COUNTRY EXPOSURE MODEL

Review main statistic of a exposure model and create summaries for a given Country.

```
# Parameters
country = "Bahrain"
```

```
Exposure files:
  Exposure_Com_Bahrain.csv
  Exposure_Ind_Bahrain.csv
  Exposure_Res_Bahrain.csv
```

Sanity checks and formats

Exposure at National level

Summary by occupancy type

OCCUPANCY	OCCUPANTS	BUILDINGS	COST_USD	BUILDINGS_%	COST_USD_%
Res	1,501.6K	216.9K	$43.7B	81.73%	70.27%
Ind	0.0K	15.9K	$6.1B	5.99%	9.81%
Com	0.0K	32.6K	$12.4B	12.29%	19.92%

Other metrics to consider

OCCUPANCY	AREA_SQM	COST_BUILDING_USD	AVG_BUILDING_AREA_SQM	AVG_COST_PER_AREA_USD
Total	65.1M	$43,253.9M	245	$955
Res	46.4M	$32,674.0M	214	$941
Ind	6.6M	$2,948.7M	415	$925
Com	12.1M	$7,631.2M	372	$1,021

Exposure summary at Admin level 1

NAME_1	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
Capital Governorate	$23.7B	94.5K	548.3K	38.19%	35.60%	36.52%
Northern Governorate	$16.0B	70.9K	379.5K	25.76%	26.69%	25.27%
Southern Governorate	$11.5B	50.2K	305.6K	18.46%	18.92%	20.35%
Muharraq Governorate	$10.9B	49.9K	268.1K	17.59%	18.78%	17.86%

Exposure by simplified taxonomy

Adding `MACRO_TAXO` column

MACRO_TAXO	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
RC	$48,055.4M	199,540	1,288.1K	77.32%	75.17%	85.78%
MCF	$5,446.6M	24,724	121.0K	8.76%	9.31%	8.06%
MUR	$3,346.9M	21,536	71.0K	5.38%	8.11%	4.73%
S	$2,867.5M	6,354	0.0K	4.61%	2.39%	0.00%
MR	$2,332.3M	9,712	0.0K	3.75%	3.66%	0.00%
OT	$104.3M	3,568	21.5K	0.17%	1.34%	1.43%

Exposure by taxonomy

Showing only taxonomies that represent 90% of the total `COST_USD`

MACRO_TAXO	TAXONOMY	COST_USD	BUILDINGS	COST_USD_%	BUILDINGS_%
	CR/LFINF+CDL/HBET:4-7/RES	$15,271.3M	72,275	27.32%	29.51%
	CR/LFINF+CDL/HBET:8-/RES	$7,861.0M	36,021	14.06%	14.71%
RC	CR/LFINF+CDL/H:3/RES	$7,522.9M	36,352	13.46%	14.84%
	CR/LFINF+CDL/H:1/RES	$3,705.1M	18,648	6.63%	7.61%
	CR/LFINF+CDL/H:2/RES	$3,705.1M	18,294	6.63%	7.47%
MCF	MCF/LWAL+CDL/H:2/RES	$1,566.7M	7,881	2.80%	3.22%
	MCF/LWAL+CDL/HBET:3-6/RES	$1,566.7M	7,881	2.80%	3.22%
RC	CR/LFINF+CDL/HBET:4-7/COM	$1,535.2M	1,097	2.75%	0.45%
S	S/LFM+CDL/H:1/IND	$1,151.0M	3,573	2.06%	1.46%
RC	CR+PC/LWAL+CDL/H:1/IND	$852.6M	2,384	1.53%	0.97%
	CR/LFINF+CDL/H:1/IND	$852.6M	2,384	1.53%	0.97%
MR	MR+CB/LWAL+CDL/HBET:3-6/COM	$846.3M	956	1.51%	0.39%
MUR	MUR+CB/LWAL+CDN/HBET:3-6/COM	$846.3M	956	1.51%	0.39%
RC	CR/LDUAL+CDL/HBET:4-7/COM	$787.5M	571	1.41%	0.23%
	CR/LWAL+CDL/HBET:4-7/COM	$787.5M	571	1.41%	0.23%
MCF	MCF/LWAL+CDL/H:1/RES	$783.3M	3,941	1.40%	1.61%
MR	MR+CB/LWAL+CDL/H:2/COM	$718.0M	3,184	1.28%	1.30%
MUR	MUR+CB/LWAL+CDN/H:2/COM	$718.0M	3,184	1.28%	1.30%
S	S/LFM+CDL/H:2/IND	$618.2M	1,191	1.11%	0.49%
RC	CR/LFINF+CDL/HBET:8-/COM	$571.8M	140	1.02%	0.06%
S	S/LFM+CDL/HBET:4-7/COM	$558.3M	365	1.00%	0.15%
RC	CR/LFINF+CDL/H:3/COM	$520.3M	1,143	0.93%	0.47%
MUR	MUR+STDRE/LWAL+CDN/H:1/RES	$518.5M	5,912	0.93%	2.41%
	MUR+STDRE/LWAL+CDN/H:2/RES	$518.5M	5,912	0.93%	2.41%
MCF	MCF/LWAL+CDL/HBET:3-6/COM	$516.7M	571	0.92%	0.23%
MR	MR+CB/LWAL+CDL/H:1/COM	$499.9M	4,775	0.89%	1.95%
MUR	MUR+CB/LWAL+CDN/H:1/COM	$499.9M	4,775	0.89%	1.95%