There was a foolish mistake in the algebra/calculus for the lower bound $c(0+)$ at (3.6), which should be

$$c(0+) \geq e(d-1)/(v_d\Gamma(d+1))^{-1/(d-1)}$$

That is, e instead of e^{-1}. For $d = 2$ this gives

$$c(0+) \geq e/(2\pi) = 0.43.....$$

We realized this after seeing the related paper below.

John Gunnar Carlsson, Mehdi Behroozi, Raghuveer Devulapalli, Xiangfei Meng (2016).
Household-Level Economies of Scale in Transportation.
Operations Research 64(6):1372-1387.
https://doi.org/10.1287/opre.2016.1533