Reviewer #1: The paper is trying to produce a new measure of accessibility, two main issues with the paper that makes it hard to accept or publish in the current format. First why do we need a new measure of accessibility and what does the new measure offer, the authors have failed in making the case for the new measure claiming that current measures actually double count which is not true, so why do we need such measure. Second I read the paper like three times, mostly the numerical example to understand what the authors are actually doing and I did not get it and hot lost in all three times. So the numerical example need to be accompanied by some figure or rewritten totally, you have an example of nine population centres and only use two and one job center. So it is hard to follow. Looking at the accessibility map, clearly there is something wrong, the map the authors comparing things to is not correct and does not correspond to the maps I have seen in other regions and in

Toronto with a lot of high and low values next to each other, so you have an issue with your accessibility calculations not even your new measure. There is the Chen model for competition, why do we need a new measure why is yours more superior. The use of travel time as free flow is a clear over simplification you should be using congested travel times. Then looking at the map it is not clear why is this measure good. So to me the paper is over complicating a problem that is not even there to generate a new measure that is so hard to understand and does not reflect to be better and the authors does not use the appropriate tool to compare the new measure to existing ones, like plugging your measure to a mode choice or a hedonic analysis to show you are actually explaining the variance in these variables better for example. When putting the example and the figure please place them next to each other so the reader does not keep going back and forth to understand stuff. I was

confused with the equations to a great extant so please stick to conventional naming like do not name the ratio as F and then name the cost as F again. It might be better to use a smaller region or part of the region just for the reader to understand what you are doing, applying it to a huge mega region makes it hard to understand the value of the new measure.

Reviewer #2: 1. In Introduction, the authors stated that "traditional measures of accessibility do not capture the competition for opportunities.". This is true in some cases. But jobs represent both employment opportunities and urban amenities, including shops and restaurants, which are not very sensitive to competition. I think this is worth mentioning. (and that the application of accessibility with competition has its limits)

2. I find the description of "spatial availability" in the introduction section a bit confusing. For audience without technical background or knowledge of "accessibility with competition", this amount of information is easily overwhelming. Perhaps it would be better to provide high-level descriptions here, and move these description to the methods section later in this paper.

3. A more intuitive, high-level description of the methodology is needed in the methods section. And unless there is good reason, why is the methods section named "analytical framework".

4. The proposed methodology is very similar to many other work already in the literature (most notably with Shen's approach). The idea is basically to carve up reachable opportunities using the ratio of population from zone i that can reach them, over the entire population from all other zones, plus a distance decay. The expression/equations might be different, but it's the same idea. So unless I'm missing something here, the proposed methodology is just giving new names to an old methodology? Please clarify the contribution of this paper, and how this new approach is meaningfully better than other methods in the literature in your response.

5. The other focus of this paper, is that accessibility with competition is better than conventional access measures. Conventional access measures has been used extensively to explain real-world events, for example, population density, transit mode choice, etc., which had very good model fit. This paper provides no such evidence for the explanatory power of the proposed accessibiltiy metrics.