

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 = "Kosovo"
```

Exposure files:
Exposure_Com_Kosovo.csv
Exposure_Ind_Kosovo.csv
Exposure_Res_Kosovo.csv

Sanity checks and formats

Exposure at National level

Summary by occupancy type

	OCCUPANTS	BUILDINGS	COST_USD	BUILDINGS_%	COST_USD_%
OCCUPANCY					
Res	1,794.0K	247.7K	\$14,159.0M	84.74%	61.99%
Ind	717.6K	7.1K	\$2,862.1M	2.45%	12.53%
Com	717.6K	37.4K	\$5,819.0M	12.81%	25.48%

Other metrics to consider

	AREA_SQM	COST_BUILDING_USD	AVG_BUILDING_AREA_SQM	AVG_COST_PER_AREA_USD
OCCUPANCY				
Total	31,174.7K	\$15,381.6M	107	\$733
Res	25,930.4K	\$11,327.2M	105	\$546
Ind	1,955.3K	\$1,144.9M	274	\$1,464
Com	3,289.1K	\$2,909.5M	88	\$1,769

Exposure summary at Admin level 1

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
NAME_1						
Pristina	\$6,632.5M	79.5K	885.9K	29.04%	27.22%	27.43%
Prizren	\$4,313.1M	52.6K	605.3K	18.88%	18.00%	18.74%
Gnjilane	\$2,604.4M	34.6K	336.8K	11.40%	11.85%	10.43%
Gjakova	\$2,538.3M	32.3K	375.6K	11.11%	11.04%	11.63%
Ferizaj	\$2,476.2M	32.5K	344.7K	10.84%	11.13%	10.67%
Kosovska Mitrovica	\$2,152.7M	31.4K	357.5K	9.43%	10.74%	11.07%
Peja	\$2,123.0M	29.3K	323.4K	9.29%	10.02%	10.01%

Exposure by simplified taxonomy

Adding `MACRO_TAXO` column

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
MACRO_TAXO						
RC	\$9,668.2M	89,183	1,350.1K	42.33%	30.51%	41.81%
MUR	\$5,269.0M	102,665	724.4K	23.07%	35.13%	22.43%
MCF	\$5,086.0M	79,254	673.5K	22.27%	27.12%	20.86%
MIX	\$1,802.2M	18,550	221.5K	7.89%	6.35%	6.86%
S	\$1,014.8M	2,614	259.6K	4.44%	0.89%	8.04%

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/LWAL+CDN/H:2/RES	\$2,902.3M	44,405	14.17%	16.51%
MCF	MCF/LWAL+CDL/H:2/RES	\$1,988.3M	27,431	9.71%	10.20%
RC	CR/LFINF+CDM+LFC:10.0/H:2/RES	\$1,739.9M	23,843	8.50%	8.87%
	CR/LFINF+CDM+LFC:2.5/H:2/RES	\$1,455.3M	20,256	7.11%	7.53%
MUR	MUR/LWAL+CDN/H:1/RES	\$1,443.8M	43,717	7.05%	16.26%
MCF	MCF/LWAL+CDL/H:1/RES	\$826.0M	22,602	4.03%	8.40%
S	S/LFM+CDM/H:1/IND	\$724.6M	1,859	3.54%	0.69%
RC	CR/LFINF+CDM+LFC:5.0/H:2/RES	\$683.4M	9,512	3.34%	3.54%
	CR/LFINF+CDM/H:2/IND	\$585.2M	1,430	2.86%	0.53%
MCF	MCF/LWAL+CDN/H:2/RES	\$471.2M	6,559	2.30%	2.44%
RC	CR/LFINF+CDM+LFC:10.0/H:3/COM	\$455.3M	1,217	2.22%	0.45%
MCF	MCF/LWAL+CDL/H:1/IND	\$438.9M	1,072	2.14%	0.40%
RC	CR+PC/LFM+CDL/H:1/IND	\$438.9M	1,072	2.14%	0.40%
MIX	MIX/LH+CDM/H:2/RES	\$413.0M	5,998	2.02%	2.23%
MCF	MCF/LWAL+CDN/H:1/RES	\$345.8M	9,543	1.69%	3.55%
RC	CR/LFINF+CDM+LFC:10.0/H:1/COM	\$291.9M	6,327	1.43%	2.35%
MIX	MIX/LH+CDM/H:4/COM	\$291.3M	607	1.42%	0.23%
S	S+SL/LFM+CDL/H:1/IND	\$278.7M	715	1.36%	0.27%
RC	CR/LFINF+CDM+LFC:10.0/H:2/COM	\$277.5M	2,033	1.36%	0.76%
	CR/LDUAL+CDM+LFC:10.0/HBET:6-9/COM	\$266.0M	306	1.30%	0.11%
	CR/LFINF+CDL/HBET:3-5/IND	\$263.4M	643	1.29%	0.24%
MIX	MIX/LH+CDM/H:3/COM	\$251.7M	700	1.23%	0.26%
RC	CR/LFINF+CDM+LFC:2.5/H:3/COM	\$247.5M	643	1.21%	0.24%
MCF	MCF/LWAL+CDL/H:3/COM	\$209.4M	588	1.02%	0.22%
RC	CR/LFINF+CDM+LFC:10.0/H:4/COM	\$194.4M	392	0.95%	0.15%
MUR	MUR/LWAL+CDN/H:2/COM	\$191.5M	1,354	0.94%	0.50%
MCF	MCF/LWAL+CDL/H:4/COM	\$190.8M	406	0.93%	0.15%
	MCF/LWAL+CDL/H:3/RES	\$185.2M	5,502	0.90%	2.05%
MUR	MUR/LWAL+CDN/H:1/COM	\$180.0M	4,053	0.88%	1.51%
	MUR/LWAL+CDN/H:3/RES	\$172.9M	5,679	0.84%	2.11%
RC	CR/LDUAL+CDM+LFC:10.0/H:5/COM	\$172.3M	278	0.84%	0.10%
	CR/LFINF+CDM+LFC:10.0/HBET:6-9/RES	\$167.1M	302	0.82%	0.11%
	CR/LFINF+CDM+LFC:2.5/H:1/COM	\$164.8M	3,570	0.80%	1.33%
MIX	CR/LFINF+CDM+LFC:10.0/H:5/COM	\$163.5M	263	0.80%	0.10%
	MIX/LH+CDM/H:1/COM	\$155.0M	3,011	0.76%	1.12%
RC	CR/LFINF+CDM+LFC:5.0/H:3/COM	\$154.0M	397	0.75%	0.15%
	CR/LFINF+CDM+LFC:2.5/H:2/COM	\$153.6M	1,126	0.75%	0.42%
	CR/LFINF+CDM+LFC:10.0/H:3/RES	\$151.3M	4,440	0.74%	1.65%
	CR/LDUAL+CDM+LFC:2.5/HBET:6-9/COM	\$144.4M	162	0.71%	0.06%
MCF	MCF/LWAL+CDL/H:1/COM	\$144.0M	2,689	0.70%	1.00%
MIX	MIX/LH+CDM/H:2/COM	\$142.3M	717	0.69%	0.27%
MUR	MUR/LWAL+CDN/H:1/IND	\$132.4M	357	0.65%	0.13%
MCF	MCF/LWAL+CDL/H:2/COM	\$123.4M	800	0.60%	0.30%
MUR	MUR/LWAL+CDN/H:3/COM	\$109.0M	356	0.53%	0.13%

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