LE GRAND PARIS EXPRESS
and access to the Métro in Paris’ underserved banlieues

Introduction

In June 2016, construction began in Paris on one of the most ambitious projects in public transportation in Europe in recent decades. Known as the Grand Paris Express (GPE), the project entails four additional lines to the century-old métro system, 200 km of track, and 68 new stations surrounding Paris’ core. The GPE aims to unify Paris’ underserved banlieues — or suburbs — with each other and allow more mobility across Île-de-France for the region’s 12 million residents. I address one specific claim of GPE: that the project will dramatically increase access to the métro network in Paris’ most economically disadvantaged banlieues. With data provided by the Paris transportation authority (RATP) and the regional and national governments, I analyze the placement of métro stations in Paris and its surrounding departments to gauge the impact of the GPE. Specifically, I examine how the GPE improves access to transit in spatiotemporal clusters of high poverty in Paris’ northern banlieue using a buffer analysis. I join other researchers like Beaucat and Drevelle, who performed a spatial analysis of the GPE to assess the project’s impact on job access.

Methodology

With vector point and line data for both existing and GPE stations provided by the RATP and the Société du Grand Paris, I mapped both sets of stations and used the buffer tool in ArcMap to create an 800m walkshed around stations. 800m is standard in research on public transportation, and this method provides a rough estimate of how far the average person is willing to walk to a métro station. I then used the data to identify areas of high poverty surrounding high poverty areas, and high-low areas — areas of high poverty surrounded by low poverty. I selected all areas with high poverty, which includes 20 communes mainly north of Paris and one arrondissement in Paris for a total of 21, and analyzed the change in access to transit before and after the GPE. I used the intersect tool to find the area within an 800m walkshed today and the area that will be within an 800m walkshed by 2030.

Results

I find that the mean poverty rate in the 21 communes selected is 31%, compared to 14% in Paris proper. Poverty rates reach upwards of 44% in the commune of Aubervilliers, 42% in La Courneuve, and 39% in Saint-Denis, which are all included in the high cluster found through the Local Moran’s I analysis. The large difference in poverty rates is magnified by other indicators, including relatively high rates of unemployment and low standards of living in the communes north of Paris in the department of Seine-Saint-Denis. This is shown in the maps below. All of these indicators point to entrenched spatial inequalities across the Grand Paris region and highlight the need for greater access to transit across the city. The effect of the GPE on transit is limited in the most impoverished banlieues. I find that the GPE project has a minimal effect on Paris itself, which confirms expectations since the project is aimed at the banlieues. Improvements in access to the métro in the 21 communes I selected show mixed results, with only 39% of the area covered compared to 24% before and 85% in Paris. As shown in the maps above, new stations improve access in the southern regions of the selected area, but most of the area remains outside the 800m buffer.

Conclusion

Although the area of the selected high poverty region within 800m of métro stations increases from 24% to 39% in 2030, inequalities in access to transit in the Grand Paris region will persist even after the over 30 billion Euro investment in expanding the métro. This analysis confirms to some extent the research of Enright, who sees the GPE primarily as a project to boost real estate development and market Paris as a global competitive city. While the GPE symbolically unifies the Grand Paris region, it is far from a solution to the region’s inequalities. Additionally, it is unclear whether not the project will cause gentrification in Paris’ low-income banlieues and result in the displacement of the region’s most disadvantaged populations, many of whom are people of color and immigrants. More research needs to be done on the effect of development around new stations on residents to determine whether the GPE is truly providing access to transit for those in need or whether it is a tool to boost the region’s overall economic growth primarily for the benefit of private developers. This analysis has implications for other cities considering expansions to public transportation, including Boston’s Green Line, and policymakers should evaluate whether expansions are motivated by private gain or by public good. Leaders in the Grand Paris region need to recognize that although the GPE has the potential to start alleviating spatial inequalities, more needs to be done to provide transportation to the over 1 million residents of the high poverty region identified by this analysis.

Cartographer: Jack Ronan
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Coordinate system: UTM Zone 31N
Projection: Transverse Mercator