

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 Shapely 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(

# Parameters
country = "Lithuania"
```

Exposure files:
Exposure_Com_Lithuania.csv
Exposure_Ind_Lithuania.csv
Exposure_Res_Lithuania.csv

Sanity checks and formats

Exposure at National level

Summary by occupancy type

	OCCUPANTS	BUILDINGS	COST_USD	BUILDINGS_%	COST_USD_%
OCCUPANCY					
Res	2,787.0K	507.5K	\$77.3B	84.70%	42.16%
Ind	1,114.8K	21.8K	\$57.1B	3.64%	31.13%
Com	1,114.8K	69.9K	\$49.0B	11.66%	26.71%

Other metrics to consider

	AREA_SQM	COST_BUILDING_USD	AVG_BUILDING_AREA_SQM	AVG_COST_PER_AREA_USD
OCCUPANCY				
Total	96.4M	\$109.2B	161	\$1,902
Res	60.5M	\$61.9B	119	\$1,279
Ind	19.7M	\$22.8B	905	\$2,895
Com	16.2M	\$24.5B	232	\$3,018

Exposure summary at Admin level 1

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
NAME_1						
Vilniaus	\$46.7B	151.8K	1,434.1K	25.45%	25.34%	28.59%
Kauno	\$36.7B	121.9K	1,015.0K	20.01%	20.34%	20.23%
Klaipedos	\$19.4B	64.1K	570.8K	10.60%	10.69%	11.38%
Siauliai	\$19.2B	63.1K	481.7K	10.48%	10.53%	9.60%
Panevezio	\$14.0B	49.5K	400.8K	7.61%	8.27%	7.99%
Telsiai	\$11.7B	30.4K	245.4K	6.36%	5.07%	4.89%
Marijampoles	\$10.3B	31.8K	217.6K	5.63%	5.30%	4.34%
Utenos	\$9.6B	34.0K	237.7K	5.24%	5.68%	4.74%
Alytaus	\$9.4B	32.5K	252.2K	5.13%	5.42%	5.03%
Taurages	\$6.4B	20.2K	161.2K	3.48%	3.37%	3.21%

Exposure by simplified taxonomy

Adding `MACRO_TAXO` column

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
MACRO_TAXO						
RC	\$108.5B	309.2K	2,968.9K	59.18%	51.60%	59.18%
MUR	\$31.4B	176.4K	1,000.7K	17.13%	29.44%	19.95%
S	\$25.3B	9.8K	501.7K	13.80%	1.64%	10.00%
W	\$18.1B	103.8K	545.3K	9.89%	17.32%	10.87%

Exposure by taxonomy

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

		COST_USD	BUILDINGS	COST_USD_%	BUILDINGS_%
MACRO_TAXO	TAXONOMY				
RC	CR/LFINF+CDN/H:3/RES	\$44,635.8M	250,902	27.29%	45.12%
	CR+PC/LFM+CDN/H:1/IND	\$14,759.6M	5,450	9.02%	0.98%
S	S/LFM+CDN/H:1/IND	\$14,056.8M	5,450	8.59%	0.98%
RC	CR/LFINF+CDL/H:1/COM	\$12,664.3M	15,976	7.74%	2.87%
	CR/LFINF+CDL/HBET:3-5/COM	\$12,047.5M	11,577	7.37%	2.08%
S	S+SL/LFM+CDN/H:1/IND	\$11,245.4M	4,360	6.87%	0.78%
MUR	MUR+CL/LWAL+CDN/HBET:1-4/RES	\$9,132.0M	56,039	5.58%	10.08%
RC	CR/LWAL+CDN/HBET:4-10/RES	\$7,929.8M	13,372	4.85%	2.40%
	CR/LWAL+CDN/H:2/IND	\$5,903.9M	2,180	3.61%	0.39%
MUR	MUR+CB/LWAL+CDN/HBET:1-2/RES	\$4,932.3M	82,785	3.02%	14.89%
W	W/LWAL+CDL/HBET:1-3/RES	\$4,834.6M	30,726	2.96%	5.53%
RC	CR/LFINF+CDL/H:2/COM	\$4,759.7M	6,970	2.91%	1.25%
	CR/LFM+CDN/H:2/IND	\$4,723.1M	1,744	2.89%	0.31%
MUR	MUR+CB/LWAL+CDN/H:1/COM	\$4,663.0M	7,480	2.85%	1.35%
	MUR/LWAL+CDN/H:1/IND	\$3,739.1M	1,526	2.29%	0.27%
W	W/LPB+CDL/HBET:1-3/RES	\$3,547.4M	59,541	2.17%	10.71%

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