

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 = "Jordan"
```

Exposure files:
Exposure_Com_Jordan.csv
Exposure_Ind_Jordan.csv
Exposure_Res_Jordan.csv

Sanity checks and formats

Exposure at National level

Summary by occupancy type

	OCCUPANTS	BUILDINGS	COST_USD	BUILDINGS_%	COST_USD_%
OCCUPANCY					
Res	10.6M	1,146.2K	\$293.2B	90.00%	82.80%
Ind	0.0M	18.0K	\$6.8B	1.42%	1.91%
Com	0.0M	109.3K	\$54.1B	8.59%	15.28%

Other metrics to consider

	AREA_SQM	COST_BUILDING_USD	AVG_BUILDING_AREA_SQM	AVG_COST_PER_AREA_USD
OCCUPANCY				
Total	363.7M	\$277,230.9M	286	\$974
Res	320.3M	\$236,935.7M	279	\$916
Ind	7.5M	\$3,610.4M	414	\$907
Com	35.9M	\$36,684.8M	328	\$1,508

Exposure summary at Admin level 1

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
NAME_1						
Amman	\$144,173.4M	584.2K	4,448.3K	40.71%	45.87%	42.04%
Irbid	\$66,619.6M	230.0K	1,964.9K	18.81%	18.06%	18.57%
Zarqa	\$52,234.8M	167.4K	1,515.0K	14.75%	13.15%	14.32%
Mafraq	\$21,100.0M	66.7K	610.4K	5.96%	5.23%	5.77%
Balqa	\$18,719.5M	60.8K	545.8K	5.29%	4.77%	5.16%
Karak	\$12,033.7M	39.3K	351.5K	3.40%	3.09%	3.32%
Jarash	\$9,078.2M	28.6K	263.1K	2.56%	2.25%	2.49%
Madaba	\$7,158.9M	23.4K	210.0K	2.02%	1.84%	1.98%
Aqaba	\$7,141.7M	23.1K	208.9K	2.02%	1.81%	1.97%
Ajlun	\$6,663.2M	22.0K	195.4K	1.88%	1.73%	1.85%
Ma?an	\$5,480.6M	17.5K	159.9K	1.55%	1.37%	1.51%
Tafilah	\$3,747.0M	10.6K	106.9K	1.06%	0.83%	1.01%

Exposure by simplified taxonomy

Adding `MACRO_TAXO` column						
	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
MACRO_TAXO						
RC	\$197,360.2M	364,724	5,349.7K	55.73%	28.64%	50.56%
MCF	\$75,385.8M	346,350	2,436.5K	21.29%	27.19%	23.03%
MUR	\$70,303.2M	514,613	2,687.2K	19.85%	40.41%	25.40%
MR	\$7,069.6M	19,817	0.0K	2.00%	1.56%	0.00%
S	\$2,007.4M	5,416	0.0K	0.57%	0.43%	0.00%
OT	\$1,859.6M	21,137	99.4K	0.53%	1.66%	0.94%
ADO/E	\$164.8M	1,561	7.3K	0.05%	0.12%	0.07%

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+CDL/HBET:4-7/RES	\$35,765.9M	19,497	11.26%	1.65%
	CR/LFINF+CDM/HBET:4-7/RES	\$30,732.7M	16,750	9.67%	1.41%
	CR/LFINF+CDL/HBET:8-/RES	\$24,589.1M	4,875	7.74%	0.41%
	CR/LFINF+CDM/HBET:8-/RES	\$21,128.7M	4,187	6.65%	0.35%
MCF	MCF/LWAL+CDL/HBET:3-6/RES	\$17,955.1M	9,176	5.65%	0.77%
MUR	MUR+STDRE/LWAL+CDN/H:1/RES	\$16,160.5M	183,713	5.09%	15.51%
	MUR+STDRE/LWAL+CDN/H:2/RES	\$16,160.5M	183,713	5.09%	15.51%
MCF	MCF/LWAL+CDM/HBET:3-6/RES	\$15,860.2M	8,103	4.99%	0.68%
RC	CR/LFINF+CDL/H:3/RES	\$15,240.4M	29,243	4.80%	2.47%
	CR/LFINF+CDM/H:3/RES	\$13,095.7M	25,126	4.12%	2.12%
MCF	MCF/LWAL+CDL/H:2/RES	\$11,622.7M	110,108	3.66%	9.29%
MUR	MUR+STDRE/LWAL+CDN/H:3/RES	\$10,638.1M	22,962	3.35%	1.94%
MCF	MCF/LWAL+CDM/H:2/RES	\$10,266.6M	97,257	3.23%	8.21%
MUR	MUR/LWAL+CDN/HBET:3-6/COM	\$6,768.6M	5,408	2.13%	0.46%
	MUR+CB/LWAL+CDN/HBET:3-6/RES	\$5,875.9M	3,605	1.85%	0.30%
MCF	MCF/LWAL+CDL/H:1/RES	\$5,811.4M	55,050	1.83%	4.65%
RC	CR/LFINF+CDL/H:1/RES	\$5,788.0M	58,488	1.82%	4.94%
	CR/LFINF+CDL/H:2/RES	\$5,788.0M	58,488	1.82%	4.94%
MCF	CR/LFINF+CDL/HBET:4-7/COM	\$5,138.1M	2,143	1.62%	0.18%
	MCF/LWAL+CDM/H:1/RES	\$5,133.3M	48,630	1.62%	4.10%
MUR	MUR/LWAL+CDN/H:2/COM	\$5,047.0M	18,031	1.59%	1.52%
RC	CR/LFINF+CDM/H:1/RES	\$4,973.5M	50,255	1.57%	4.24%
	CR/LFINF+CDM/H:2/RES	\$4,973.5M	50,255	1.57%	4.24%
MUR	CR/LFINF+CDM/HBET:4-7/COM	\$4,555.2M	1,906	1.43%	0.16%
	MUR/LWAL+CDN/H:1/COM	\$3,350.4M	27,046	1.05%	2.28%
MUR	MUR+CB/LWAL+CDN/H:1/RES	\$2,852.7M	32,429	0.90%	2.74%
	MUR+CB/LWAL+CDN/H:2/RES	\$2,852.7M	32,429	0.90%	2.74%
MCF	MCF/LWAL+CDL/HBET:3-6/COM	\$2,381.1M	1,430	0.75%	0.12%
	MCF/LWAL+CDM/HBET:3-6/COM	\$2,108.9M	1,272	0.66%	0.11%
OT	MATO/RES	\$1,859.6M	21,137	0.59%	1.78%
RC	CR/LDUAL+CDL/HBET:4-7/RES	\$1,662.1M	904	0.52%	0.08%
MR	MR/LWAL+CDL/HBET:3-6/COM	\$1,602.3M	1,071	0.50%	0.09%

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