

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 = "Malta"
```

Exposure files:
Exposure_Com_Malta.csv
Exposure_Ind_Malta.csv
Exposure_Res_Malta.csv

Sanity checks and formats

Exposure at National level

Summary by occupancy type

	OCCUPANTS	BUILDINGS	COST_USD	BUILDINGS_%	COST_USD_%
OCCUPANCY					
Res	503.0K	94.4K	\$20.2B	80.47%	58.43%
Ind	201.2K	9.9K	\$8.3B	8.42%	24.00%
Com	201.2K	13.0K	\$6.1B	11.11%	17.57%

Other metrics to consider

	AREA_SQM	COST_BUILDING_USD	AVG_BUILDING_AREA_SQM	AVG_COST_PER_AREA_USD
OCCUPANCY				
Total	22,079.9K	\$22,462.2M	188	\$1,562
Res	19,054.5K	\$16,121.3M	202	\$1,058
Ind	1,893.2K	\$3,310.9M	192	\$4,372
Com	1,132.2K	\$3,030.0M	87	\$5,352

Exposure summary at Admin level 1

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
NAME_1						
Xlokk	\$11,062.6M	39.1K	313.9K	32.08%	33.32%	34.67%
Centrali	\$10,114.7M	36.4K	266.8K	29.33%	31.05%	29.47%
Nofsinhar	\$6,582.5M	18.0K	127.5K	19.09%	15.38%	14.08%
Tramuntana	\$4,619.6M	15.5K	127.8K	13.39%	13.23%	14.12%
Ghawdex	\$2,109.4M	8.2K	69.3K	6.12%	7.02%	7.66%

Exposure by simplified taxonomy

Adding `MACRO_TAX0` column

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
MACRO_TAXO						
RC	\$18,494.1M	40,579	490.6K	53.62%	34.61%	54.18%
MUR	\$12,837.7M	72,828	336.4K	37.22%	62.11%	37.15%
S	\$3,157.1M	3,850	78.5K	9.15%	3.28%	8.67%

Exposure by taxonomy

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

		COST_USD	BUILDINGS	COST_USD_%	BUILDINGS_%
MACRO_TAXO	TAXONOMY				
MUR	MUR+ST/LWAL+CDN/H:1/RES	\$4,611.9M	32,086	15.03%	29.04%
	MUR+ST/LWAL+CDN/H:2/RES	\$3,893.3M	20,878	12.69%	18.90%
	CR/LFINF+CDN/HBET:3-5/COM	\$3,079.4M	1,655	10.04%	1.50%
RC	CR+PC/LFM+CDL/H:1/IND	\$3,059.9M	3,554	9.98%	3.22%
	CR/LFINF+CDN/H:2/RES	\$2,868.4M	13,917	9.35%	12.60%
	CR/LFINF+CDN/HBET:3-5/RES	\$1,795.6M	829	5.85%	0.75%
S	S/LFM+CDL/H:1/IND	\$1,619.0M	1,974	5.28%	1.79%
MUR	MUR+CL/LWAL+CDN/H:1/RES	\$1,349.4M	9,388	4.40%	8.50%
	MUR+CL/LWAL+CDN/H:2/RES	\$1,306.5M	7,006	4.26%	6.34%
RC	CR/LFM+CDL/H:2/IND	\$1,275.0M	1,481	4.16%	1.34%
	CR/LFINF+CDL/HBET:3-5/RES	\$1,246.0M	575	4.06%	0.52%
S	S+SL/LFM+CDL/H:1/IND	\$1,052.4M	1,283	3.43%	1.16%
RC	CR+PC/LWAL+CDN/H:2/RES	\$993.8M	4,822	3.24%	4.36%
	CR/LFINF+CDL/H:2/RES	\$884.7M	4,292	2.88%	3.89%
	CR/LFINF+CDN/H:1/COM	\$852.9M	6,309	2.78%	5.71%
	CR+PC/LWAL+CDN/HBET:3-5/COM	\$787.5M	423	2.57%	0.38%

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