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Residential settlement of migrants and housing values; zooming into neighbourhoods of Italian provincial capitals

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The purpose

- To demonstrate the potential use of the high resolution dataset on migrants' presence developed within D4I project in combination with information on real estate values;

- to explore the relationship between housing prices and rents and the residential settlement of migrants;

- to identify future research directions.

Note: The presented analysis does not explore causal relationship of between housing values and residential settlement of migrants.

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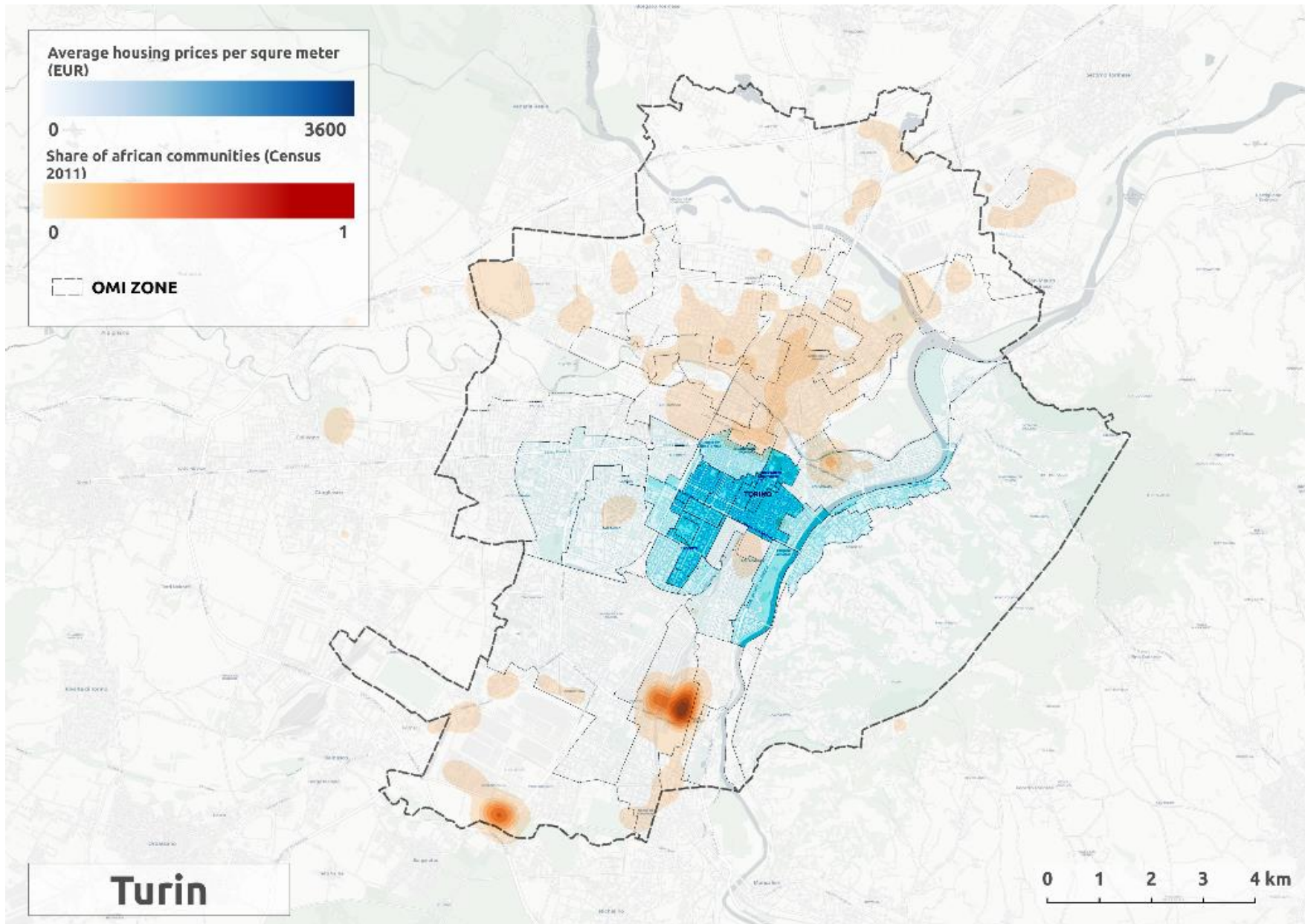
Map 1. Housing prices vs. Share of migrants

Data

Data

106 provincial and regional capitals

- **Population**: residing population by single country of birth with high geographic resolution (D4I, 2011 Census of population in Italy).

- **Housing values**: Estimates of housing prices and rents for civic housing provided by the Italian fiscal authority (OMI, Agenzia delle Entrate).

- **Unit of analysis**: OMI microzone (refers to a small municipality or a district/street of a bigger one). Max/Min<1.5.

- **Geographic coverage**: 106 provincial and regional capitals

- **Period**: 2011

Table 1. Descriptive Statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
Prices per sq.m (Max)	2,568	**2,525**	1,357	290.0	14,000
Prices per sq.m (Min)	2,568	**1,878**	9,988	220.0	10,000
Rent per sq.m (Max)	2,435	**8.12**	5.19	1.0.	50.00
Rent per sq.m (Min)	2,435	**5.94**	3.77	0.9	35.00
Entropy Index	2,016	**0.39**	0.21	0.00	1.30
Share of migrants	2,016	**0.09**	0.06	0.00	0.86
Share of mig. from High Income countries	2,016	**0.01**	0.02	0.00	0.47
Share of mig. from Low Income countries	2,016	**0.01**	0.02	0.00	0.47
Share of mig. from African countries	2,016	**0.08**	0.09	0.00	1.00

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Share of migrants and Entropy Index in OMI micro zones (frequency)
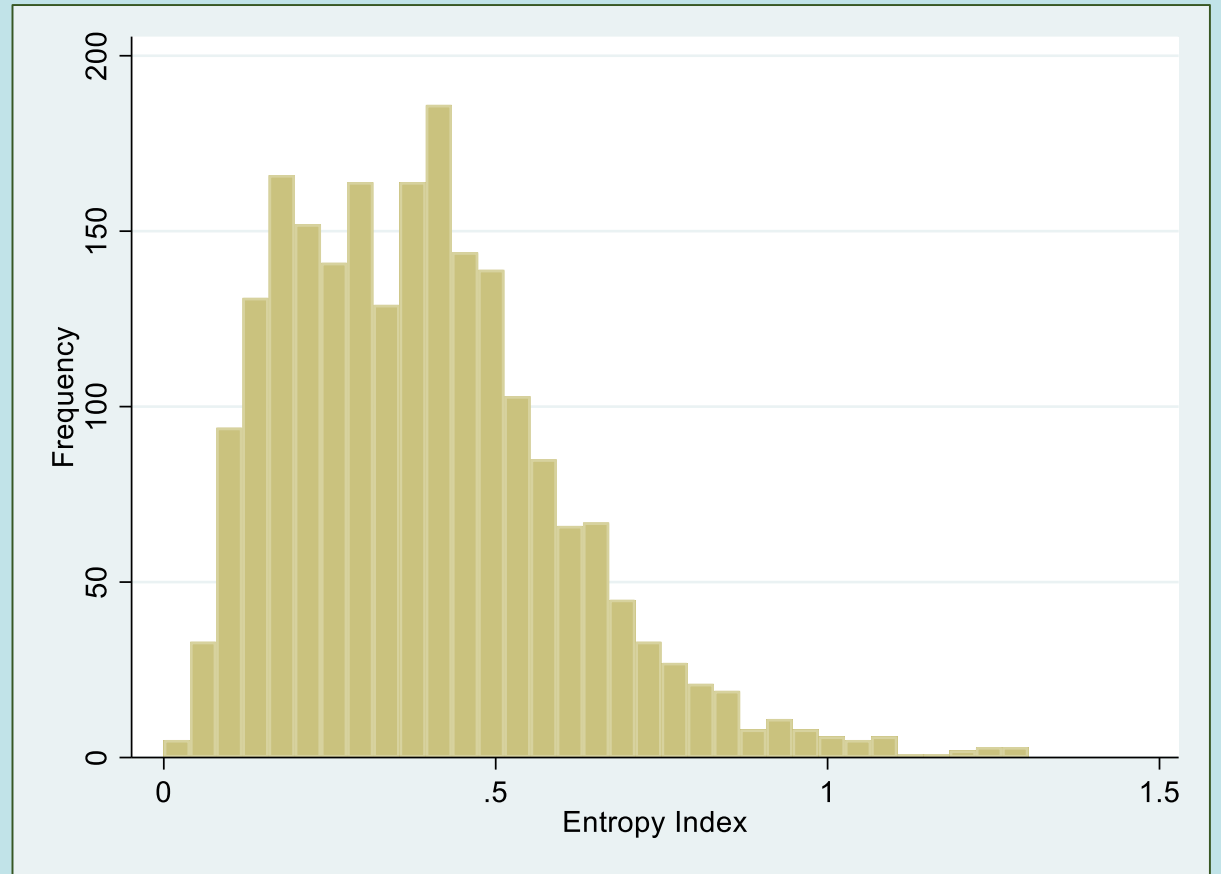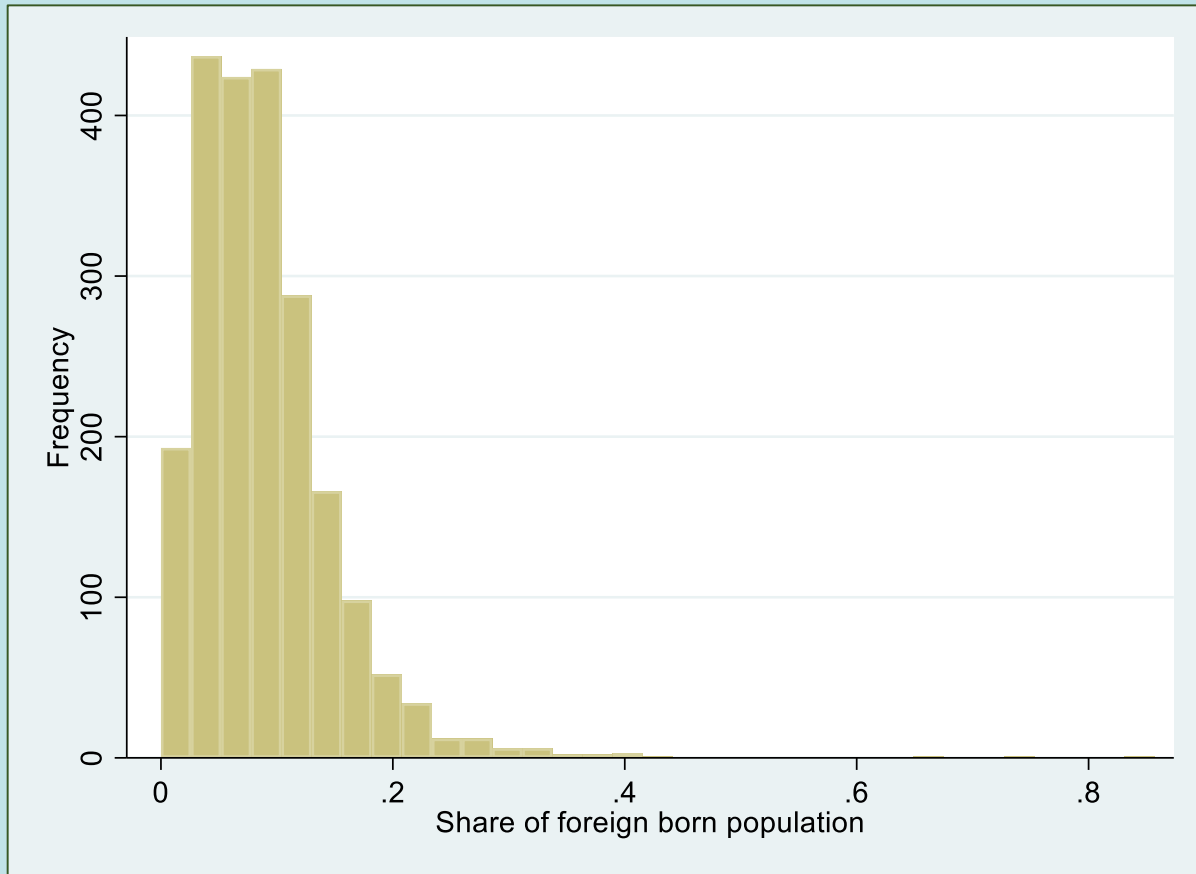
Empirical specification

Basic empirical specification:

$\log(\textit{Housing Value} \, _{ni}^{l}) =$

$\boldsymbol{\alpha} + \boldsymbol{\beta}_1 \textit{Share of Migrants} \, _{ni} + \beta_2 \textit{Share of Migrants} \, _{ni}^{2} + \boldsymbol{\gamma} \textit{Entropy Index}_{ni}$

$+ \boldsymbol{\delta} \textit{Urban Zones}_f + \boldsymbol{\gamma} \textit{State of Conservation}_s + \mu_i + \varepsilon_{ni}$

Entropy Index:

Shannon (1948)

$$\textit{Entropy Index} = -\sum_o (p_o * Log(p_o))$$

Table 2. The relationship between presence of migrants and housing values in Italian provincial capitals: Income level of country of origin specification

	Price		Rents	
	(1)	(2)	(3)	(4)
	Max	Min	Max	Min
Share High-income	0.340	0.381	0.430	0.412
	(0.313)	(0.290)	(0.307)	(0.296)
Share Low-income	0.224	0.289	-0.108	-0.366
	(0.423)	(0.382)	(0.342)	(0.318)
Share of Africans	-0.535***	-0.549***	-0.238	-0.165
	(0.106)	(0.112)	(0.201)	(0.169)
Share of migrants	9.425***	8.847***	9.152***	8.679***
	(2.059)	(2.004)	(2.110)	(2.019)
Share of migrants^2	-8.384***	-7.845***	-8.291***	-7.700***
	(2.162)	(2.094)	(2.192)	(2.013)
Entropy index	-2.100***	-1.998***	-1.973***	-1.889***
	(0.365)	(0.357)	(0.406)	(0.382)
Constant	6.860***	6.371***	1.134***	0.545***
	(0.068)	(0.074)	(0.089)	(0.098)
Municipality FE	Yes	Yes	Yes	Yes
State of conservation FE	Yes	Yes	Yes	Yes
Urban zone' FE	Yes	Yes	Yes	Yes
Observations	2,568	2,568	2,435	2,435
R-squared	0.887	0.887	0.867	0.868
Clusters	106	106	106	106

Results

1. Negative relationship between the diversity (Entropy Index) of population and housing prices and rents;

2. The relationship between housing values and concentration of migrants is **non-linear**;

The positive coefficients at share of migrants and negative ones at its square term indicate that the relationship between presence of migrants and housing values is positive but declining.

3. Country of origin matters;

Presence of migrants some countries is negatively associated with housing prices and to a lesser extent to rents (e.g. from Romania, Morocco, China). The presence of some groups (e.g. Ukraine, Philippines and USA) is associated with higher housing prices and rents.
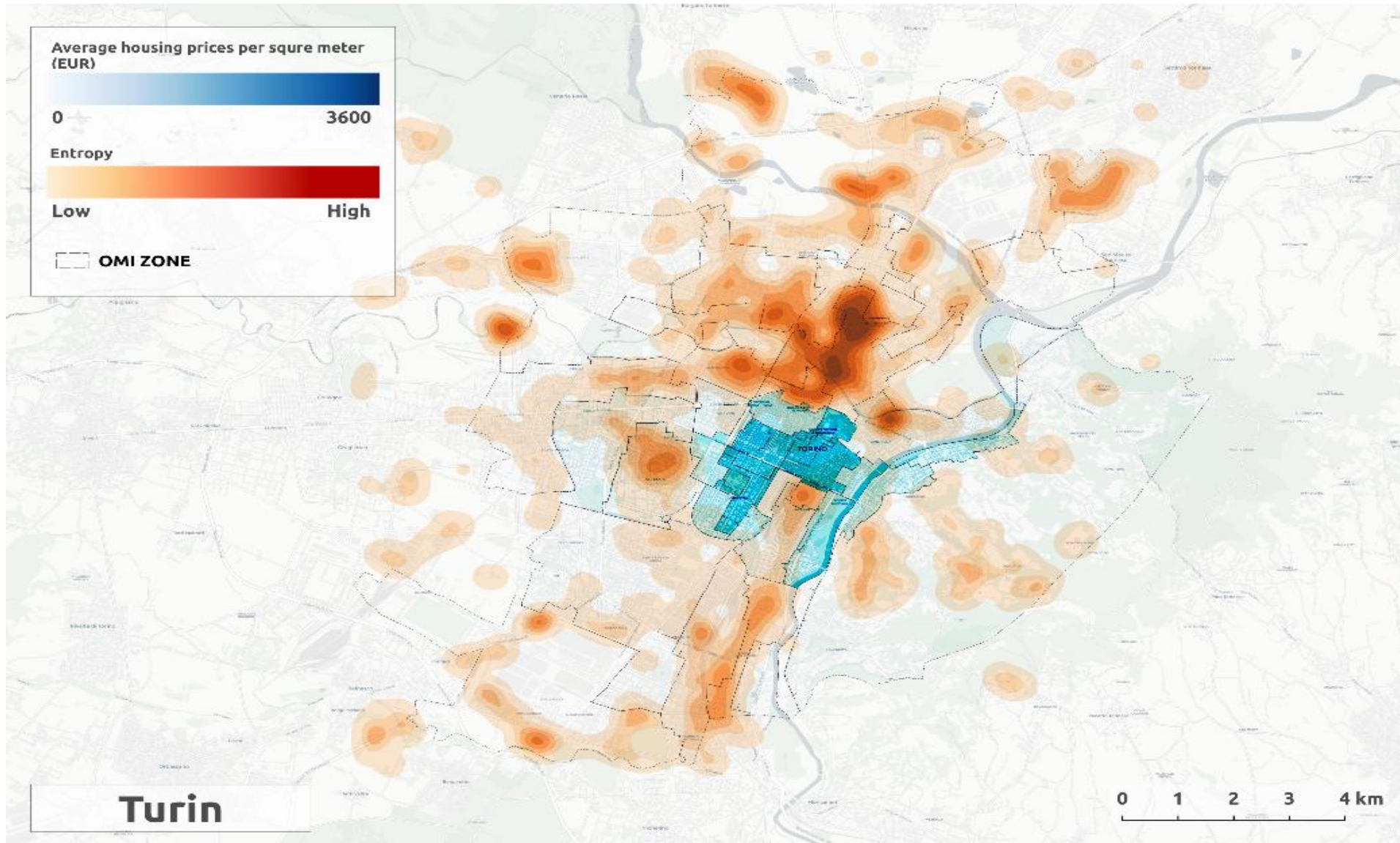
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Nonlinear relationship between housing values and concentration of foreign born
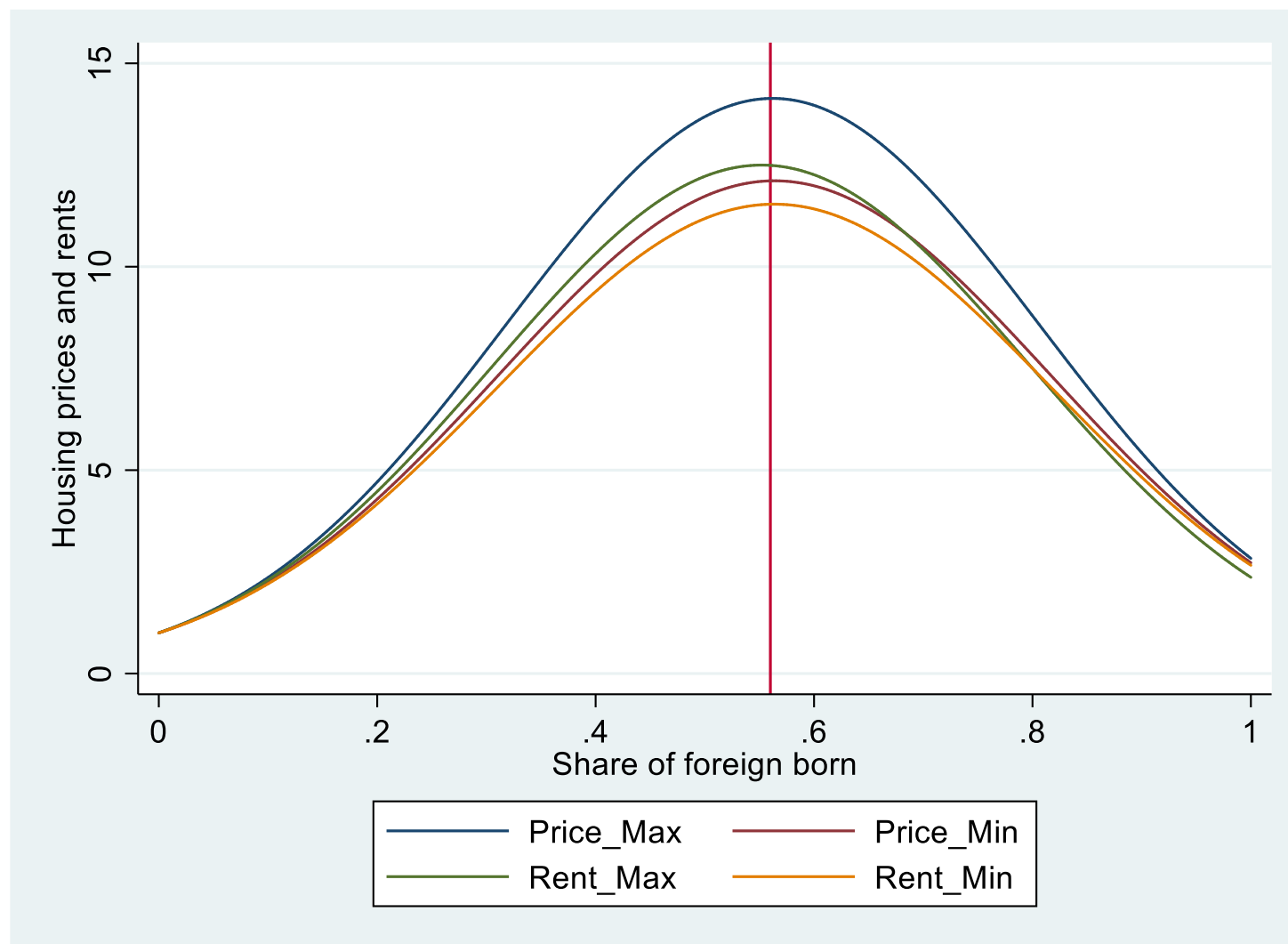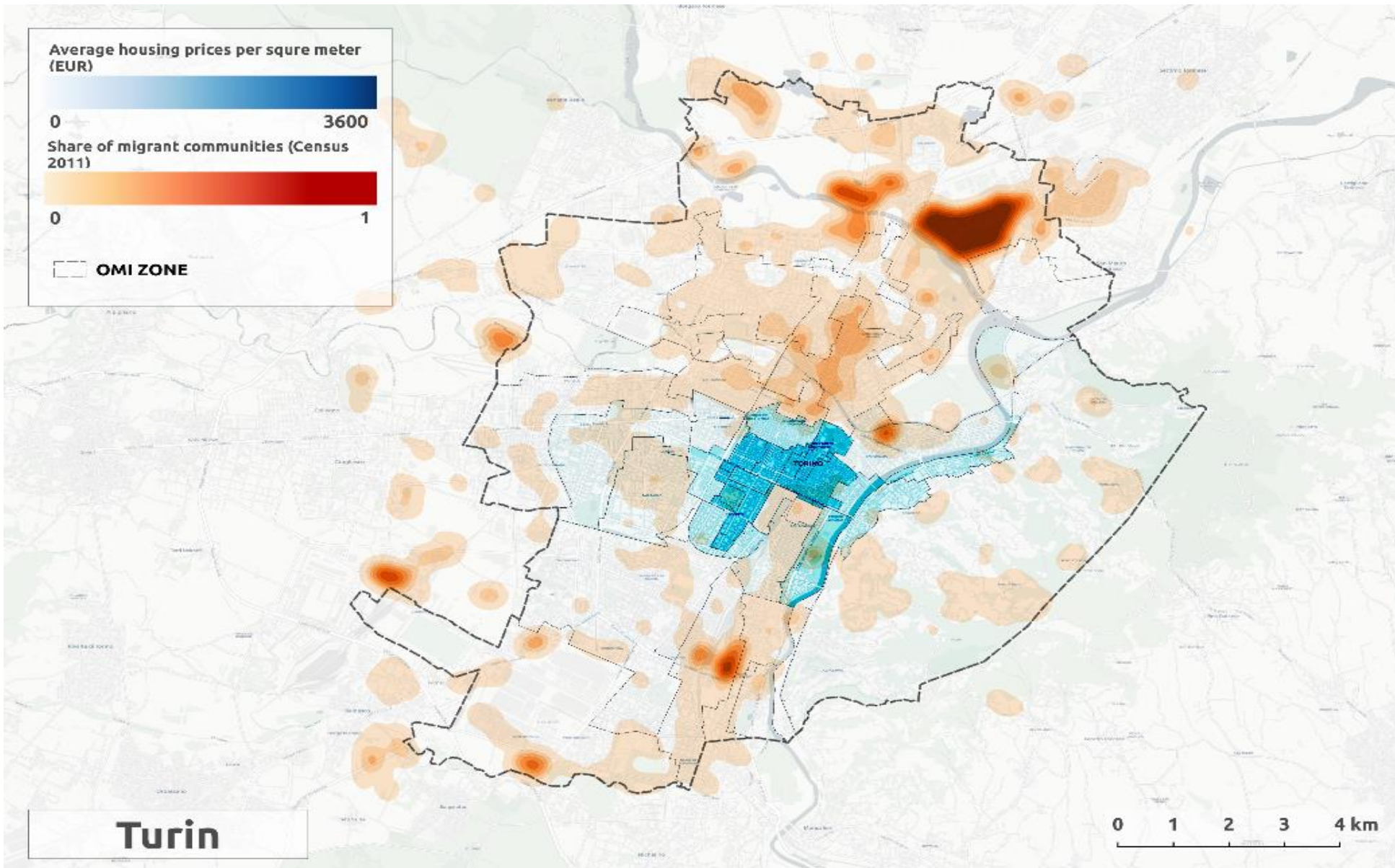
Map 2. Average housing prices vs. Share of African migrants

Map 3. Average housing prices vs. Entropy index

Conclusions & Future research agenda pointers

- ✓ More diverse neighbourhoods are also those with relatively lower housing values;
- ✓ the relationship between housing values and concentration of migrants is non-linear;
- ✓ the sign and significance of the association varies significantly depending on the origin of migrants.

- ❑ exploring the potential of longitudinal data for evaluating the impact of migrants on housing market dynamics and detecting residential segregation in Italian cities (2001 vs 2011);
- ❑ exploring the causal relationship of between housing values and residential settlement of migrants (Instrumental variable);
- ❑ understanding on how patterns of migrant mobility into, within and out of neighbourhoods influence house prices.

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THANKS