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## **Location, Location, Location: How do Competition and Local Market Conditions Influence Food Hub Viability?<sup>1</sup>**

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ARE THERE TOO MANY FOOD HUBS?

In response to the growing interest and demand for local foods, government support for food hubs has helped assure that local food systems are viable and benefit the broader agribusiness community. However, such support should consider local market conditions or risk over-proliferation that could jeopardize the success of existing food hubs. Food hubs are food supply chain businesses that offer aggregation, distribution, and marketing services to small and mid-size farms and source-identified food products to consumers. Most food hubs have a mission-driven objective that they must balance with more traditional economic drivers of profitability whereas traditional wholesalers focus on maximizing profitability so any support that helps them balance these competing roles may be the most effective.

Food hubs offer a novel solution to connect small and mid-sized local farms, which individually lack the scale to profitably market products to restaurants, schools, and final consumers. Because many food hubs rely on grants and philanthropy to provide broader community services and their mission might not necessarily be purely profit-driven, the decisions to start-up and operate hubs may vary from normal market development.

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<sup>1</sup> This is a short summary of Cleary, R., S.J. Goetz, D. Thilmany, and H. Ge. 2019. [Excess Competition among Food Hubs](#). *Journal of Agricultural and Resource Economics*, 44(1): 141–S7.

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Of greatest concern to the viability of food hubs is the possibility that local markets may become oversaturated due to overinvestment. In short, grant, programming, and philanthropic support targeted to this sector could unintentionally be detrimental if it encourages entry of hubs that cannibalize sales from other hubs or for-profit food businesses in the area. If the intention is to support market access for small and mid-sized farms, over-competition may be disruptive and leave producers uncertain of which distribution option will provide stable and fair access to markets.

In contrast, support that encourages firms to adapt to market forces or subsidizes the less profit-oriented education and vendor development services commonly provided by hubs may better serve the community. According to a [National Food Hub Survey](#) conducted by Michigan State University and the Wallace Center at Winrock International, the vast majority of food hubs have a key mission to source their products from small and mid-size farms, and to assure a fair price to producers. They have enjoyed both public and private support because they fill an important role in strengthening local and regional food system linkages, but many communities lack the population and buying power necessary to sustain a food hub.

#### STUDY METHODS

We used publically-available county data and an economic model of competition to estimate food-hub profitability. We then calculated the county population needed to generate enough sales for one, two, and three food hubs to break even.

#### FINDINGS

To establish its first food hub a county needs roughly 182,000 residents to break even, while only about 105,000 residents are needed for a traditional wholesaler (see Table 1). The difference is more glaring when the possibility of adding more food hubs is considered.

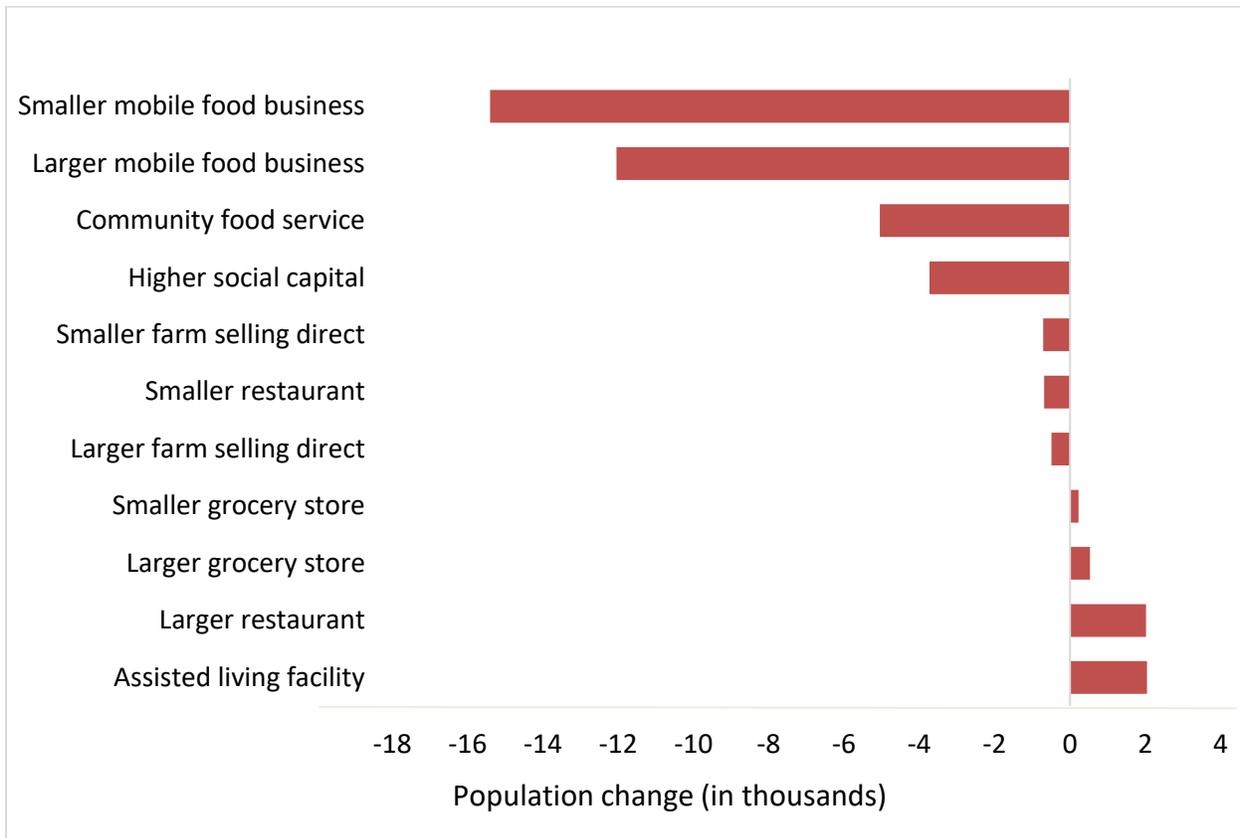
Roughly 500,000 residents would be required to sustain a second food hub and three times more to sustain a third, whereas only about 190,000 residents would be needed to sustain a second mainline wholesaler and about 342,000 to sustain a third wholesaler. The population entry thresholds also demonstrate the potential for market cannibalization: each successive food hub entering the local market likely takes sales away from the existing food hub (they can grow the market demand but not enough to justify the sales they would need to be viable).

Table 1. Population needed to support 1, 2, and 3 establishments

	<b>Merchant Wholesalers</b>	<b>Food Hubs</b>
<b>To support 1 establishment</b>	105,383	182,662
<b>To support 2 establishments</b>	188,400	502,884
<b>To support 3 establishments</b>	342,445	1,669,275

We also examined a number of county economic and business characteristics to determine which ones are associated with food hub profitability, including farm activity, the presence of other food businesses, and a commonly used measure of social capital (Figure 1).

Figure 1. Which county characteristics lower the population threshold necessary to sustain a food hub?



We use the North American Industry Classification System (NAICS) for these and those definitions apply directly. For instance, "mobile food business" includes food trucks. The findings above indicate that the presence of both large and small businesses, like food trucks, are associated with food hub profitability (because it is associated with lower population thresholds that need to be served to be profitable). Another business we look at is "community food service" which includes "Meals on Wheels" for example.

The characteristics are not additive, and the population effects are not meant to be added together.

Social capital refers to a community's social networks and bonds that engender feelings of trust, belonging, and reciprocity among residents. Not surprisingly, we find that higher levels of social capital in a county is associated with food hub profitability and lowers the county population threshold required for food hubs to break even. In contrast, social capital has no significance for merchant wholesaler profitability.

Food hubs also benefit from the presence of allied local-foods businesses. For example, counties with small farms that sell directly to consumers, mobile farmers markets, and small

full-service restaurants require lower population thresholds to support a viable food hub than counties lacking these businesses.

#### SUMMARY

Food hubs offer a novel solution to connect small and mid-sized local farms, which individually lack the scale to profitably market products to restaurants, schools, and final consumers. Moreover, they commonly serve a community and economic development function for farms, ranches and food businesses in markets that face competitive challenges. In order to determine the optimal number of food hubs in an area, we use a seminal firm entry model to estimate the average U.S. county population necessary for one, two, and three food hubs to break-even. We also examine the effects of local food system activity and social capital on food hub profitability compared to traditional merchant wholesalers. Our findings suggest that policymakers and philanthropists need to consider the “carrying capacity” of the local food environment and population prior to supporting additional food hubs.

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