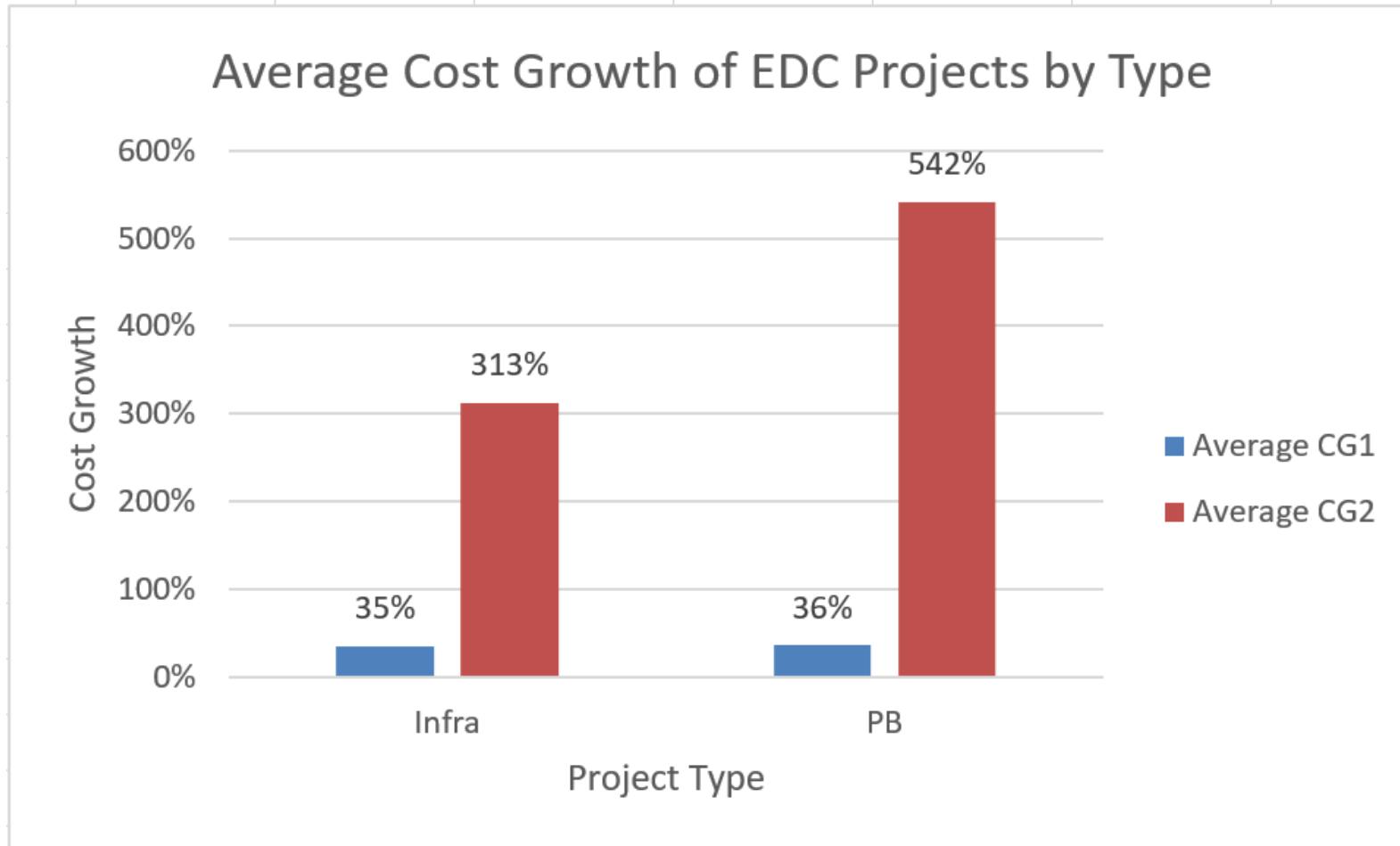
- There are no statistically significant regression coefficients for DEP Projects (CG2)

Regression Statistics		ANOVA						
			df		SS	MS	F	Significance F
Multiple R	0.667							
R Square	0.445	Regression	8		0.520	0.065	1.400	0.278
Adjusted R Square	0.127	Residual	14		0.650	0.046		
Standard Error	0.215	Total	22		1.170			
Observations	23							

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-0.116	0.346	-0.335	0.742	-0.857	0.625	-0.857	0.625
Crude Oil (\$/Barrel)	-0.001	0.002	-0.436	0.669	-0.006	0.004	-0.006	0.004
LIBOR Rates (\$)	0.123	0.067	1.836	0.088	-0.021	0.267	-0.021	0.267
Location_Bronx	0.140	0.209	0.670	0.514	-0.308	0.588	-0.308	0.588
Location_Brooklyn	0.219	0.179	1.224	0.241	-0.165	0.604	-0.165	0.604
Location_Citywide	0.236	0.202	1.170	0.261	-0.197	0.669	-0.197	0.669
Location_Manhattan	0.192	0.232	0.829	0.421	-0.305	0.689	-0.305	0.689
Location_Queens	-0.059	0.238	-0.246	0.809	-0.568	0.451	-0.568	0.451
Project Duration (yr)	0.015	0.018	0.810	0.432	-0.024	0.053	-0.024	0.053

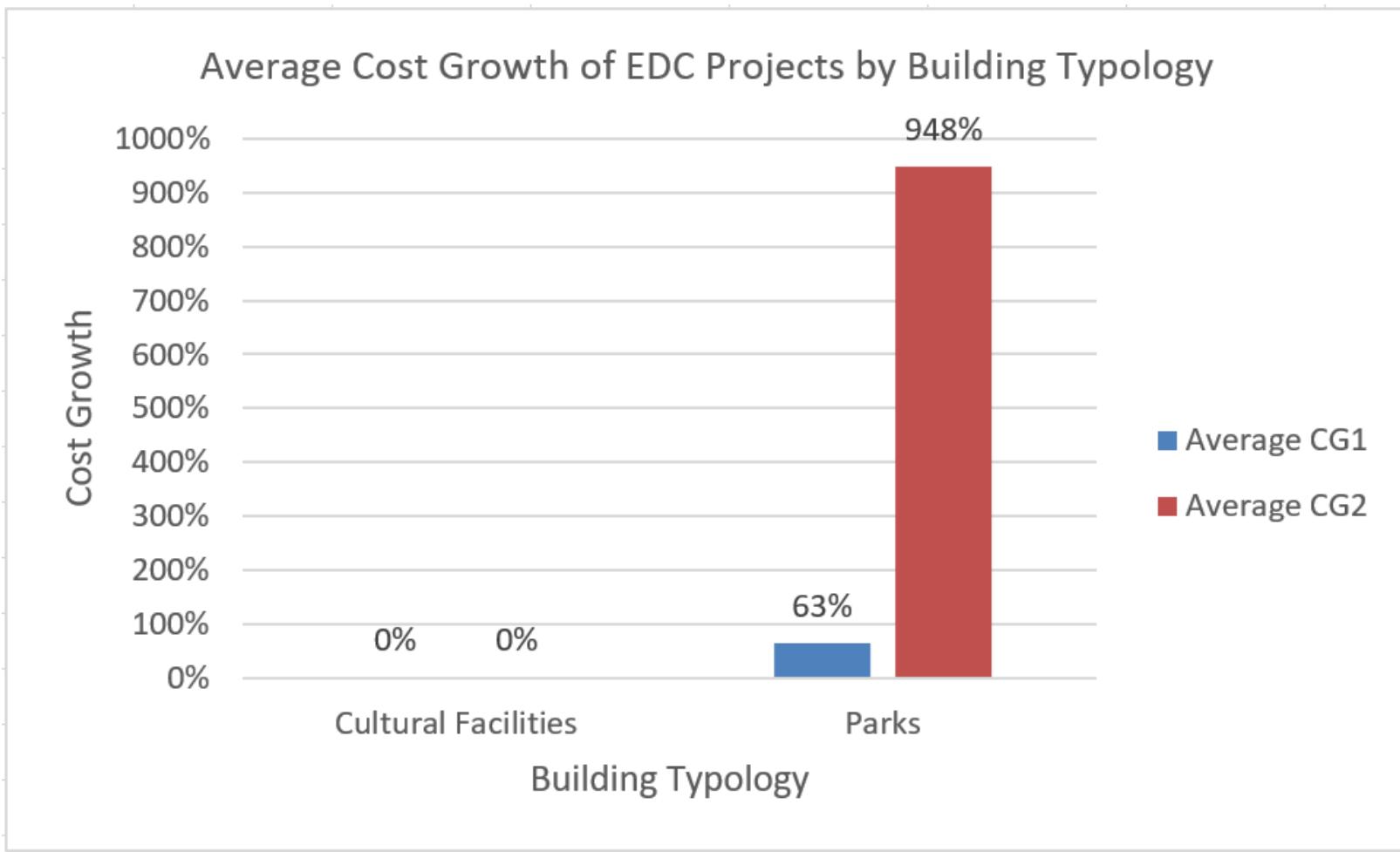
* important values are bolded and statistically significant ones are also highlighted

EDC Descriptive Statistics: Project Type*



* additional descriptive statistics because more than one project type

EDC Descriptive Statistics: Building Typology*



* additional descriptive statistics because more than one project type

EDC Regression: Cost Growth 1

Insights:

- As LIBOR Rates increase, CG1 is likely to decrease for EDC projects

Regression Statistics		ANOVA					
			df	SS	MS	F	Significance F
Multiple R	0.758						
R Square	0.574	Regression	8	2.073	0.259	1.348	0.342
Adjusted R Square	0.148	Residual	8	1.538	0.192		
Standard Error	0.438	Total	16	3.611			
Observations	17						

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	1.670	0.959	1.740	0.120	-0.543	3.882	-0.543	3.882
Crude Oil (\$/Barrel)	0.001	0.006	0.100	0.923	-0.013	0.015	-0.013	0.015
LIBOR Rates (\$)	-1.735	0.614	-2.826	0.022	-3.151	-0.319	-3.151	-0.319
Location_Bronx	0.866	0.660	1.311	0.226	-0.657	2.388	-0.657	2.388
Location_Brooklyn	-0.519	0.452	-1.148	0.284	-1.561	0.523	-1.561	0.523
Location_Manhattan	-0.278	0.516	-0.539	0.604	-1.467	0.911	-1.467	0.911
Location_Queens	0.020	0.440	0.045	0.965	-0.994	1.034	-0.994	1.034
Project Duration (yr)	0.018	0.038	0.473	0.649	-0.069	0.105	-0.069	0.105
Project Type	0.301	0.298	1.008	0.343	-0.387	0.988	-0.387	0.988

* important values are bolded and statistically significant ones are also highlighted

EDC Regression: Cost Growth 2

Insights:

- As LIBOR Rates increase, CG2 is likely to decrease for EDC projects

Regression Statistics		ANOVA						
			df		SS	MS	F	Significance F
Multiple R	0.774							
R Square	0.599	Regression	8		864.070	108.009	1.495	0.291
Adjusted R Square	0.198	Residual	8		577.924	72.241		
Standard Error	8.499	Total	16		1441.994			
Observations	17							

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	27.012	18.597	1.452	0.184	-15.874	69.897	-15.874	69.897
Crude Oil (\$/Barrel)	0.046	0.118	0.393	0.705	-0.225	0.318	-0.225	0.318
LIBOR Rates (\$)	-34.098	11.901	-2.865	0.021	-61.542	-6.654	-61.542	-6.654
Location_Bronx	22.225	12.798	1.737	0.121	-7.288	51.738	-7.288	51.738
Location_Brooklyn	-6.285	8.760	-0.718	0.493	-26.486	13.915	-26.486	13.915
Location_Manhattan	-4.969	9.993	-0.497	0.632	-28.013	18.076	-28.013	18.076
Location_Queens	7.442	8.521	0.873	0.408	-12.207	27.091	-12.207	27.091
Project Duration (yr)	-0.069	0.735	-0.094	0.928	-1.763	1.625	-1.763	1.625
Project Type	6.694	5.778	1.158	0.280	-6.631	20.019	-6.631	20.019

* important values are bolded and statistically significant ones are also highlighted

DOT Regression: Cost Growth 1

Insights:

- There are no statistically significant regression coefficients for DOT Projects (CG1)

Regression Statistics		ANOVA					
			df	SS	MS	F	Significance F
Multiple R	0.772						
R Square	0.596	Regression	8	0.358	0.045	0.554	0.776
Adjusted R Square	-0.480	Residual	3	0.242	0.081		
Standard Error	0.284	Total	11	0.601			
Observations	12						

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.391	0.574	0.682	0.544	-1.436	2.218	-1.436	2.218
Crude Oil (\$/Barrel)	-0.003	0.006	-0.467	0.673	-0.022	0.016	-0.022	0.016
LIBOR Rates (\$)	-0.124	0.085	-1.460	0.240	-0.395	0.146	-0.395	0.146
Location_Bronx	0.358	0.451	0.794	0.485	-1.077	1.794	-1.077	1.794
Location_Brooklyn	0.063	0.348	0.182	0.867	-1.044	1.171	-1.044	1.171
Location_Citywide	0.572	0.432	1.324	0.277	-0.803	1.947	-0.803	1.947
Location_Manhattan	0.058	0.468	0.124	0.909	-1.433	1.549	-1.433	1.549
Location_Queens	0.009	0.438	0.021	0.985	-1.386	1.404	-1.386	1.404
Project Duration (yr)	-0.010	0.016	-0.629	0.574	-0.060	0.041	-0.060	0.041

* important values are bolded and statistically significant ones are also highlighted

DOT Regression: Cost Growth 2

Insights:

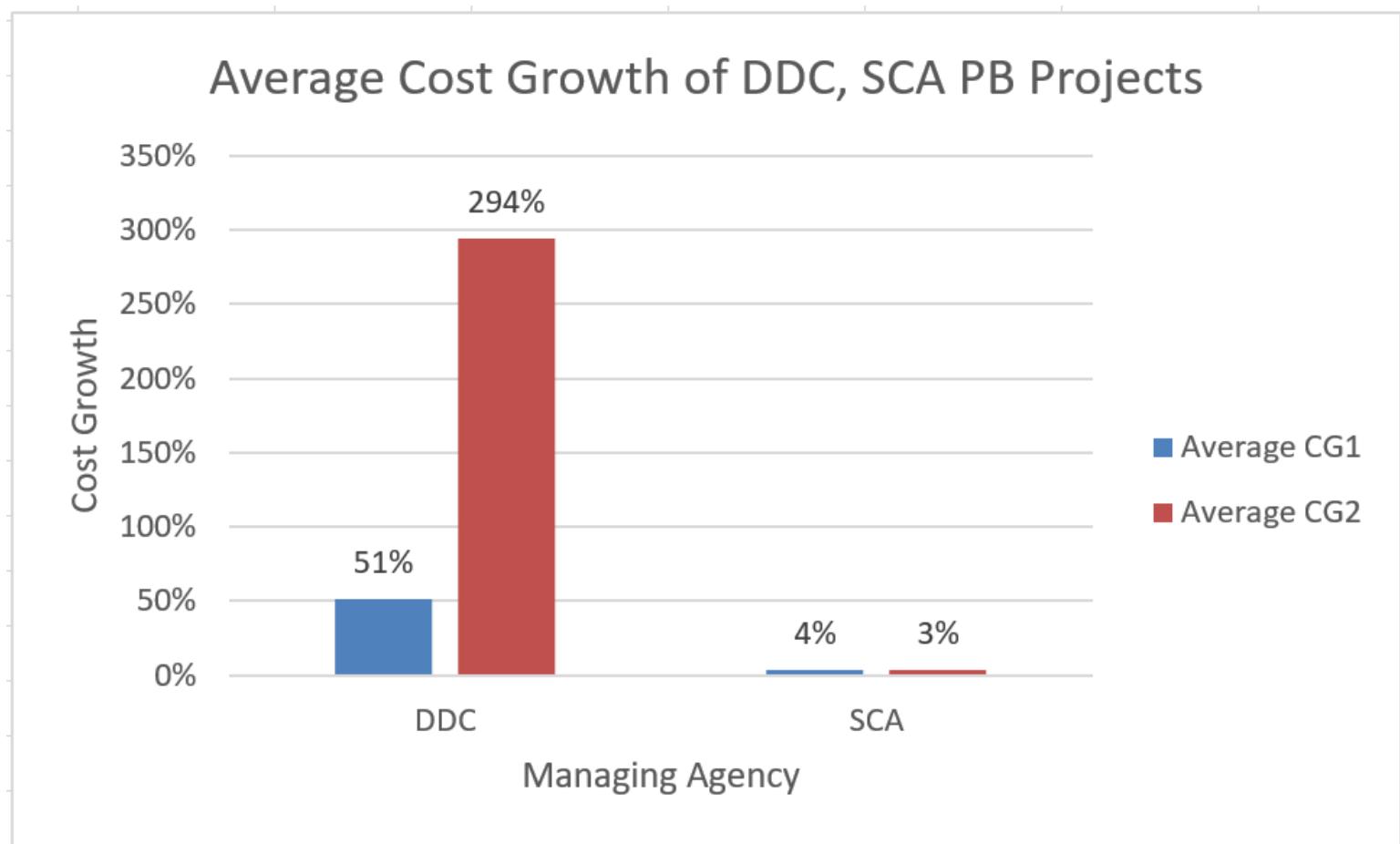
- There are no statistically significant regression coefficients for DOT Projects (CG2)

Regression Statistics		ANOVA						
			df		SS	MS	F	Significance F
Multiple R	0.947							
R Square	0.898	Regression	8		0.160	0.020	3.292	0.178
Adjusted R Square	0.625	Residual	3		0.018	0.006		
Standard Error	0.078	Total	11		0.178			
Observations	12							

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-0.018	0.157	-0.115	0.916	-0.518	0.482	-0.518	0.482
Crude Oil (\$/Barrel)	0.001	0.002	0.783	0.491	-0.004	0.007	-0.004	0.007
LIBOR Rates (\$)	-0.045	0.023	-1.921	0.150	-0.119	0.029	-0.119	0.029
Location_Bronx	0.139	0.124	1.124	0.343	-0.254	0.532	-0.254	0.532
Location_Brooklyn	-0.017	0.095	-0.182	0.867	-0.321	0.286	-0.321	0.286
Location_Citywide	0.192	0.118	1.621	0.203	-0.185	0.568	-0.185	0.568
Location_Manhattan	0.226	0.128	1.758	0.177	-0.183	0.634	-0.183	0.634
Location_Queens	-0.073	0.120	-0.610	0.585	-0.455	0.309	-0.455	0.309
Project Duration (yr)	0.000	0.004	-0.002	0.999	-0.014	0.014	-0.014	0.014

* important values are bolded and statistically significant ones are also highlighted

DDC, SCA PB Projects Descriptive Statistics



DDC, SCA (PB) Regression: Cost Growth 1

Insights:

- There are no statistically significant regression coefficients for DDC, SCA Public Building Projects (CG1)

<i>Regression Statistics</i>		<i>ANOVA</i>					
			<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Multiple R	0.411						
R Square	0.169	Regression	8	0.378	0.047	1.120	0.369
Adjusted R Square	0.018	Residual	44	1.857	0.042		
Standard Error	0.205	Total	52	2.235			
Observations	53						

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	-0.214	0.225	-0.949	0.348	-0.667	0.240	-0.667	0.240
Crude Oil (\$/Barrel)	0.001	0.002	0.858	0.395	-0.002	0.005	-0.002	0.005
LIBOR Rates (\$)	0.039	0.040	0.990	0.328	-0.041	0.119	-0.041	0.119
Location_Bronx	0.000	0.223	0.001	0.999	-0.449	0.450	-0.449	0.450
Location_Brooklyn	-0.066	0.254	-0.260	0.796	-0.577	0.446	-0.577	0.446
Location_Manhattan	0.010	0.222	0.044	0.965	-0.437	0.457	-0.437	0.457
Location_Queens	0.015	0.217	0.069	0.946	-0.422	0.451	-0.422	0.451
Location_Staten Island	-0.054	0.260	-0.208	0.836	-0.577	0.469	-0.577	0.469
Project Duration (yr)	0.025	0.014	1.778	0.082	-0.003	0.054	-0.003	0.054

* important values are bolded and statistically significant ones are also highlighted

DDC, SCA (PB) Regression: Cost Growth 2

Insights:

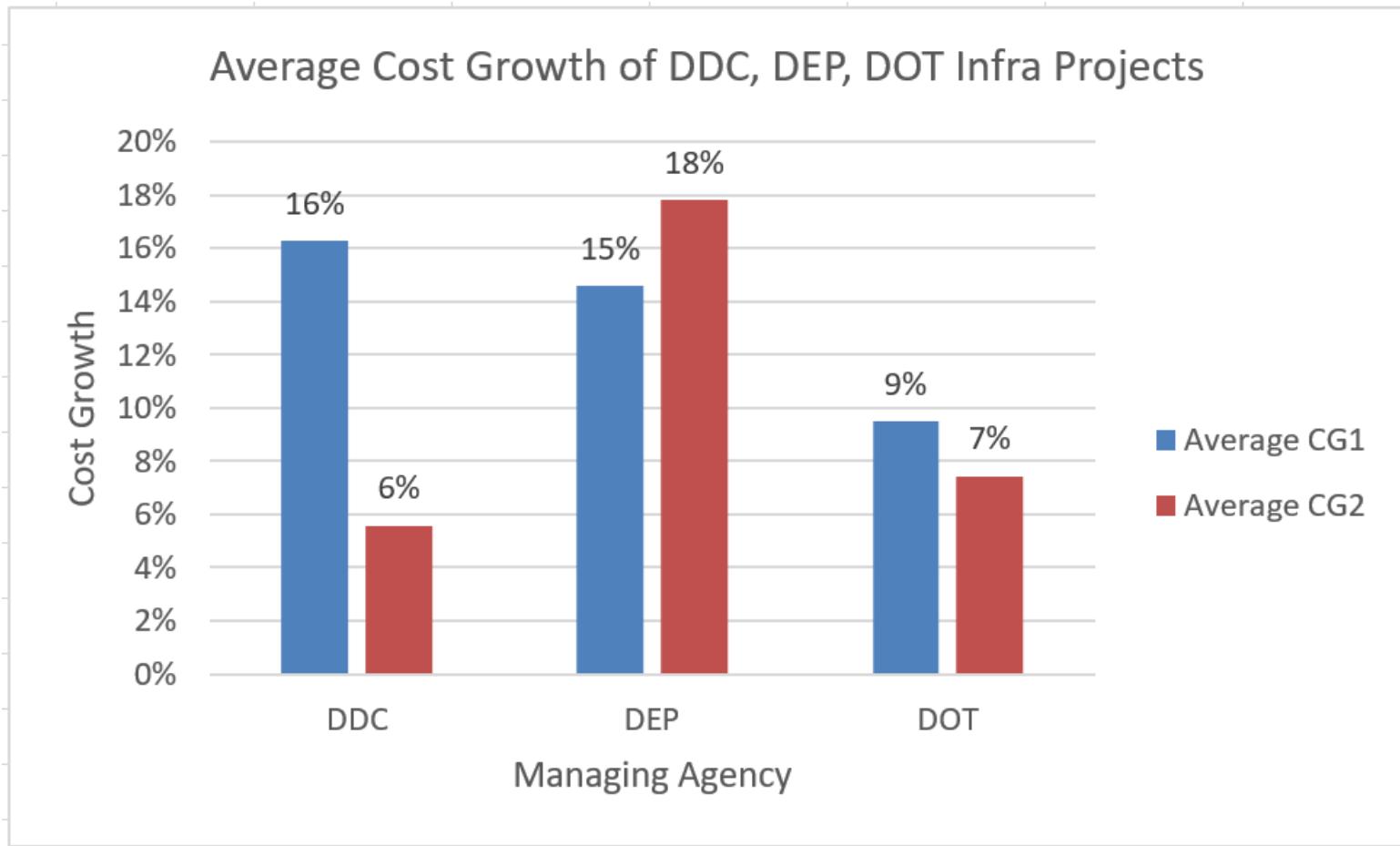
- There are no statistically significant regression coefficients for DDC, SCA Public Building Projects (CG2)

Regression Statistics		ANOVA						
			df		SS	MS	F	Significance F
Multiple R	0.283							
R Square	0.080	Regression	8		115.580	14.447	0.478	0.865
Adjusted R Square	-0.087	Residual	44		1329.408	30.214		
Standard Error	5.497	Total	52		1444.988			
Observations	53							

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-2.804	6.022	-0.466	0.644	-14.940	9.333	-14.940	9.333
Crude Oil (\$/Barrel)	0.009	0.044	0.206	0.837	-0.079	0.097	-0.079	0.097
LIBOR Rates (\$)	-0.262	1.063	-0.246	0.807	-2.404	1.881	-2.404	1.881
Location_Bronx	-0.425	5.969	-0.071	0.944	-12.453	11.604	-12.453	11.604
Location_Brooklyn	-1.039	6.791	-0.153	0.879	-14.726	12.647	-14.726	12.647
Location_Manhattan	-1.670	5.931	-0.281	0.780	-13.623	10.284	-13.623	10.284
Location_Queens	0.684	5.795	0.118	0.907	-10.994	12.363	-10.994	12.363
Location_Staten Island	-0.572	6.947	-0.082	0.935	-14.573	13.430	-14.573	13.430
Project Duration (yr)	0.573	0.381	1.504	0.140	-0.195	1.341	-0.195	1.341

* important values are bolded and statistically significant ones are also highlighted

DDC, DEP, DOT Infra Projects Descriptive Statistics



DDC, DOT, DEP (Infra)

Regression:

Cost Growth 1

Insights:

- As Project Duration increases, CG1 is likely to increase for DDC, DOT, DEP Infra Projects

Regression Statistics		ANOVA						
	Multiple R	0.474		df	SS	MS	F	Significance F
R Square	0.224		Regression	8	3.929	0.491	2.277	0.033
Adjusted R Square	0.126		Residual	63	13.591	0.216		
Standard Error	0.464		Total	71	17.520			
Observations	72							
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-0.084	0.318	-0.264	0.793	-0.720	0.552	-0.720	0.552
Crude Oil (\$/Barrel)	-0.001	0.003	-0.239	0.812	-0.006	0.005	-0.006	0.005
LIBOR Rates (\$)	0.048	0.042	1.137	0.260	-0.036	0.132	-0.036	0.132
Location_Bronx	-0.219	0.203	-1.079	0.285	-0.625	0.187	-0.625	0.187
Location_Brooklyn	-0.115	0.183	-0.626	0.534	-0.481	0.252	-0.481	0.252
Location_Manhattan	0.255	0.189	1.349	0.182	-0.123	0.634	-0.123	0.634
Location_Queens	-0.144	0.184	-0.783	0.437	-0.513	0.224	-0.513	0.224
Location_Staten Island	-0.131	0.273	-0.480	0.633	-0.677	0.415	-0.677	0.415
Project Duration (yr)	0.030	0.013	2.358	0.022	0.005	0.055	0.005	0.055

* important values are bolded and statistically significant ones are also highlighted

DDC, DOT, DEP (Infra)

Regression:

Cost Growth 2

Insights:

- As Project Duration increases, CG2 is likely to increase for DDC, DOT, DEP Infra Projects

Regression Statistics		ANOVA						
	Multiple R	0.322		df	SS	MS	F	Significance F
R Square	0.103		Regression	8	0.269	0.034	0.908	0.515
Adjusted R Square	-0.010		Residual	63	2.330	0.037		
Standard Error	0.192		Total	71	2.599			
Observations	72							
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.041	0.132	0.308	0.759	-0.223	0.304	-0.223	0.304
Crude Oil (\$/Barrel)	0.000	0.001	0.296	0.768	-0.002	0.003	-0.002	0.003
LIBOR Rates (\$)	-0.002	0.017	-0.117	0.907	-0.037	0.033	-0.037	0.033
Location_Bronx	-0.079	0.084	-0.941	0.350	-0.247	0.089	-0.247	0.089
Location_Brooklyn	-0.070	0.076	-0.916	0.363	-0.221	0.082	-0.221	0.082
Location_Manhattan	-0.078	0.078	-0.992	0.325	-0.234	0.079	-0.234	0.079
Location_Queens	-0.085	0.076	-1.119	0.267	-0.238	0.067	-0.238	0.067
Location_Staten Island	-0.105	0.113	-0.931	0.355	-0.331	0.121	-0.331	0.121
Project Duration (yr)	0.013	0.005	2.403	0.019	0.002	0.023	0.002	0.023

* important values are bolded and statistically significant ones are also highlighted