

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 = "Armenia"
```

Exposure files:
Exposure_Com_Armenia.csv
Exposure_Ind_Armenia.csv
Exposure_Res_Armenia.csv

Sanity checks and formats

Exposure at National level

Summary by occupancy type

	OCCUPANTS	BUILDINGS	COST_USD	BUILDINGS_%	COST_USD_%
OCCUPANCY					
Res	3,052.3K	614.2K	\$41,223.5M	95.06%	81.70%
Ind	0.0K	7.1K	\$2,344.5M	1.09%	4.65%
Com	0.0K	24.9K	\$6,888.1M	3.85%	13.65%

Other metrics to consider

	AREA_SQM	COST_BUILDING_USD	AVG_BUILDING_AREA_SQM	AVG_COST_PER_AREA_USD
OCCUPANCY				
Total	101,647.1K	\$41,447.1M	157	\$496
Res	90,094.0K	\$35,592.3M	147	\$458
Ind	2,923.2K	\$1,248.5M	414	\$802
Com	8,630.0K	\$4,606.3M	347	\$798

Exposure summary at Admin level 1

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
NAME_1						
Yerevan	\$18,510.7M	235.8K	1,114.2K	36.69%	36.49%	36.51%
Armavir	\$4,485.9M	57.5K	271.8K	8.89%	8.90%	8.90%
Ararat	\$4,363.2M	55.9K	264.4K	8.65%	8.66%	8.66%
Kotayk	\$4,276.3M	54.8K	259.1K	8.48%	8.49%	8.49%
Shirak	\$3,965.2M	50.8K	240.3K	7.86%	7.87%	7.87%
Gegharkunik	\$3,877.2M	49.7K	235.0K	7.68%	7.70%	7.70%
Lori	\$3,659.6M	47.0K	221.8K	7.25%	7.27%	7.27%
Syunik	\$2,323.7M	30.0K	141.4K	4.61%	4.64%	4.63%
Aragatsotn	\$2,117.7M	27.3K	128.8K	4.20%	4.23%	4.22%
Tavush	\$2,063.3M	26.6K	125.5K	4.09%	4.12%	4.11%
Vayots Dzor	\$813.3M	10.7K	50.0K	1.61%	1.65%	1.64%

Exposure by simplified taxonomy

Adding `MACRO_TAXO` column						
	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
MACRO_TAXO						
MUR	\$27,573.1M	559,041	2,177.0K	54.65%	86.52%	71.32%
RC	\$17,567.5M	15,860	629.7K	34.82%	2.45%	20.63%
MIX	\$1,947.4M	37,930	134.4K	3.86%	5.87%	4.40%
MCF	\$1,323.1M	7,100	22.3K	2.62%	1.10%	0.73%
W	\$969.1M	12,936	49.9K	1.92%	2.00%	1.64%
S	\$694.8M	2,120	0.0K	1.38%	0.33%	0.00%
OT	\$287.2M	10,832	39.0K	0.57%	1.68%	1.28%
MR	\$93.9M	353	0.0K	0.19%	0.05%	0.00%

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+STRUB/LWAL+CDN/H:2/RES	\$5,913.3M	141,265	13.03%	23.17%
	MUR+STRUB/LWAL+CDN/H:1/RES	\$4,548.7M	141,265	10.03%	23.17%
RC	CR+PC/LPB+CDL/HBET:9-/RES	\$4,454.5M	1,140	9.82%	0.19%
MUR	MUR+STDRE/LWAL+CDN/H:2/RES	\$4,266.2M	81,531	9.40%	13.38%
RC	CR+PC/LPB+CDL/H:5/RES	\$4,176.1M	2,049	9.20%	0.34%
MUR	MUR+STDRE/LWAL+CDN/H:1/RES	\$3,281.7M	81,531	7.23%	13.38%
	MUR+STDRE/LWAL+CDN/H:3/RES	\$1,968.8M	27,182	4.34%	4.46%
MIX	MIX(MUR+W)/LWAL+CDL/H:2/RES	\$1,332.0M	27,275	2.94%	4.47%
MUR	MUR+CB/LWAL+CDN/H:2/RES	\$929.0M	17,757	2.05%	2.91%
	MUR+CL/LWAL+CDN/H:2/RES	\$929.0M	17,757	2.05%	2.91%
RC	CR+PC/LWAL+CDL/HBET:4-7/COM	\$920.4M	764	2.03%	0.13%
	CR/LFINF+CDL/HBET:4-7/COM	\$920.4M	764	2.03%	0.13%
	MUR+CB/LWAL+CDN/H:3/RES	\$857.6M	11,837	1.89%	1.94%
	MUR+CL/LWAL+CDN/H:3/RES	\$857.6M	11,837	1.89%	1.94%
MUR	MUR+CB/LWAL+CDN/HBET:4-6/RES	\$804.0M	1,482	1.77%	0.24%
	MUR+CL/LWAL+CDN/HBET:4-6/RES	\$804.0M	1,482	1.77%	0.24%
	MUR/LWAL+CDN/HBET:3-6/COM	\$761.9M	1,280	1.68%	0.21%
	MUR/LWAL+CDN/H:2/COM	\$648.7M	4,257	1.43%	0.70%
RC	CR+PC/LPB+CDL/H:7/RES	\$556.8M	183	1.23%	0.03%
	CR+PC/LPB+CDL/H:8/RES	\$556.8M	161	1.23%	0.03%
	CR+PC/LPB+CDL/H:6/RES	\$522.0M	214	1.15%	0.04%
MUR	MUR/LWAL+CDN/H:1/COM	\$452.9M	6,387	1.00%	1.05%
RC	CR+PC/LPB+CDL/H:4/RES	\$452.4M	320	1.00%	0.05%
	CR+PC/LPB+CDM/HBET:9-/RES	\$426.9M	109	0.94%	0.02%
S	S/LFM+CDL/H:1/IND	\$405.1M	1,424	0.89%	0.23%
	CR+PC/LPB+CDM/H:5/RES	\$400.3M	195	0.88%	0.03%
	CR+PC/LWAL+CDL/H:3/COM	\$325.8M	793	0.72%	0.13%
	CR/LFINF+CDL/H:3/COM	\$325.8M	793	0.72%	0.13%
W	W/LWAL+CDL/H:2/RES	\$315.2M	4,658	0.69%	0.76%
MCF	MCF/LWAL+CDL/HBET:3-6/COM	\$297.8M	383	0.66%	0.06%
RC	CR+PC/LWAL+CDL/H:1/IND	\$297.1M	950	0.65%	0.16%
	CR/LFINF+CDL/H:1/IND	\$297.1M	950	0.65%	0.16%
W	W/LWAL+CDL/H:3/RES	\$290.9M	3,108	0.64%	0.51%
RC	CR+PC/LWAL+CDL/HBET:8-/COM	\$279.5M	80	0.62%	0.01%
	CR/LFINF+CDL/HBET:8-/COM	\$279.5M	80	0.62%	0.01%
OT	MATO/RES	\$279.3M	10,410	0.62%	1.71%
MUR	MUR+CB/LWAL+CDN/H:1/RES	\$238.2M	5,919	0.52%	0.97%

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