

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 = "Burundi"
```

Exposure files:
Exposure_Com_Burundi.csv
Exposure_Ind_Burundi.csv
Exposure_Res_Burundi.csv

Sanity checks and formats

Burundi
Exposure/Exposure/Exposure_Com_Burundi.csv
Exposure/Exposure/Exposure_Ind_Burundi.csv
Exposure/Exposure/Exposure_Res_Burundi.csv
Occupants / Dwellings = 4.8
Reference avg household size (2019) = 4.81
Population (exposure / UN_2021) = 0.97
Exposure models OK

Exposure at National level

Summary by occupancy type

	OCCUPANTS	BUILDINGS	COST_USD	BUILDINGS_%	COST_USD_%
OCCUPANCY					
Res	11.9M	2,360.2K	\$24,408.7M	98.88%	95.93%
Ind	0.0M	6.1K	\$324.4M	0.26%	1.27%
Com	0.0M	20.6K	\$711.7M	0.86%	2.80%

Other metrics to consider

	AREA_SQM	COST_BUILDING_USD	AVG_BUILDING_AREA_SQM	AVG_COST_PER_AREA_USD
OCCUPANCY				
Total	195,331.2K	\$20,537.8M	82	\$130
Res	189,858.1K	\$19,790.5M	80	\$129
Ind	1,724.5K	\$214.5M	281	\$188
Com	3,748.6K	\$532.8M	182	\$190

Exposure summary at Admin level 1

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
NAME_1						
Muyinga	\$2,150.3M	226.4K	1,115.1K	8.45%	9.49%	9.38%
Bujumbura Mairie	\$2,090.2M	177.9K	894.9K	8.21%	7.45%	7.53%
Gitega	\$2,088.3M	185.3K	930.6K	8.21%	7.76%	7.83%
Kayanza	\$2,022.6M	181.4K	909.5K	7.95%	7.60%	7.65%
Bururi	\$1,936.1M	178.8K	889.2K	7.61%	7.49%	7.48%
Bujumbura Rural	\$1,861.1M	171.4K	855.6K	7.31%	7.18%	7.20%
Ngozi	\$1,840.6M	176.3K	876.1K	7.23%	7.38%	7.37%
Kirundo	\$1,748.5M	183.9K	903.5K	6.87%	7.70%	7.60%
Makamba	\$1,381.7M	120.8K	604.9K	5.43%	5.06%	5.09%
Ruyigi	\$1,349.2M	127.5K	636.2K	5.30%	5.34%	5.35%
Cibitoke	\$1,338.8M	124.4K	620.0K	5.26%	5.21%	5.22%
Rutana	\$1,220.7M	112.7K	562.5K	4.80%	4.72%	4.73%
Karuzi	\$1,163.4M	112.6K	559.3K	4.57%	4.72%	4.70%
Bubanza	\$922.9M	89.0K	441.6K	3.63%	3.73%	3.71%
Muramvya	\$833.1M	74.9K	375.5K	3.27%	3.14%	3.16%
Mwaro	\$766.4M	72.2K	359.7K	3.01%	3.03%	3.03%
Cankuzo	\$730.9M	71.4K	354.0K	2.87%	2.99%	2.98%

Exposure by simplified taxonomy

Adding `MACRO_TAXO` column						
	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
MACRO_TAXO						
ADO/E	\$18,784.9M	1,713,470	8,592.7K	73.83%	71.79%	72.28%
MUR	\$3,245.4M	251,270	1,243.4K	12.75%	10.53%	10.46%
W	\$2,786.2M	332,116	1,614.3K	10.95%	13.91%	13.58%
OT	\$251.7M	78,059	375.9K	0.99%	3.27%	3.16%
RC	\$149.9M	4,888	32.1K	0.59%	0.20%	0.27%
MCF	\$114.3M	5,574	29.8K	0.45%	0.23%	0.25%
S	\$112.4M	1,534	0.0K	0.44%	0.06%	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				
ADO/E	MUR+ADO/LWAL+CDN/H:2/RES	\$8,830.0M	675,453	38.88%	31.08%
	MUR+ADO/LWAL+CDN/H:1/RES	\$5,361.8M	692,775	23.61%	31.88%
MUR	MUR+CL/LWAL+CDN/H:2/RES	\$1,408.8M	96,988	6.20%	4.46%
W	W+WWD/LWAL+CDN/H:1/RES	\$1,397.8M	216,718	6.15%	9.97%
ADO/E	MUR+ADO/LWAL+CDN/HBET:3-6/RES	\$1,167.4M	9,114	5.14%	0.42%
	MUR+ADO+MOM/LWAL+CDN/H:2/RES	\$1,060.3M	81,109	4.67%	3.73%
W	W+WWD/LWAL+CDN/H:2/RES	\$986.5M	90,557	4.34%	4.17%
MUR	MUR+CL/LWAL+CDN/H:1/RES	\$855.4M	99,475	3.77%	4.58%
ADO/E	E+ETO/LWAL+CDN/H:1/RES	\$798.7M	123,837	3.52%	5.70%
	MUR+ADO+MOM/LWAL+CDN/H:1/RES	\$643.8M	83,185	2.83%	3.83%
	MUR+ADO/LWAL+CDN/H:2/COM	\$202.3M	4,178	0.89%	0.19%

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