Xinavane visualizations

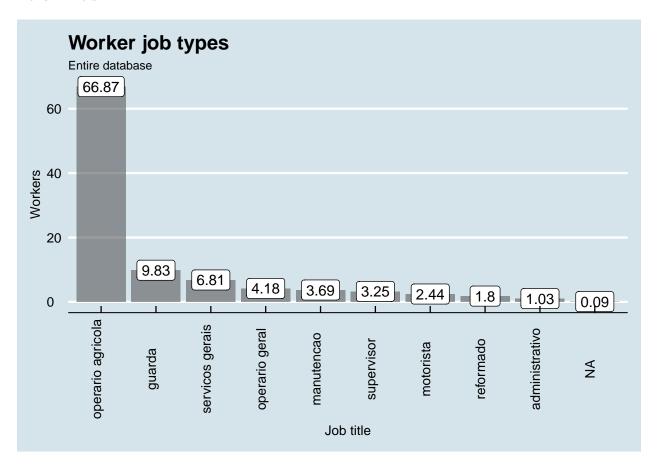
Joe Brew Laia Cirera Elisa Sicuri

Contents

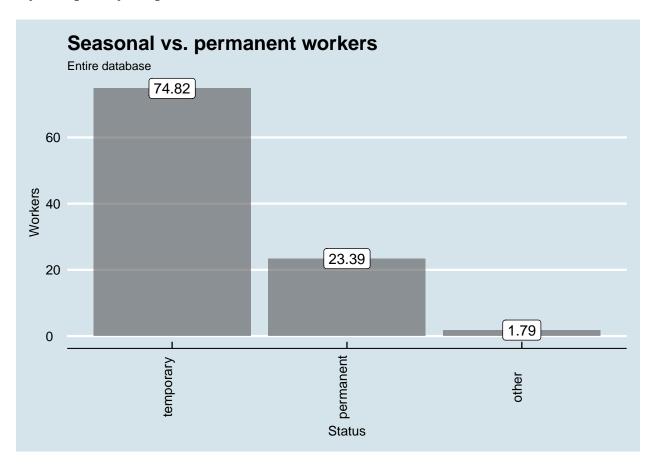
Worker details	2
By job type	2
By temporary vs permanent status	3
By job type AND temporary vs. permanent status	4
By seasonality and place of residence	5
Absenteeism: permanent vs. temporary	
Absenteeism: location and permanent vs. temporary	7
Absenteeism:worker type	8
Absenteeism: location and worker type	9
Using days rather than rate	10
All absenteeism	11
Absenteeism over time by place of residence	11
Absenteeism over time by place of residence and sex	14
Absenteeism over time by place of residence and seasonal vs. permanent status	17
Absenteeism over time by place of residence and worker type	18
Sickness-only absenteeism	20
Sick absenteeism over time by place of residence	22
Absenteeism over time by place of residence and sex	25
Absenteeism over time by place of residence and seasonal vs. permanent status	28
Absenteeism over time by place of residence and worker type	
Filtering to exclude multi-contract workers	31
Modeling	33
Difference in differences visualization	34
Difference in differences with detail	
Difference in differences with more aggregation	
Details	37

Worker details

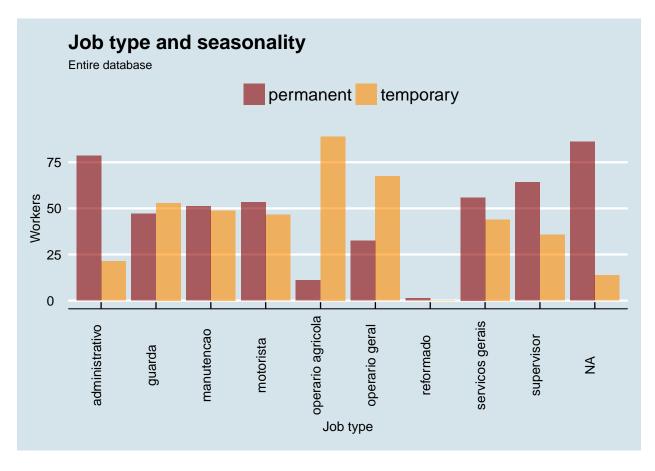
By job type



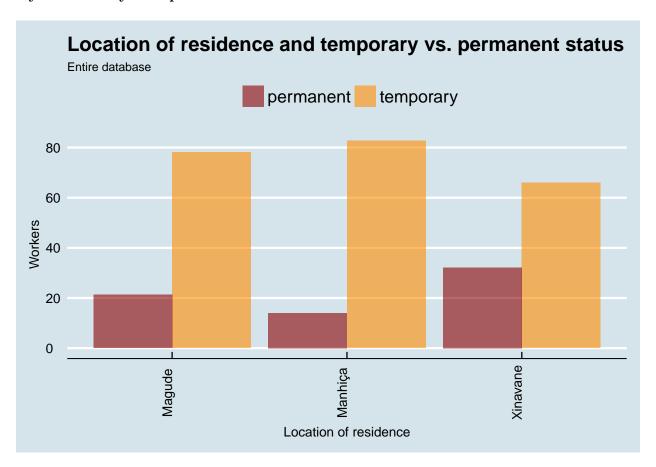
By temporary vs permanent status



By job type AND temporary vs. permanent status



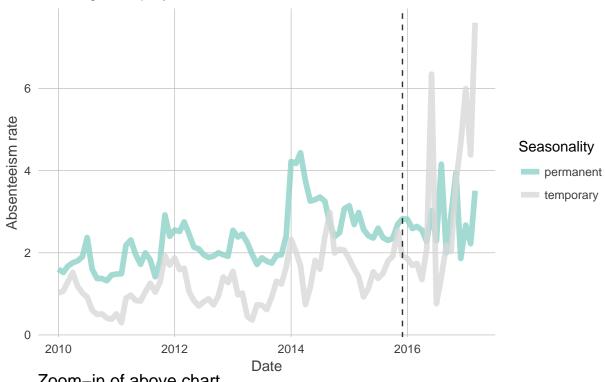
By seasonality and place of residence



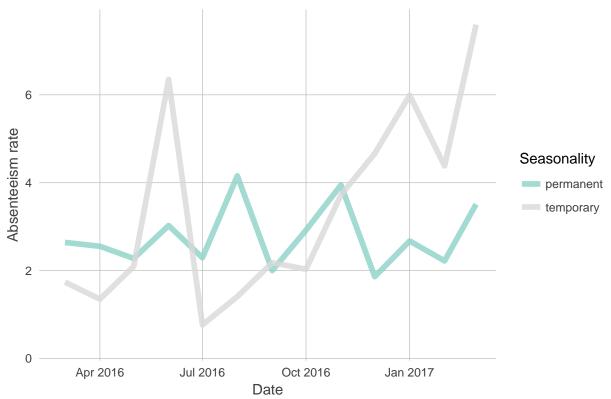
Absenteeism: permanent vs. temporary

Monthly crude absences

According to company records-based residential locations



Zoom-in of above chart

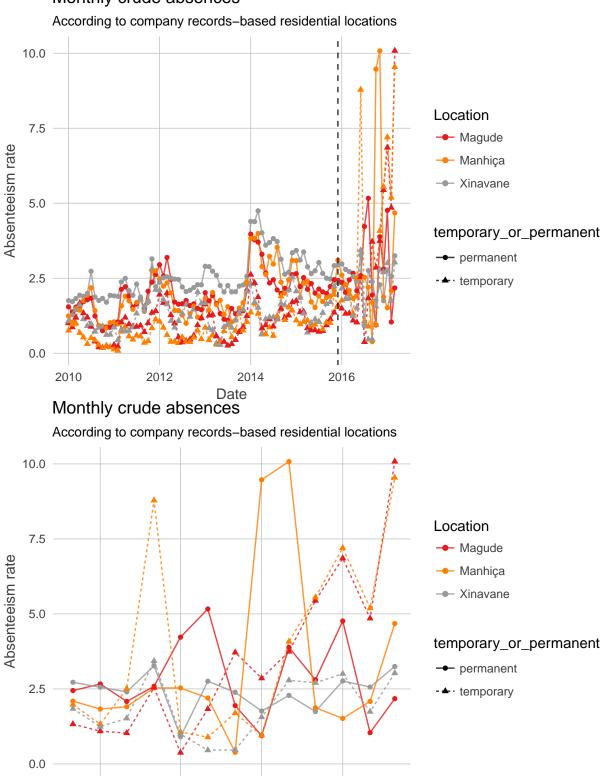


Absenteeism: location and permanent vs. temporary

Monthly crude absences

Apr 2016

Jul 2016



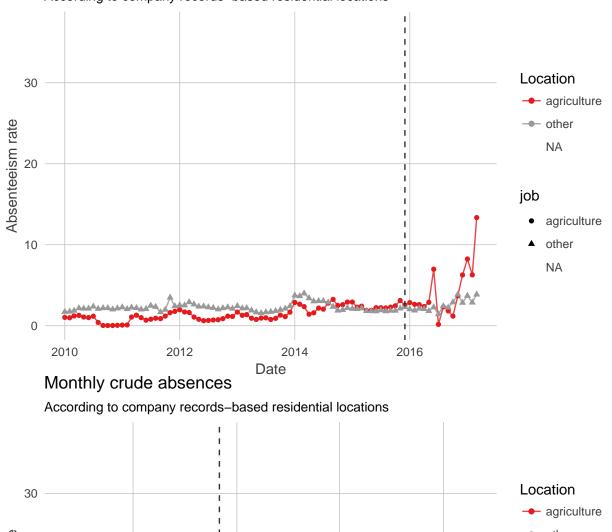
Jan 2017

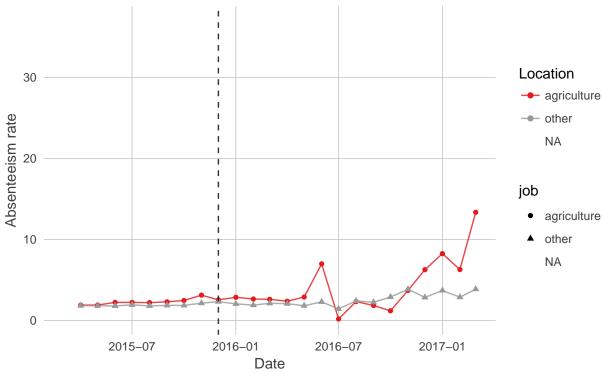
Oct 2016

Date

Absenteeism:worker type

Monthly crude absences

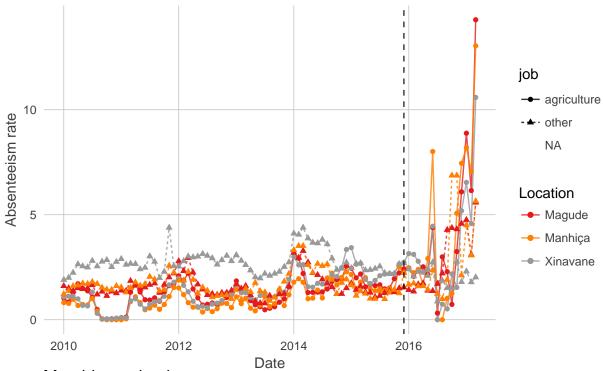




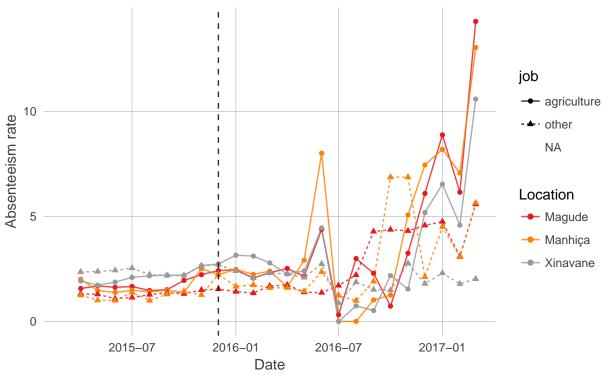
Absenteeism: location and worker type

Monthly crude absences

According to company records-based residential locations



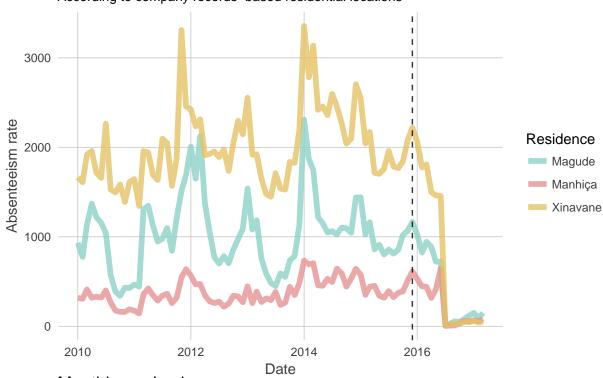
Monthly crude absences



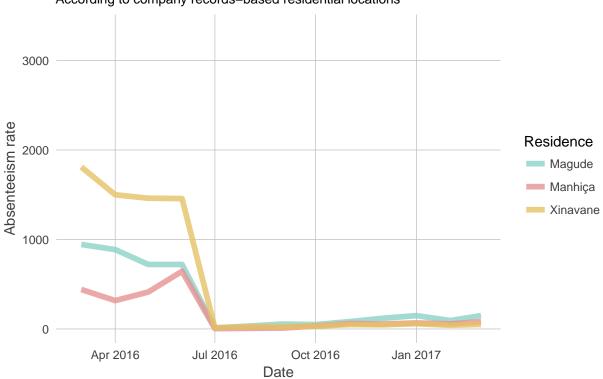
Using days rather than rate

Monthly crude absences

According to company records-based residential locations



Monthly crude absences

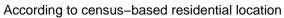


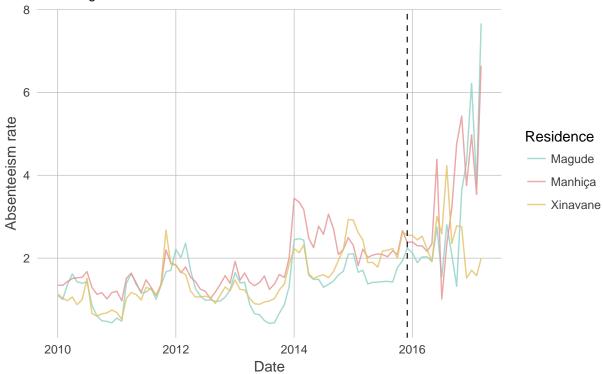
All absenteeism

Absenteeism over time by place of residence

Using census-based locations

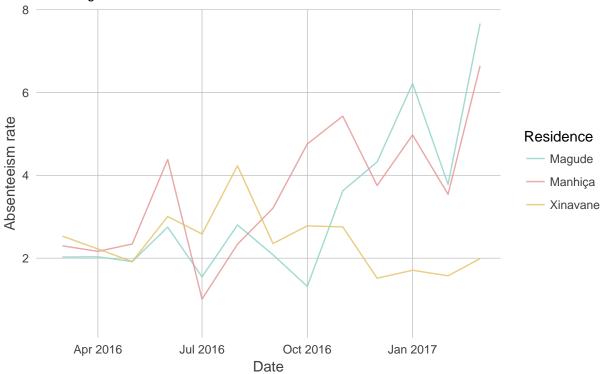
Monthly absenteeism rate





Monthly absenteeism rate

According to census-based residential location

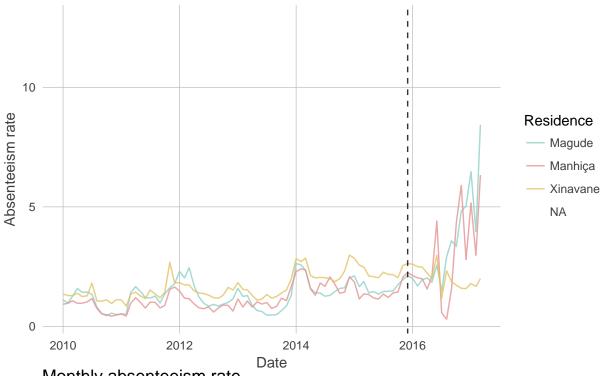


Below is a table of the same data.

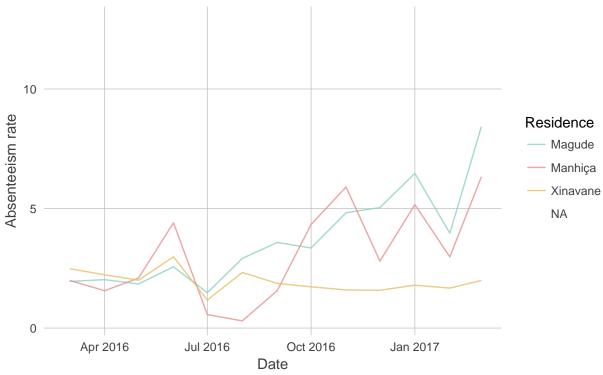
Using company-based locations

Monthly absenteeism rate

According to company records-based residential locations



Monthly absenteeism rate



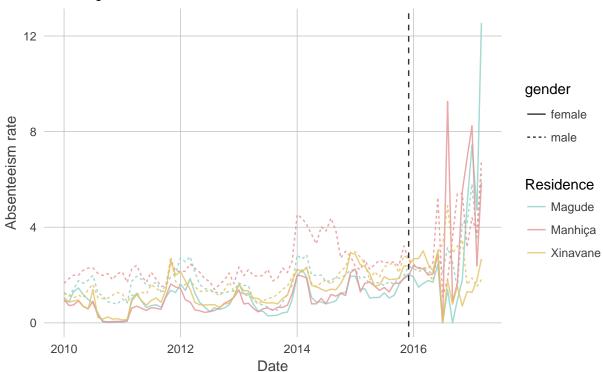
Below is a table of the same data.

Absenteeism over time by place of residence and sex

Using census-based locations

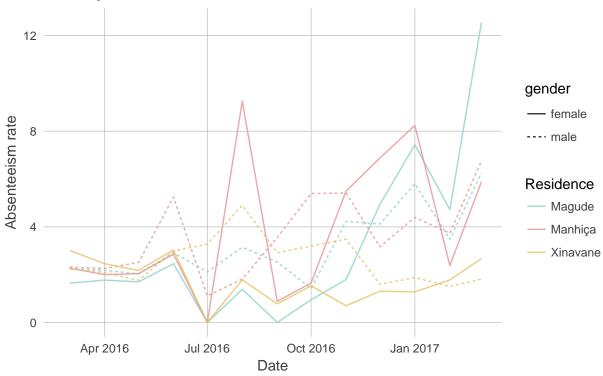
Monthly absenteeism rate

According to census-based residential location



Monthly absenteeism rate

According to census-based residential location

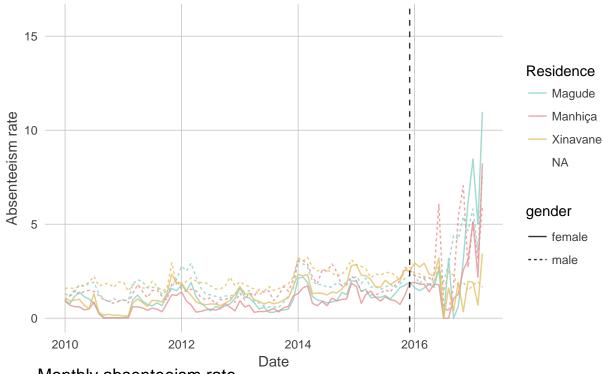


Below is a table of the same data.

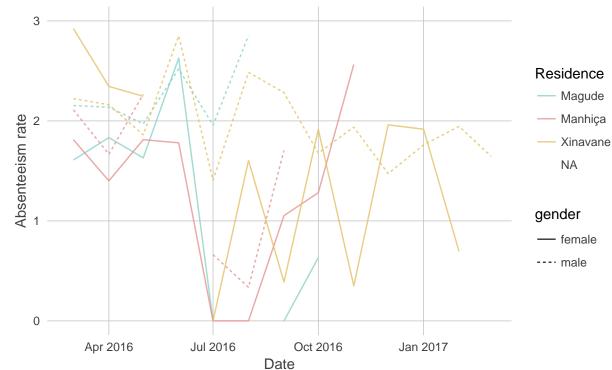
Using company-based locations

Monthly absenteeism rate

According to company records-based residential locations



Monthly absenteeism rate



Below is a table of the same data.

Absenteeism over time by place of residence and seasonal vs. permanent status

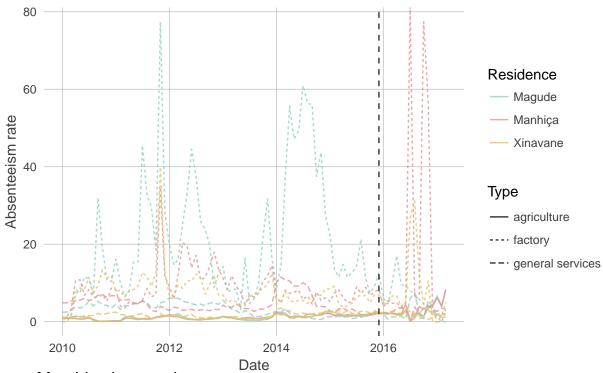
Not possible. <2% of all workers are classified as permanent or not; the rest are missing.

Absenteeism over time by place of residence and worker type

Using census-based locations

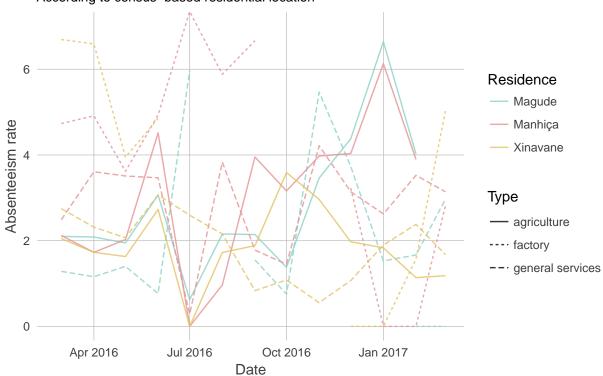
Monthly absenteeism rate

According to census-based residential location



Monthly absenteeism rate

According to census-based residential location



Below is a table of the same data.

Using company-based locations

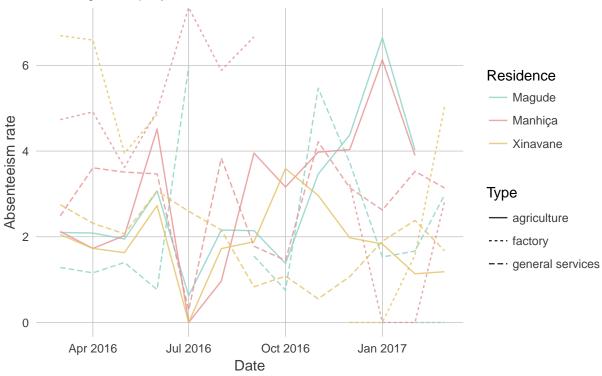
Monthly absenteeism rate



Date

Monthly absenteeism rate

According to company records-based residential locations

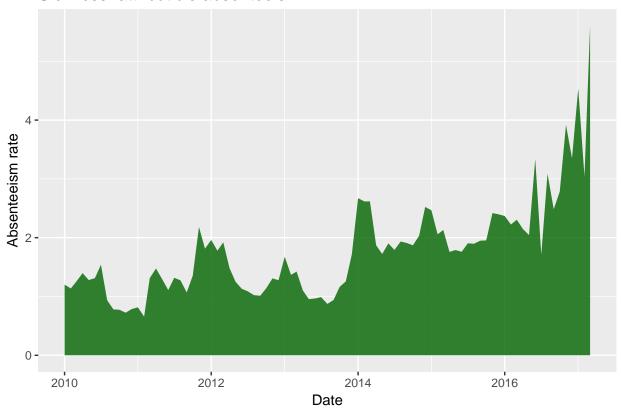


Below is a table of the same data.

Sickness-only absenteeism

What follows are the same charts and tables, but only for sickness-attributible absenteeism. Note, these data may not be reliable prior to 2014, when it appeared that sickness-attributible absenteeism was significantly lower than it has been for the last 3 years.

Sickness-attributible absenteeism

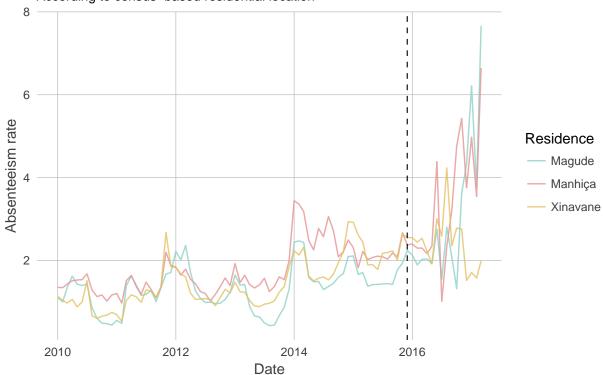


Sick absenteeism over time by place of residence

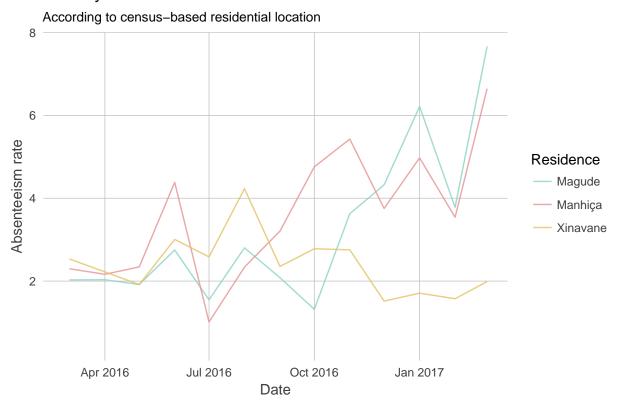
Using census-based locations

Monthly sickness absenteeism rate

According to census-based residential location



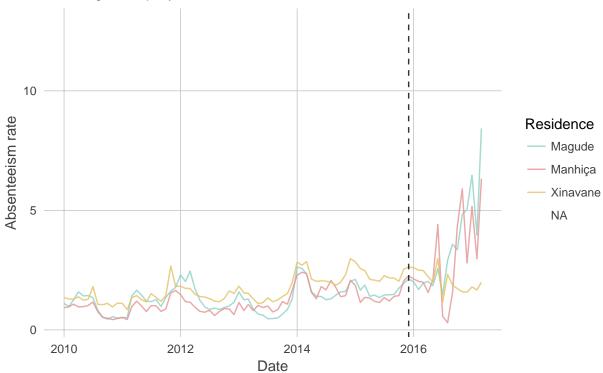
Monthly sickness absenteeism rate



Below is a table of the same data.

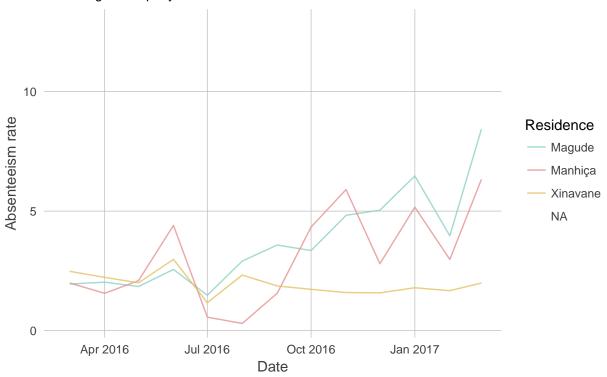
Using company-based locations

Monthly sickness absenteeism rate



Monthly sickness absenteeism rate

According to company records-based residential locations



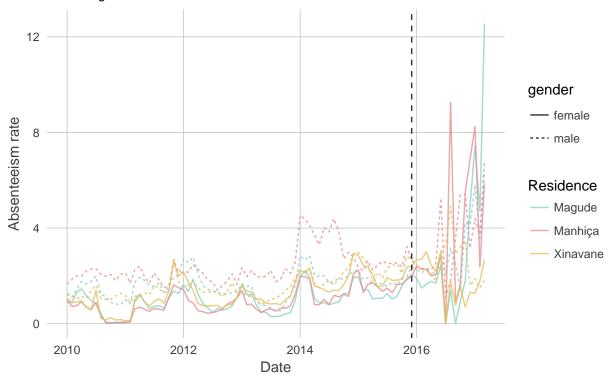
Below is a table of the same data.

Absenteeism over time by place of residence and sex

Using census-based locations

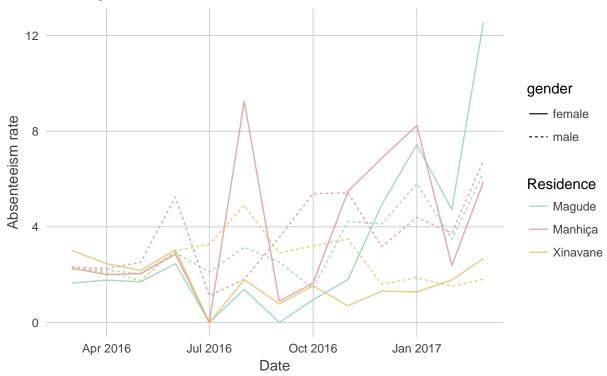
Monthly sickness absenteeism rate

According to census-based residential location



Monthly sickness absenteeism rate

According to census-based residential location

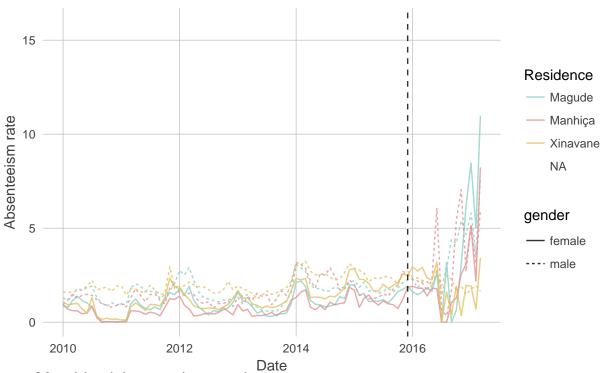


Below is a table of the same data.

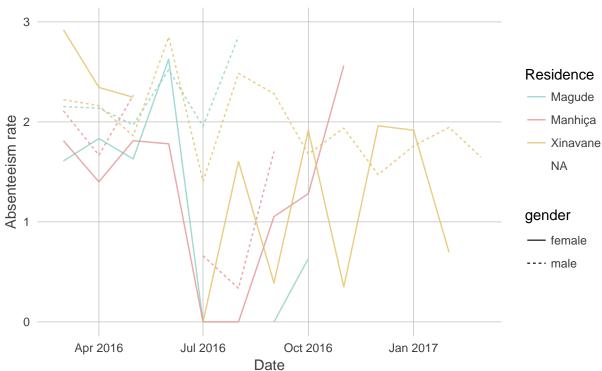
Using company-based locations

Monthly sickness absenteeism rate

According to company records-based residential locations



Monthly sickness absenteeism rate



Below is a table of the same data.

Absenteeism over time by place of residence and seasonal vs. permanent status

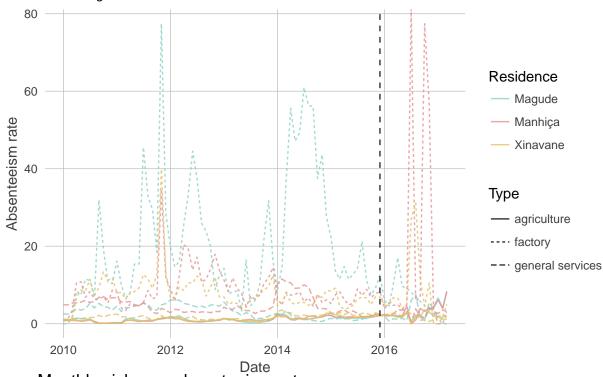
Not possible. <2% of all workers are classified as permanent or not; the rest are missing.

Absenteeism over time by place of residence and worker type

Using census-based locations

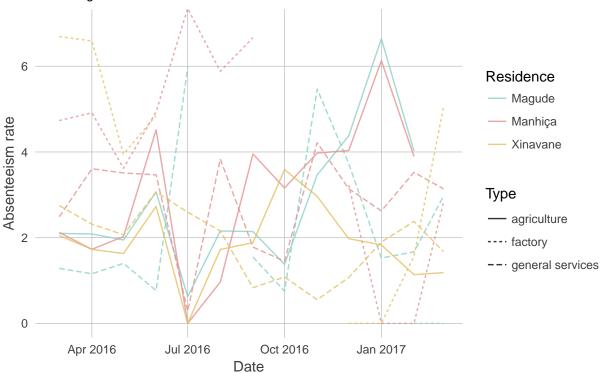
Monthly sickness absenteeism rate

According to census-based residential location



Monthly sickness absenteeism rate

According to census-based residential location



Below is a table of the same data.

Using company-based locations

Monthly sickness absenteeism rate

2012

2010



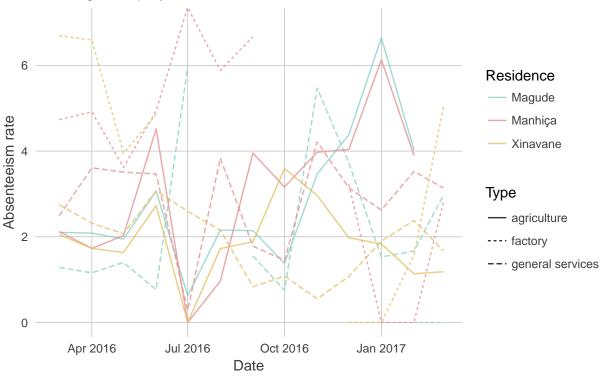
2014

Date

2016

Monthly sickness absenteeism rate

According to company records-based residential locations



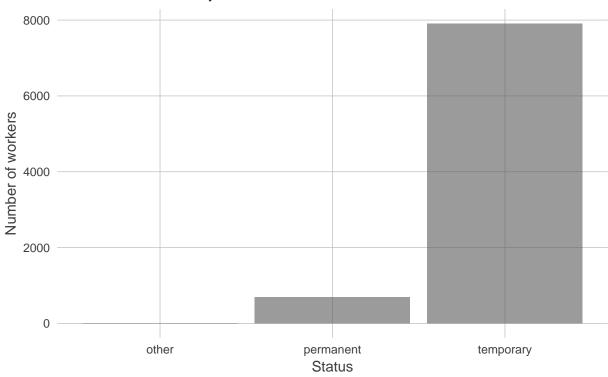
Filtering to exclude multi-contract workers

In the below analyses, we filter so as to keep only those workers who had exactly one contract. We do this because we can then use contract start date and contract end date as the *true* employment period, and we are therefore more confident about these workers' absenteeism.

After this filter, we are left with 8610 workers (of the original 31882). Their breakdown by permanent/temporary status is below.

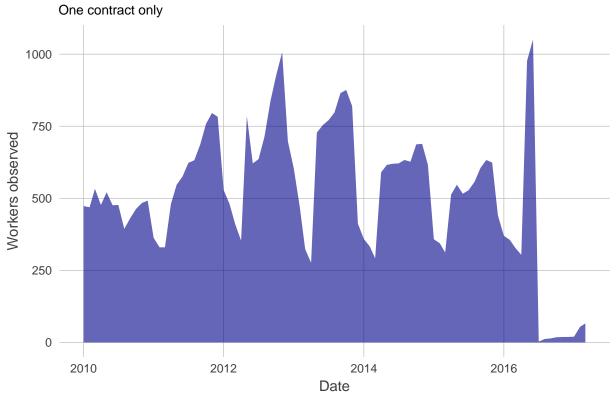
Temporary vs. permanent status

One-contract workers only

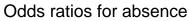


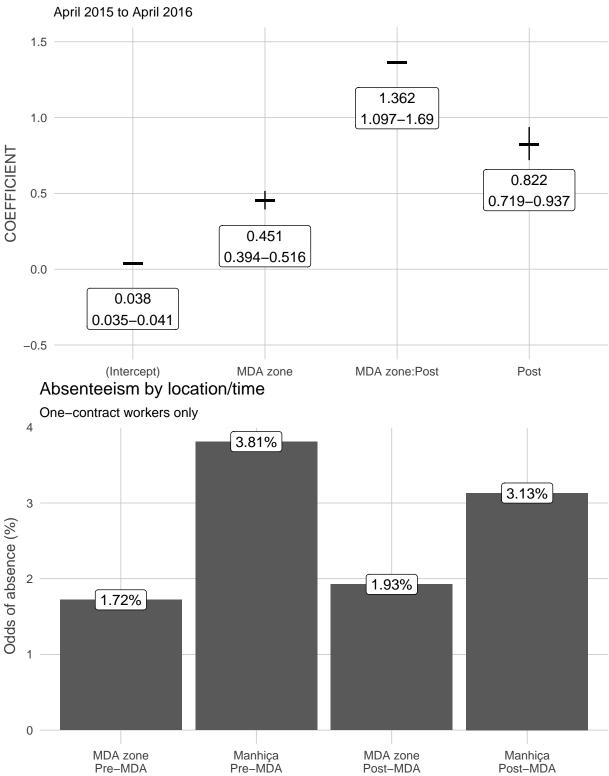
We can also examine the number of workers under observation at any given time.

Number of workers under observation



Modeling

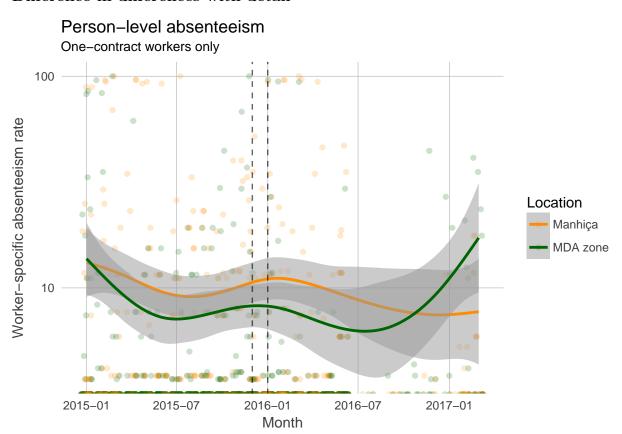




Location/time

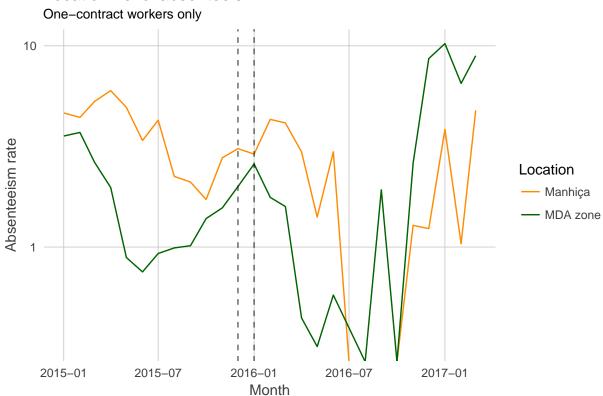
Difference in differences visualization

Difference in differences with detail



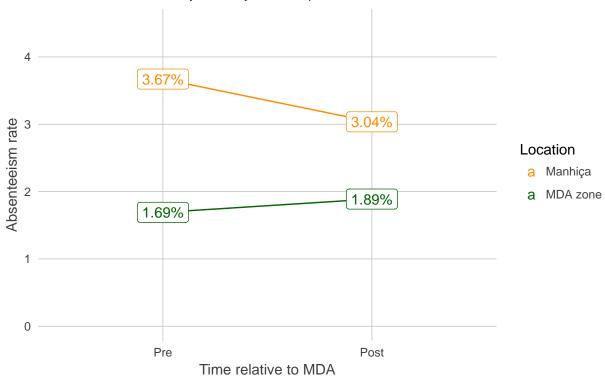
Difference in differences with more aggregation

Location-level absenteeism



Difference in differences: all absenteeism

One-contract workers only: January 2015 - April 2016



Difference in differences: sick absenteeism only

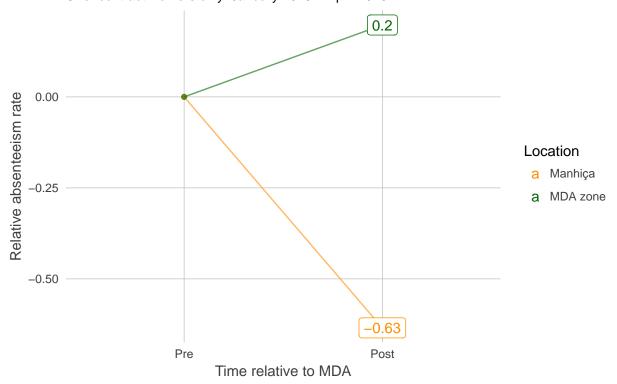
One-contract workers only: January 2015 - April 2016



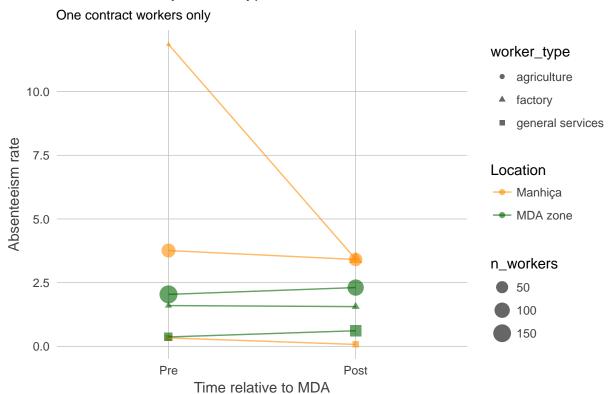
Below is a standardized version of the diff in diffs chart.

Scaled difference in differences: all absenteeism

One-contract workers only: January 2015 - April 2016



Absenteeism by worker type and location



Details

All code for the cleaning, analysis and generation of this report are hosted on Joe Brew's github page.