Text 1 Supplement

The second set of analyses allows a more general interpretation of the impact of TELs on volatility that may not be captured using the index itself given how the data are distributed. Additionally, it allows for the possibility that simply the presence of a TEL, regardless of stringency, may have a significant impact on revenue volatility. This analyses categorizes TELs as either being low (1-10), medium (11-20), or high (21+) based on their respective values in the index.

---supplement table 2 about here---

Models VI-X measure the stringency of TELs as categories rather than as a continuous index as presented in models I-V. Doing so provides significant results regarding the connection between TELs and municipal revenue volatility. While the specific type of TEL found to be relevant in the remaining models varies based on which revenue stream is under investigation, the results indicate that TELs have a significant negative relationship with the various levels of volatility in most instances.

The previous set of analyses showed own-source revenue to be the only area where the TELs index was statistically significant, and the results from the second set of analyses help shed light on why this might be. Unsurprising, the impact of TELs stringency on the volatility of own-source revenue is the most dramatic with all categories of TELs showing statistical significance. However, for three other measure of revenue volatility (models VI, IX, X) only the presence of either "low" and "high" TELs shows to be significant, while only "medium" TELs appear significant in model VIII.

When looking at own-source revenue volatility, the presence of "low," "medium," and "high" TELs are all associated with a lower levels of fluctuations. Low, medium, and high stringency TELs are associated with about \$44, \$65, and \$169 per capita reductions in revenue volatility, respectively. As the finding from the first set of analyses would suggest, the impact on revenue volatility increases as the TEL stringency increases. A similar relationship is seen when looking at total revenue volatility. The presence of low stringency TELs is associated with lower volatility levels \$53 per capita on average while high stringency TELs are associated with \$192 per capita reductions. The same pattern

holds when examining income tax volatility with "low" and "high" TELs being associated with respective lower levels of volatility at \$5 and \$22 per capita.

Results for the models VIII and IV which examine volatility in the property tax and the sales and gross-receipt tax are a bit different. While both low and high stringency TELs are significant when looking at the sales and gross-receipt tax, low TELs are shown to have a negative relationship while high TELs are show to have a positive relationship with volatility. Low stringency TELs are associated with \$10 per capita lower levels of volatility while high stringency TELs are associated with \$38 per capita greater levels of volatility. Model IX is the only model which shows any form of TEL having a positive relationship. Based on the literature this is most likely a result of revenue shifting behavior of local governments, however a full explanation is beyond the scope of this current work. Unlike the other models, medium stringency TELs are the only ones to show statistical significance when examining volatility of the property tax. However, the general trend of the presence of TELs having a negative relationship with volatility continues, and they are associated with \$37 per capita lower fluctuations in property tax revenues.

Findings regarding the governance structure, demographic features, and city and state characteristics remain essentially unchanged in both significance and impact from the initial set of analyses (models I-V).