

Unemployment rate and real estate price in Barcelona

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Main challenges

- Time constraint
- Catalan language
- Double Group By
- Excel imports
- Cleaning data
- Interpret the data

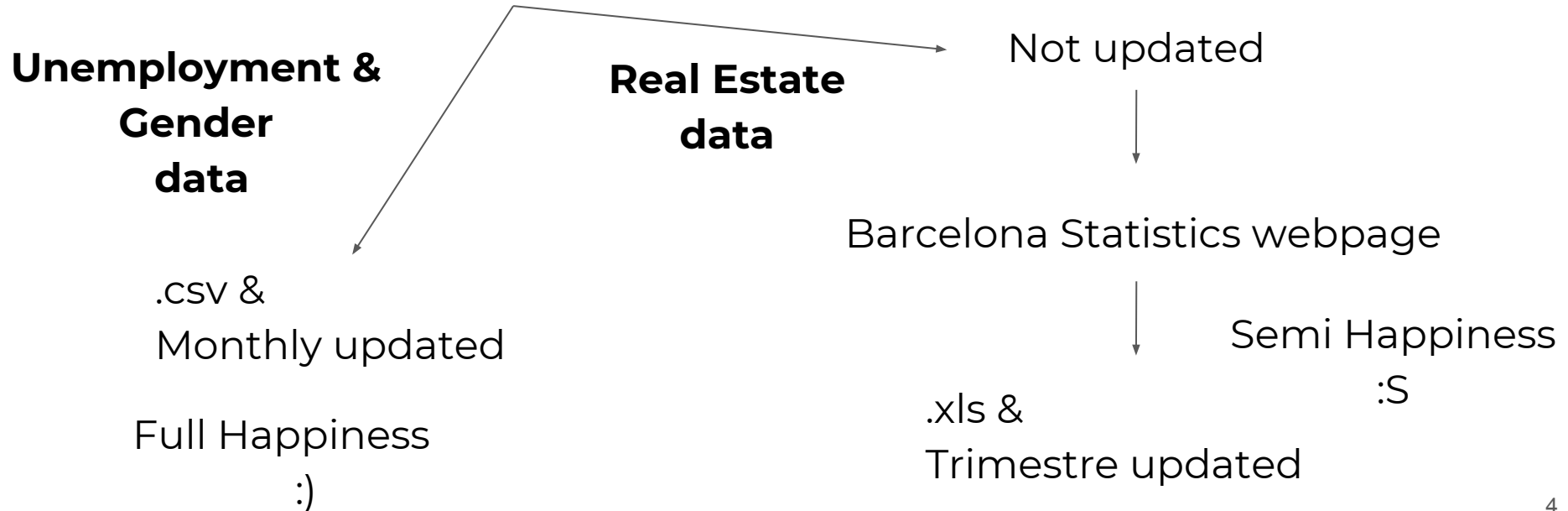
Kanban

Not useful for us.

- Small project.
- Only two persons in the team.
- Rigid scheme to make changes.

About our data: Data Source

- We took it from Barcelona Open Data.



About our data: additional information

- It would have been great to have additional data such as



**Pre-2010 vs
Post-crisis data
(unemployment
rate & growth in
each district)**

**Working
population split
between
men/women &
age groups**

**Flat rental prices
/ district**

**Number of jobs
created by district &
by industry / year**

About our data: Data Results

Flat prices by District

	District	2016	2017	2018 (1,2,3t)
0	Sarrià-Sant Gervasi	542,451.94€	601,039.97€	620,197.00€
1	Les Corts	420,334.83€	559,055.60€	583,627.94€
2	Eixample	310,896.53€	364,298.11€	366,987.75€
3	Ciutat Vella	277,278.17€	306,263.39€	354,175.10€
4	Gràcia	282,499.54€	329,729.80€	309,447.35€
5	Sant Martí	293,441.22€	313,599.29€	293,472.85€
6	Sant Andreu	188,885.24€	219,305.19€	216,565.15€
7	Horta-Guinardó	168,120.67€	178,508.56€	207,067.28€
8	Sants-Montjuïc	164,800.86€	237,785.09€	199,744.70€
9	Nou Barris	110,451.27€	126,845.36€	123,246.72€

About our data: Data Results

	Year	Unemployment rate %	Average working population	Average number of men looking for a job	Average number of women looking for a job
Name District					
Ciutat Vella	2018	8	76977	3457	2927
Eixample	2018	5	176803	4250	5174
Gràcia	2018	5	79621	2017	2567
Horta-Guinardó	2018	6	107494	3413	4250
Les Corts	2018	4	49869	1194	1563
Nou Barris	2018	9	105370	4255	5412
Sant Andreu	2018	7	94810	2993	4065
Sant Martí	2018	7	154672	5050	6191
Sants-Montjuïc	2018	7	122513	3869	4681
Sarrià-Sant Gervasi	2018	3	92221	1512	1917

	Year	Unemployment rate %	Average working population	Average number of men looking for a job	Average number of women looking for a job
Name District					
Ciutat Vella	2016	9	74820	4051	3159
Eixample	2016	6	174728	5114	5921
Gràcia	2016	6	79215	2429	2884
Horta-Guinardó	2016	8	105252	4138	4814
Les Corts	2016	5	50166	1428	1808
Nou Barris	2016	11	102612	5434	5905
Sant Andreu	2016	9	93905	3746	4656
Sant Martí	2016	8	152694	6021	7113
Sants-Montjuïc	2016	9	121861	4680	5367
Sarrià-Sant Gervasi	2016	4	91086	1730	2182

Unemployment/Gender Figures 2018 vs 2016:

- Unemployment rate decreased in most of the districts (except Horta-Guinardo)
- Average working population also rose in almost all of the districts between 2016 and 2018
- Both the average number of men and women looking for a job decreased as well in most of the districts

About our data: Data Results

Important to note:

- Average working population is total number of people who are working and registered in the Department of Labor (it does not take into account the black market)
- Employed people in the labor force (from 16 to 64 years old)
- The unemployment rate is based on the active population (or labor force)

	Year	Unemployment rate %	Average working population	Average number of men looking for a job	Average number of women looking for a job
Name District					
Ciutat Vella	2017	8	76575	3679	2997
Eixample	2017	5	177115	4651	5426
Gràcia	2017	6	79562	2143	2700
Horta-Guinardó	2017	7	106465	3638	4474
Les Corts	2017	5	50255	1257	1620
Nou Barris	2017	10	103980	4700	5526
Sant Andreu	2017	8	94321	3234	4261
Sant Martí	2017	7	154138	5432	6566
Sants-Montjuïc	2017	8	122680	4069	4893
Sarrià-Sant Gervasi	2017	3	92267	1587	1955

Insights/Arguments

- We could deduct that the unemployment rate fell between 2016 and 2018 because the economy of the region is improving.
- Consequently, it would make sense that the number of people looking for a job decreased during the same period.
- Regarding real estate prices, during the same period the price of the flats are rising in all Barcelona districts.
- Again, we would need more data on the underground economy (which is not taken into account in our data sets), annual economic growth of Barcelona in order to strengthen the argument above.

What did we learn?

- Data is **never** perfect.
- Difficult to know if you're analyzing the data correctly.
- Lack of administrative transparency = enemy number 1
- Excel = enemy number 2.
- Data cleaning.
- Group by function.