

Where is it possible to survive the nightlife in Turin?

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Abstract

This report intends to observe whether there is a correlation between the choice of an area in which to take up residence and whether this is the optimal choice in relation to commercial activities and the response of the public authorities to *bad nightlife* phenomena, locally known as "*malamovida*".

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Introduction

Background

Turin has a two-thousand-year history and was the first capital of the Kingdom of Italy. Since the second half of the twentieth century it has experienced a significant expansion of the urban morphology and is considered one of the major Italian production centers. Internal migrations in the second half of the twentieth century and subsequent ones from other foreign states have further modified the social pattern of the city. Turin is divided into 8 Districts that do not correspond to its historic districts and rises on the plain bordered by its 4 rivers; the Po "divides" the city into the south-north axis, delimiting the flat

part of the city to the west and the hilly part to the east. The city is characterized by a checkerboard road network and has long tree-lined avenues of nineteenth-century origin. In the most recent history of the city, Turin has had to go through critical phases aggravated by the world economic recession of the second half of the 2000s, despite receiving a slightly favorable boost during the XX Winter Olympic Games and the IX Paralympic Winter Games in 2006. The Turin economic crisis, also aggravated by that of its major automotive industry, forced the shift of economic activities towards the secondary and tertiary sector, inaugurating a season of revaluation of fairs and cultural events, museums and art centers and important public works (such as the underground Metro or the railway link).

Problem Definition

Despite this attempt to revive the city, some areas nevertheless remain distant from the model that every city government tries to achieve. The most striking examples are the eternal conflict between the center and the suburbs, the problems caused by traffic that makes the city one of the most polluted in Italy or the problems caused by the "nightlife" due to a concentration of clubs, pubs in some urban areas. It is appropriate to understand what are the real estate market trends in relation to the expansion of the tertiary sector, which appears to be dominated by commercial activities that have replaced the classic local shops and which causes considerable civic problems in some central and historic areas of the city. Furthermore, it is necessary to understand the extent of the public authority and its sanctioning system in relation to the reports made by affected citizens, especially in areas frequented by young people where noisy or general incivility actions often occur.

Target Audience

The idea of this report is to help people who are planning to relocate or find a new home in Turin to consider the best option for a quiet residence in the central or semi-central or hill areas near the Po river (*precollina*) possibly close to public parks and easily accessible by public transport. But are these areas really recommended for a possible stakeholder with these needs? The essential question is: are there islands of tranquility? And what is the response of public institutions to the phenomena of disturbances and incivility in certain areas?

Possible Solution

The purpose of this report is to demonstrate whether there are alternatives and whether there is an impact in relocation choices in certain city areas.

Data Sources

The data essentially comes from sources of the Public Administration updated up to 2019. The complete dataset for the analysis consists of: datasets that contain the list of districts, zones, areas; the Revenue Agency dataset containing Residential and Commercial Land Value; a dataset from Local Police low crime rate (received petition and reports for disorderly conduct); the local Commercial Activities dataset in conjunction with Foursquare. The data format is provided in *csv/excel, geojson or geospatial* format.

Data Sources:

- [Geoportale Torino](#)

- [Geoportale Torino Catalog](#)
- [Geoportale Torino maps](#)
- [Open Data Torino](#)
- [Agenzia Entrate OMI](#)
- [Foursquare API](#)

First, it is necessary to *normalize* data as they contains a possibly obsolete geocoding format. For this reason the Python *GeoPandas* library¹ is used as it extends the *pandas* datatypes with geospatial features in order to convert the original data in Latitude and Longitude. Some dataset contains the geographic information relating to the districts of the City of Turin, geo-referenced according to the *WGS84*² coordinate system *EPSG: 4326* or *Monte Mario / Italy zone 1 (EPSG: 3003)*. In the second case the coordinates are converted into the *WGS84 system*. For a quick visualization of places of attraction such as restaurants or squares for example, the *Foursquare API*³ is incorporated with data from other datasets.

OMI Zones are a sub-zoning of main Districts and they are compiled by The Revenue Agency or Agenzia delle Entrate, an italian non-economic public body that collect taxes and also provides cadastral and geocartography services. OMI is the acronym of Osservatorio Mercato Immobiliare that provides cadastral and land registry queries for individuals and professionals. This service provides cadastral and land registry data bases, plans, incomes, class and typology, zones for each cities in the country. The survey sources are: real estate agencies, internal agency estimates, auctions, deeds of sale, courts, etc. OMI files can be obtained and exported in *zip* format and contain:

- 2 CSV: Value and Zone listing with zoning, residential, commercial, min and max prices for property and lease, status, typology;
- 1 KML file with zone coordinates defining zone, micro-zones, macro-zones, zone description.

Zones are grouped in 4 Macro Areas (Fascia):

- B: Central area
- C: Semi-central neighbourhoods
- D: Outskirts neighbourhoods
- E: Hills area

Local administration counts 8 Districts now, while in some open data still counts 10. In recent years two districts have been merged with others: Districts 8 and 9 were merged into District 8; Districts 2 and 10 were merged into District 2.

Operational Notes

All Data Sources are pre-Covid. The Report does not consider the year 2020 and the Covid *variable* although some private reports⁴ state that the real estate market has not yet suffered significant decline. Some datasets needed to be cleaned up before they could be used due to the use of different character encodings (non UTF-8), different formats. Other datasets seem incomplete or present missing data across the years, and in the worst case seem wrong. Especially it seems that the public authority uses different methodology to locate street and Districts. All dataframes labels are in original language. See Table Translation as references below. In this report, central and semi-central zones in *normal* state have been selected.

Cartographic base is integrated with other data of the City of Turin found on the Geoportal of the City of Turin and Open Data portal *Aperto*.

Data Licenses

License data: CC40BY, CC30BY, Agenzia delle Entrate

Methodology

A different methodology was applied for each part analyzed. From preliminary exploration of the zones to clustering for commercial activities.

The first part of the report did not need any particular approach as it was just a matter of selecting an area and then applying the averages to understand how the market has moved over the years. Anyway a Clustering approach has been applied. In summary, it was imagined starting from the initial demand of a possible buyer to search for a prestigious area and apply the analysis taking into account the average prices of the area and select the areas excluding the maximums and minimums that in certain areas represent the outliers.

For the second part of the report concerning Commercial Activities, it was necessary to use a *k-mean clustering* approach to understand the relationships between the various *Districts* of the City and to understand what is the phenomenon of the tertiary sector and if there are any components that can indicate which areas are more similar to others. In this case it was necessary to start from a preliminary analysis using the Foursquare API to understand which areas have the most commercial services available in certain categories. In this case, the categories of Restaurants and Cafes were excluded from the survey, mainly using data relating to night clubs, concerts, events. However, the data seemed rather scarce and not exactly up to date, so it was also necessary to use the official data from public sources updated to 2019, exceeding the search limits of the supplier. As for the Foursquare API, the k-mean clustering approach was applied excluding some commercial activities. However, it was not possible to discern the specific categories as they were not specified in the original dataset. So we proceeded by analyzing the data to select an entire category (EP) including all commercial activities relating to bars, restaurants, discos and public places in general.

For the third part, relating to the repression by the public authority of incivility and abuse phenomena in certain areas, a simple regression was used considering the number of reports and the number of notifications issued as values.

Results

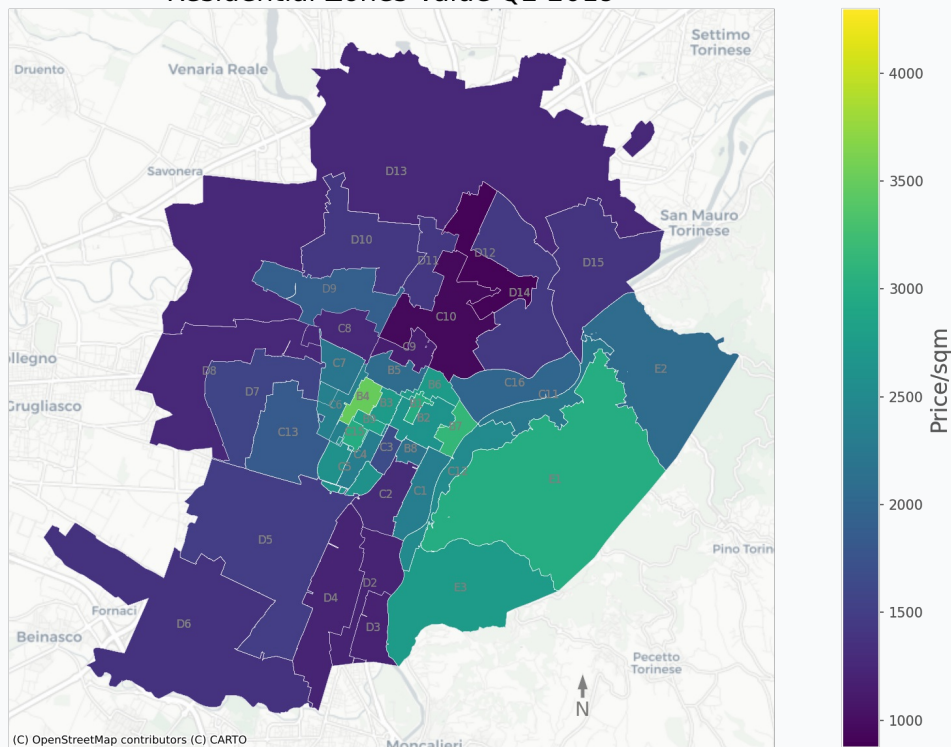
The following are the results of the analysis

Zone Exploration

The selected areas are the central one colored with shades of gray.

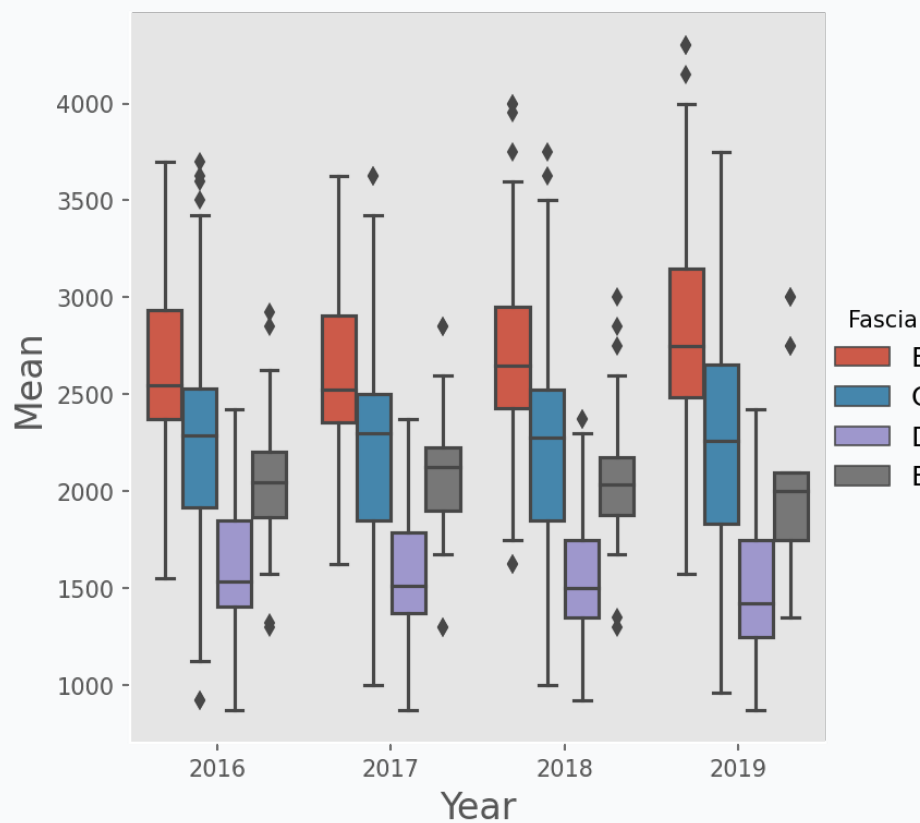
Macro areas B is the top rated.

Residential Zones Value Q2 2019



Zone Prices

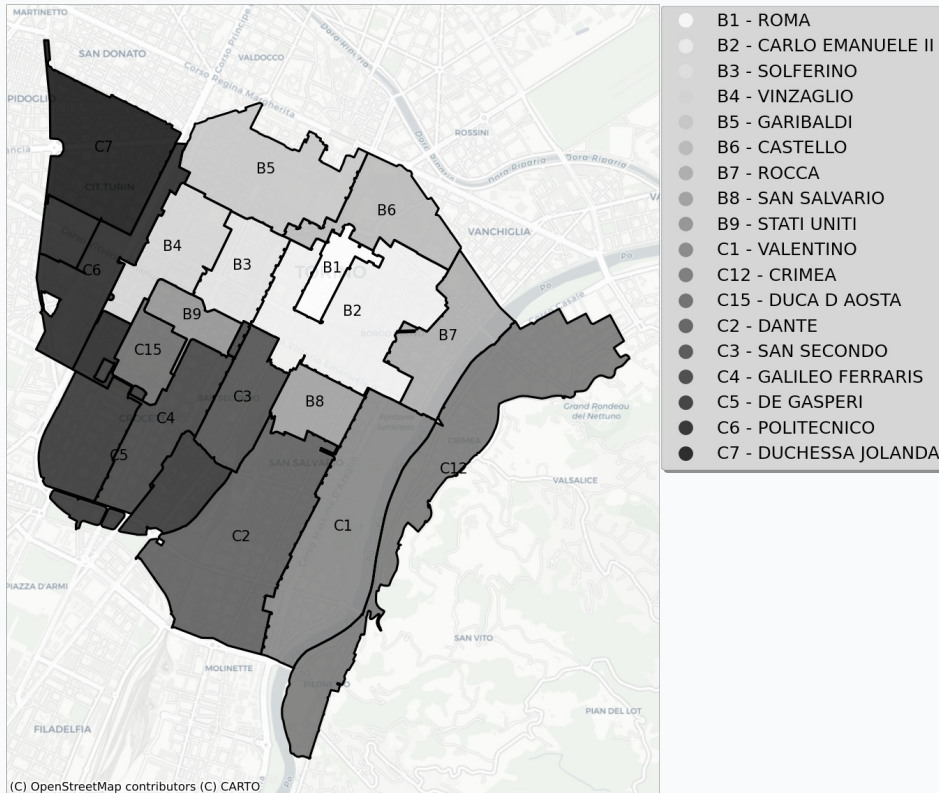
OMI Residential Macro Areas 2016-2019



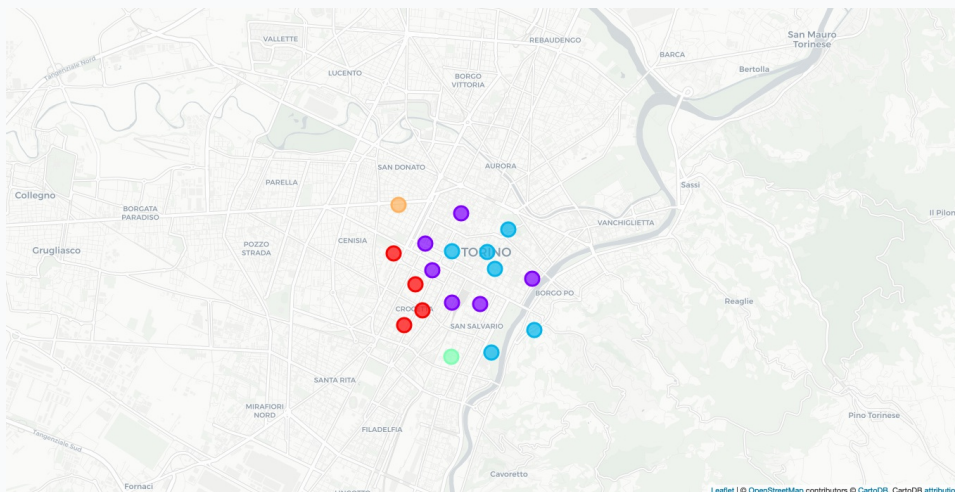
Zone market in 4 year

These are the Zones selected: central, semi-central in normal status.

Selected OMI Zones



Selected OMI Zones



Selected OMI Zones Clustering

Commercial Exploration

The commercial areas especially belonging to the *EP* (Public Places) category have increased since the second half of the 2000s.

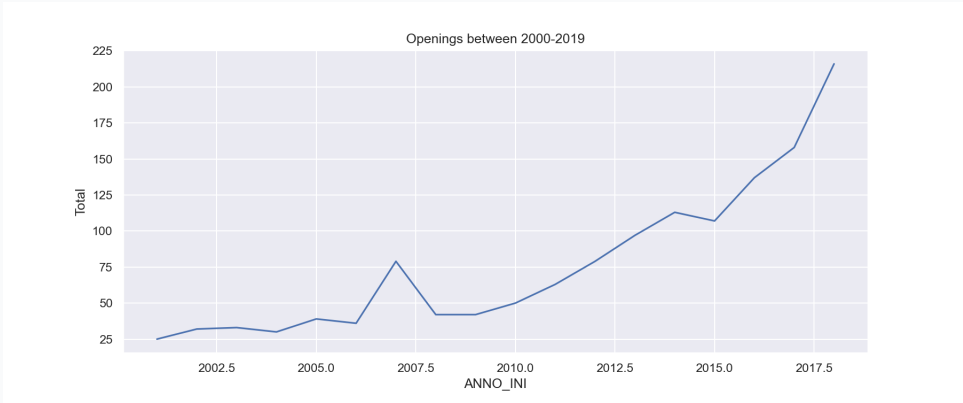
In particular, there is an increase after 2012, presumably caused by the national policy of economic *Liberalization* following the global economic crisis. This policy - in a nutshell - has in fact "unlocked" the previous one in which the local market was in some way bound by rules that prevented the opening of commercial establishments too close to each other.

Obviously the central areas are better served than the peripheral ones and concentrate the greatest number of commercial activities to serve not only the resident population but also offices and tourists.

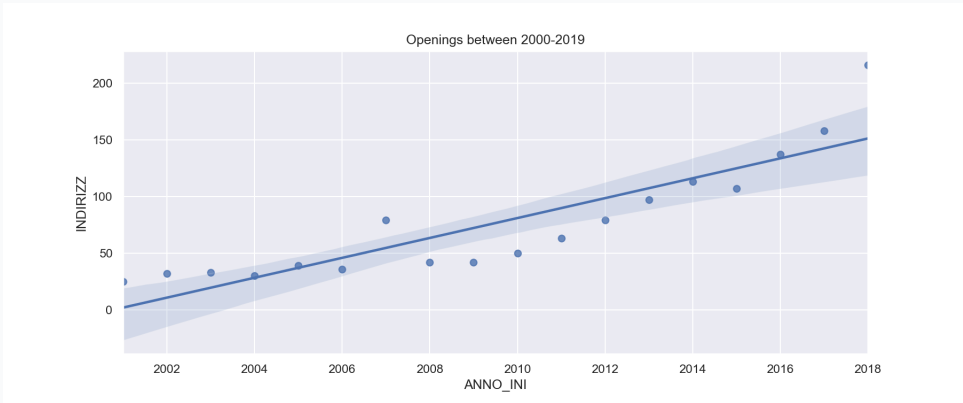
Commercial Activities openings.

These graphs show how commercial activities are moving and in particular how many new openings are

in the category of public places.



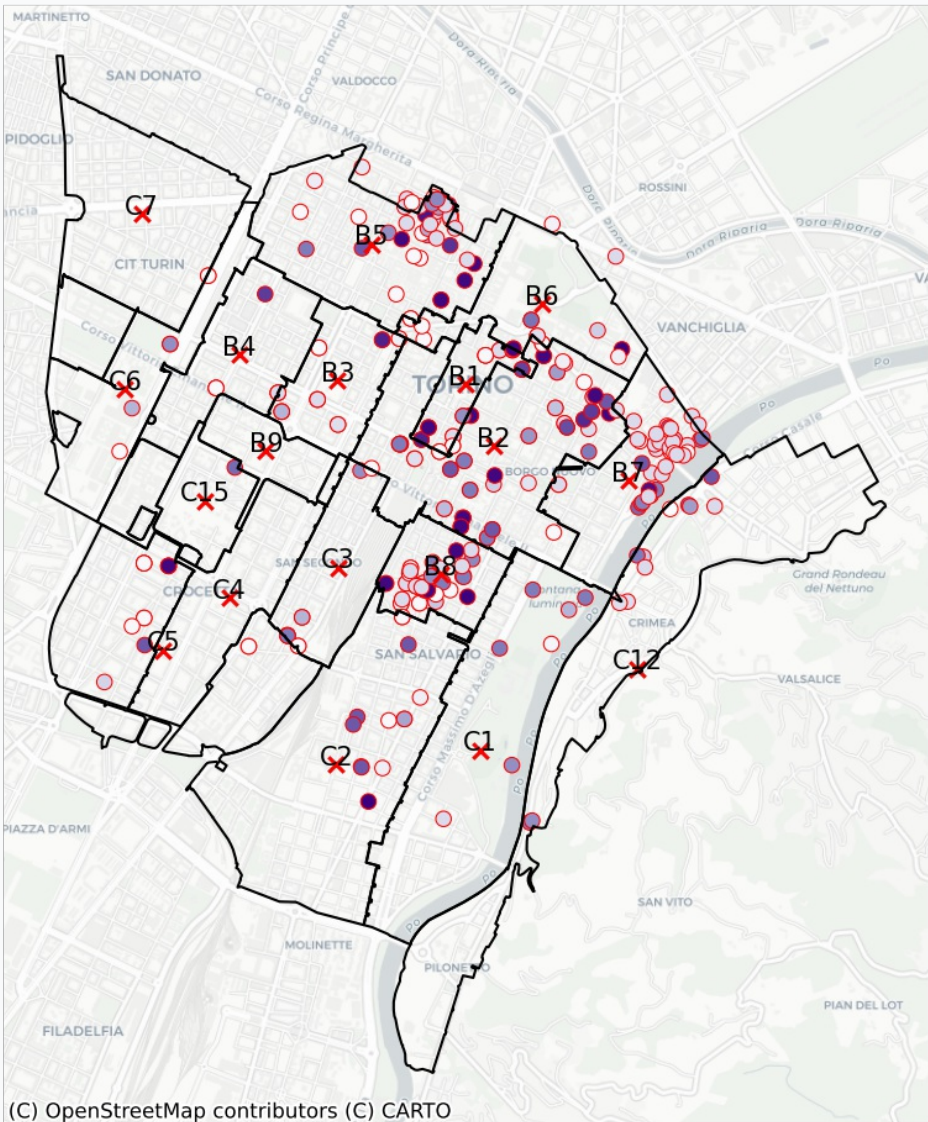
Opening in 20 Years



Opening in 20 Years - regplot

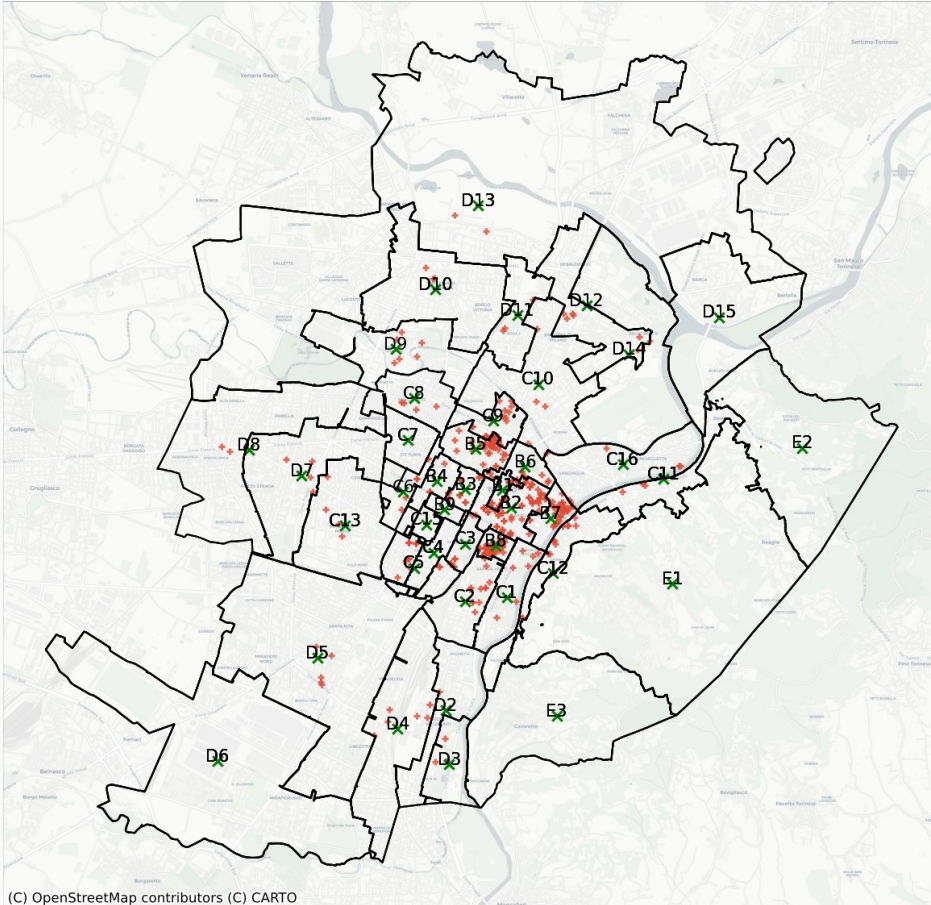
Clustering with Foursquare API.

Selected OMI Zones Venues



Clustering using Foursquare in selected zones

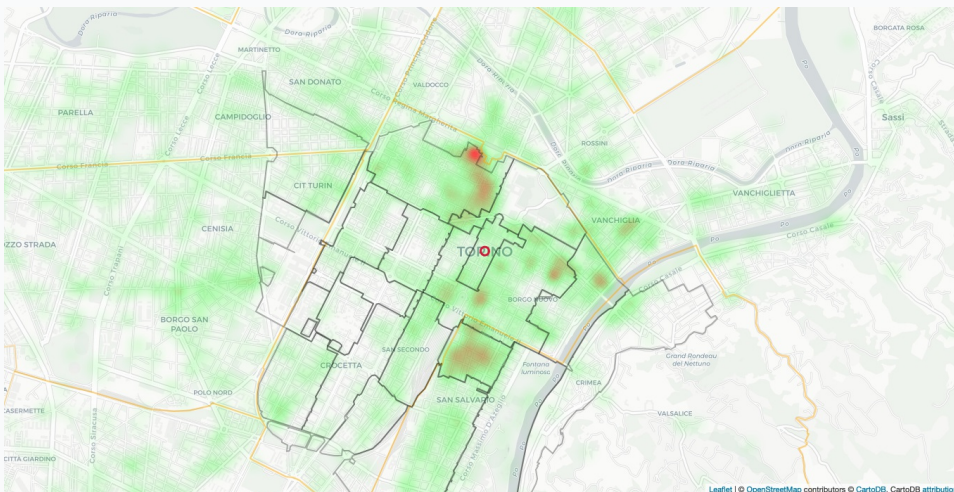
Full City Venues



Clustering using Foursquare - all city

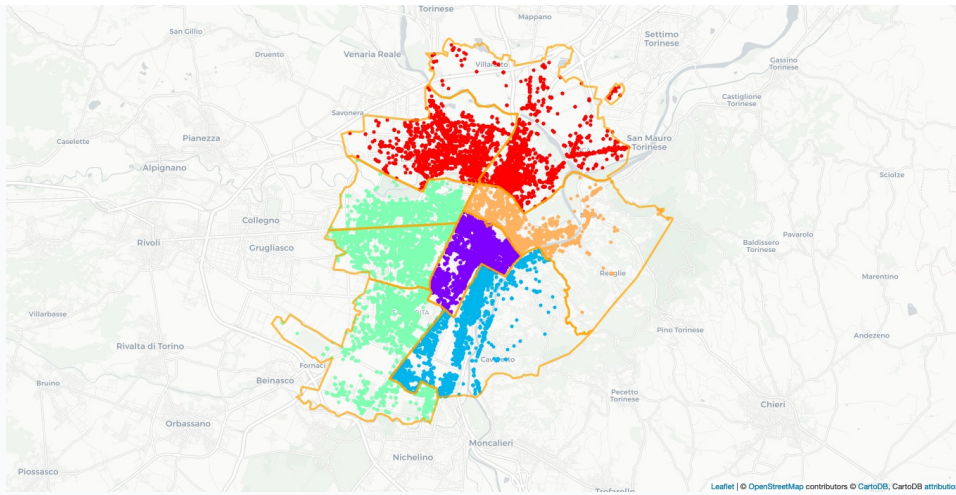
Concentration and Clustering with Public Open Data.

This map shows the concentration of public places throughout the city and in relation to the areas selected with a black border. The most impacted areas are B2, B5, B7 with a greater exposure for the B8 area. Especially in the areas more marked with the red color there are night clubs, cocktail bars, restaurants and correspond to the classic areas of nocturnal concentration and are the most problematic for civil coexistence.



Heatmap of public places based on Public Open Data - all city

Clustering results.



Clustering using Public Open Data - all city

Public Authority Exploration

Public Authority and Contact Center

This observation shows the most problematic areas of the city considering the level of Infringement Notifications issued by the public authority to suppress the phenomena of harassment, shouting, noise from public places, too much music volume, high concentrations of people, etc. In general, it can be said that the higher the concentration of public places, the higher the incivility phenomenon, especially at night. There is a geographical correspondence of the phenomenon especially in the selected and more central areas. Macro-zone *B*, which corresponds with its selected zones in the observation to Districts 1 and 8, is clearly the most impacted due to the high number of concentration of public nightclubs, bars, restaurants.

The phenomenon extends to neighboring areas and elsewhere, but the level of concentration in this case is relatively low and attributable to harassing behavior in its own right rather than to the concentration of people.

The data available from 2011 to the second quarter of 2019 were analyzed. For the unavailable data, the average was applied taking into account the previous years. The missing data refer to the second half of 2019.

Considering the years from 2011 to 2019, there is a decrease in the number of penalties applied. Observing the available data, it can be seen that from 2011 to 2014 the control was tighter, while from 2015 to 2018 the type of control diversified and became more relaxed.

The 5 major categories of abuse or misconduct are taken as examples in the table. The type *FORBIDDEN CONDUCT* refers to the behavior of people, including their behavior outside the premises, while the other types are sanctions applied to public premises.

Table 1. 2011 - 2014

Type	Infringements
FORBIDDEN CONDUCT	705
SHOWS AND ENTERTAINMENTS	558
COMPLIANCE	404
AUTHORIZATION	208
ABUSIVE OCCUPATION	165

Table 2. 2015 - 2018

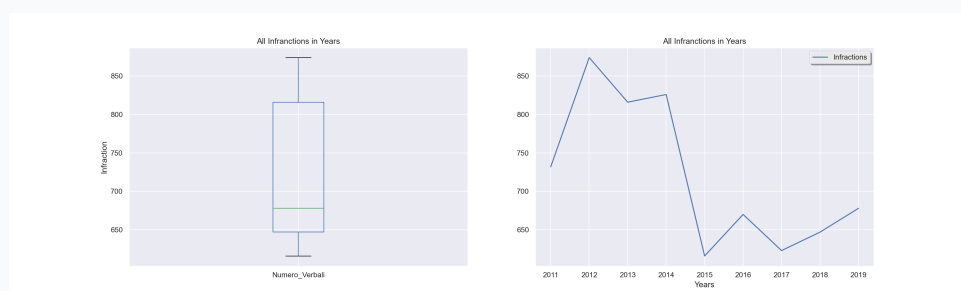
Type	Infringements
FORBIDDEN CONDUCT	352
SALE AND HOLDING OF BEVERAGES	324
AUTHORIZATION	268
COMPLIANCE	261
GENERIC	233

Table 3. Contact Center Data

harassment categories	Nr.
Youth groups	101
Other	4245
Harassing behavior	592
Public Places disturbances	1836
Troublesome noises	1152

Note the value assigned to *Other*.

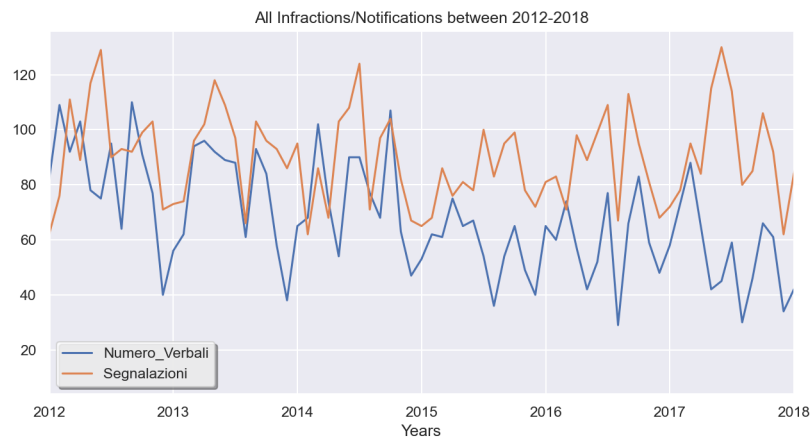
It is very meaningful and could also include reports regarding other categories, but it depends on how the data has been categorized by the public authority's Contact Center.



Total Infringement Notifications from dataset 2011 - 2019

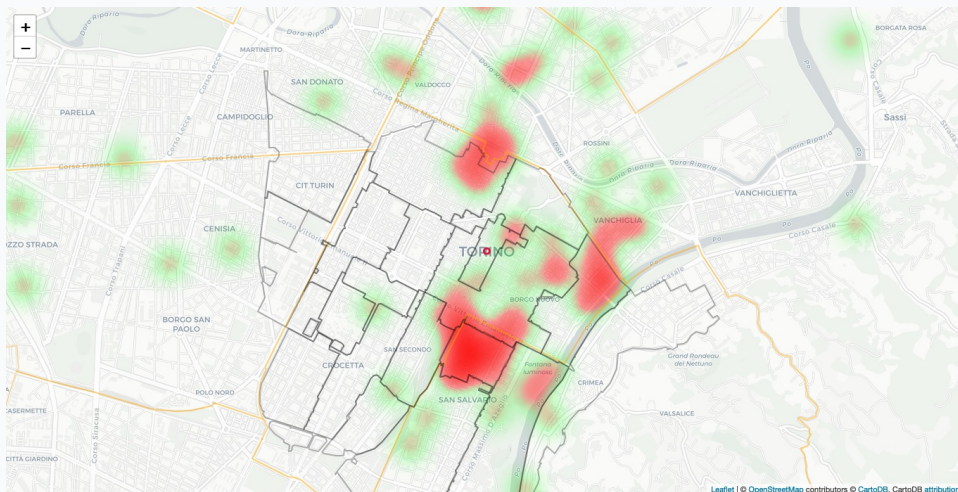
The following is the final representation with the data of the Infringement in relation to those of the Contacts for the period 2012-2018 which excludes the data in which the latter is not available or insufficient.

Note that there is no close relationship between intervention and reporting. Often the interventions of the authorities are not necessarily linked to a single event or to the contact of the citizen: the investigations can also be consequent to independent control and prevention operations.



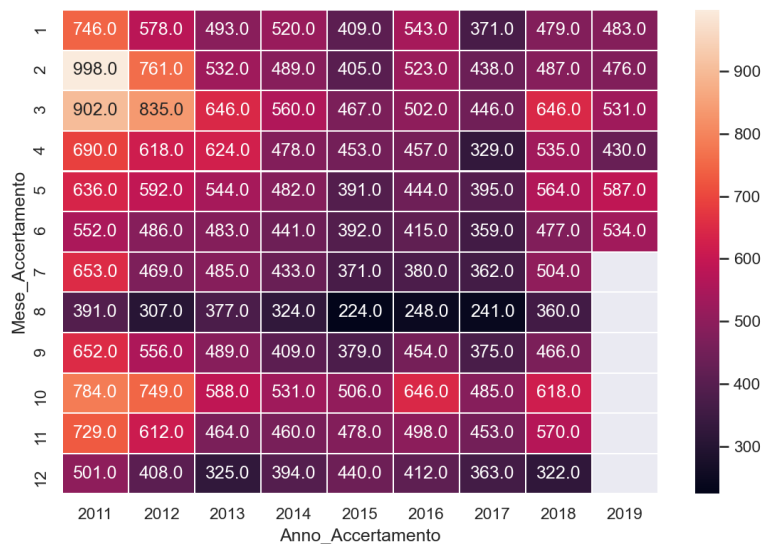
Contacts vs Infringement Notifications

The following is the map that represents the hottest areas in which bad behavior of citizens and managers of public places develop. Comparing the areas with those of the commercial categories it is possible to note that they essentially overlap.



Heatmap of the most restless zones

This is the relationship between Infractions and the most "hot" periods of the year. It is possible to note that the months of August (mid-summer) and December (mid-winter) are generally the least affected by the production of notifications and sanctions, while the months in which the most checks occur are spring and autumn.



Heatmap of the most restless zones - monthly

The Contact for each Districts is shown here.

The top Districts are 1, 8 - that contain Zones B and C - and 7, near to District 1.

Table 4.

Contacts per

Districts

District	Total
1	1532
2	660
3	846
4	768
5	774
6	966
7	1131
8	1249

Discussion

In this observation, the relationship between commercial activities, nightlife and public force intervention to repress and / or keep under control the phenomena of incivility and bad behavior caused by the increase in entertainment venues was analyzed. It has been shown that where the concentration is high, the phenomenon of incivility is more evident and marked. Furthermore, some Districts suffer more from the bad habits of uncivilized citizens, whether they are customers or managers of public places. Obligations are also imposed on the latter to maintain control of their customers.

In addition, there are numerous non-compliance with the regulations and the lack of licenses by the operators of the sector, as well as the same agreements made with the residents of certain areas.

Over time, the public authority has had to counteract the phenomenon of bad nightlife with specific ordinances, limiting in certain cases operating hours, up to the closure for a certain period of some commercial activities due to repeated violations or noise emitted with loud or music, manifesting

inability to manage customers. However, the number of violations of the regulations is considerable when compared to the population of the city and the phenomenon is often dealt with in local news.

Last but not least, petitions and complaints against local public bodies for omission or inability to limit the noise that occurs in certain areas and at certain times.

In the report it was not possible to use the most recent data as they were not yet produced by the institutions, so the pre-Covid period was only taken into consideration, limited to 2019. Following the prolonged lockdown, the Municipality decided to "help" the public places (closed for months) allowing the possibility of expanding one's business to the outside, on a public street through the installation of "temporary" dehors, at zero cost. This ordinance was followed by an additional incentive practice by establishing new pedestrian areas near public places. All to the detriment of the residents, with traffic and parking problems that are added to the already known problems of incivility.

Having analyzed the phenomenon starting from the initial question on the selection of a central area in which to take up residence, it was necessary to understand if there are other factors to determine a bad choice for the future and which must be taken into account.

In general, it could be said that the central areas are undoubtedly the most popular because they have more services and are the best served, on the other hand they are also the least quiet, especially on weekends. But this is not the case in all areas. Some are islands of tranquility - in relation to the available data and not only to personal subjectivity - but clearly at a price sometimes higher than the average of the real estate market.

Finally, from the selected areas, those where human and nocturnal recreational activity is most concentrated can be excluded: B8, followed by B7, part of B2 and B5. The hilly areas and along the River Po south of the center and west of it remain quiet areas.

Suggestions and Directions

In this report some variables have not been considered such as the resident population for each area, the quality of transport and services, traffic, but above all the part relating to the transfer of commercial activities and what is the relevance on the socio-economic factor of the City.

In the future, it may be necessary to use and compare the data following the Covid pandemic and subsequent municipal ordinances to verify promptly whether they have positively or negatively affected the resident population.

References

1. GeoPandas Library [GeoPandas](#). ↵
2. EPSG [EPSG](#). ↵
3. Foursquare [Foursquare API](#). ↵
4. Private market analysis [Immobiliare](#). ↵

Appendix

Table Reference

Table 5. Naming convention adopted

	Original	Translation
0	CIRCOSCRIZ	District
1	DENOMINAZ	Name
2	INDIRIZZO	Address
3	CAP	PostalCode
4	geometry	geometry
5	ID_QUART	ID_BORO
6	DENOM	Name
7	DID	DID
8	NCIRCO	District nr.
9	Fascia	Zone
10	Descr_Tipologia	Macro Area
11	Stato	Typology_Descr
12	Compr_min	Status
13	Compr_max	Sell_min
14	Zona_Descr	Sell_max
15	ZID	Mean
16	Zona	Zone_Descr
17	Year	ZID
18	Semester	Year
19	Mean	Semester
20	C_COMP_MER	Comm_Sector
21	INDIRIZZ	Address
22	ANNO_INI	Year_begin
23	MESE_INI	Month_begin
24	TIPO_MER	Product_Type
25	DESC_RIP	BreakDown_Descr
26	DETT_RIP	BreakDown_Detail
27	CAT_MER	PROD_CAT
28	PREVALEN	Prevalence
29	TIPO_LOC	Location_Type
30	MQ_TOT_L	SQM_TOT_L
31	MQ_TOT_V	SQM_TOT_V
32	TIPO_ADD	ADD_TYPE
33	NOME_ADD	ADD_NAME
34	Anno_Accertamento	Year_Fine
35	Mese_Accertamento	Month_Fine
36	Giorno_Accertamento	Day_Fine

	Original	Translation
37	Tipologia_Verbale	Report_type
38	Tipo_Sanzione	Sanction_type
39	Via_1	Street_1
40	Numero_Civico	House_Number
41	Via_2	Street_2
42	Descrizione_Sanzione	Sanction_Description
43	Descrizione_Paragrafo	Paragraph_Description
44	Descrizione_Capitolo	Description_Chapter
45	Descrizione_Prontuario	Description_Handbook
46	Numero_Verbali	Penalties_Number
47	Categoria	Category
48	Sottocategoria	Subcategory
49	Circoscrizione	District
50	Localita	Location
51	Area Verde	Green Area
52	Data	Date
53	Ora	Time