COUNTRY EXPOSURE MODEL

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

```
/home/risk/venvs/py38w/lib/python3.8/site-packages/geopandas/_compat.py:111: UserWarning: The Sh
apely GEOS version (3.9.1-CAPI-1.14.2) is incompatible with the GEOS version PyGEOS was compiled
with (3.10.1-CAPI-1.16.0). Conversions between both will be slow.
  warnings.warn(
```

```python
# Parameters
country = "Sweden"
```

```
Exposure files:
    Exposure_Com_Sweden.csv
    Exposure_Ind_Sweden.csv
    Exposure_Res_Sweden.csv
```

Sanity checks and formats

Exposure at National level

Summary by occupancy type

OCCUPANCY	OCCUPANTS	BUILDINGS	COST_USD	BUILDINGS_%	COST_USD_%
Res	10,285.0K	2,021.2K	$841.9B	84.97%	55.99%
Ind	4,081.0K	99.3K	$324.1B	4.18%	21.56%
Com	4,114.0K	258.2K	$337.6B	10.85%	22.45%

Other metrics to consider

OCCUPANCY	AREA_SQM	COST_BUILDING_USD	AVG_BUILDING_AREA_SQM	AVG_COST_PER_AREA_USD
Total	421.6M	$972.0B	177	$3,567
Res	318.3M	$673.5B	157	$2,645
Ind	53.0M	$129.7B	534	$6,112
Com	50.3M	$168.8B	195	$6,718

Exposure summary at Admin level 1

NAME_1	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
Stockholm	$286.4B	474.7K	4,079.0K	19.05%	19.96%	22.07%
Vastra Gotaland	$255.8B	408.4K	3,118.7K	17.01%	17.17%	16.88%
Skane	$192.6B	302.8K	2,439.7K	12.81%	12.73%	13.20%
Ostergotland	$71.9B	111.5K	839.9K	4.78%	4.69%	4.54%
Jonkoping	$58.1B	85.9K	614.5K	3.86%	3.61%	3.33%
Norrbotten	$54.3B	72.0K	485.4K	3.61%	3.03%	2.63%
Orebro	$50.3B	75.3K	549.6K	3.35%	3.16%	2.97%
Dalarna	$49.0B	76.2K	537.6K	3.26%	3.20%	2.91%
Uppsala	$48.0B	78.2K	635.1K	3.19%	3.29%	3.44%
Vastmanland	$47.9B	70.8K	522.1K	3.18%	2.98%	2.83%
Varmland	$46.9B	74.5K	533.1K	3.12%	3.13%	2.88%
Gavleborg	$46.0B	74.5K	539.5K	3.06%	3.13%	2.92%
Kalmar	$44.8B	63.7K	455.3K	2.98%	2.68%	2.46%
Vasterbotten	$44.0B	69.0K	506.1K	2.93%	2.90%	2.74%
Halland	$42.7B	71.6K	588.6K	2.84%	3.01%	3.19%
Sodermanland	$42.4B	68.2K	531.9K	2.82%	2.87%	2.88%
Vasternorrland	$40.1B	65.1K	473.1K	2.67%	2.74%	2.56%
Kronoberg	$29.2B	48.3K	360.6K	1.94%	2.03%	1.95%
Blekinge	$23.1B	38.1K	299.3K	1.54%	1.60%	1.62%
Jamtland	$21.4B	35.2K	242.3K	1.43%	1.48%	1.31%
Gotland	$8.6B	14.8K	128.3K	0.57%	0.62%	0.69%

Exposure by simplified taxonomy

Adding `MACRO_TAXO` column

MACRO_TAXO	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
RC	$806.1B	781.7K	9,640.8K	53.61%	32.86%	52.17%
MUR	$280.0B	858.7K	3,581.0K	18.62%	36.10%	19.38%
W	$263.3B	690.6K	3,299.3K	17.51%	29.03%	17.85%
S	$154.2B	47.7K	1,958.9K	10.25%	2.00%	10.60%

Exposure by taxonomy

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

MACRO_TAXO	TAXONOMY	COST_USD	BUILDINGS	COST_USD_%	BUILDINGS_%
RC	CR/LFINF+CDN/H:3/RES	$423.5B	597.9K	31.62%	27.24%
S	S/LFM+CDN/H:1/IND	$96.4B	29.8K	7.20%	1.36%
MUR	MUR+CL/LWAL+CDN/HBET:1-4/RES	$95.2B	280.0K	7.11%	12.76%
	MUR+CB/LWAL+CDN/HBET:1-2/RES	$88.3B	448.6K	6.59%	20.44%
RC	CR+PC/LFM+CDN/H:1/IND	$84.3B	24.8K	6.30%	1.13%
W	W/LWAL+CDL/HBET:1-3/RES	$79.7B	234.5K	5.95%	10.68%
	W/LPB+CDL/HBET:1-3/RES	$74.0B	376.1K	5.52%	17.13%
	CR/LFINF+CDM/HBET:3-5/COM	$70.2B	32.2K	5.24%	1.47%
RC	CR/LWAL+CDN/HBET:4-10/RES	$67.0B	42.1K	5.00%	1.92%
	CR/LWAL+CDM/HBET:3-5/COM	$49.6B	22.9K	3.70%	1.04%
	CR/LFINF+CDL/H:1/COM	$47.6B	28.5K	3.55%	1.30%
W	W/LWAL+CDN/H:1/IND	$45.8B	14.9K	3.42%	0.68%
RC	CR/LFM+CDN/H:2/IND	$33.7B	9.9K	2.52%	0.45%
S	S/LFBR+CDN/H:1/IND	$32.1B	9.9K	2.40%	0.45%
MUR	MUR+CB/LWAL+CDN/H:2/COM	$26.2B	34.9K	1.96%	1.59%
S	S+SL/LFM+CDN/H:1/IND	$25.7B	7.9K	1.92%	0.36%