

## Correspondence

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### **The Missing Middle**

Chang-Tai Hsieh and Benjamin Olken argue that, contrary to received wisdom, there is no “missing middle” in the plant size distributions of developing countries (“The Missing ‘Missing Middle,’” Summer 2014, pp. 89–108). They base their case on the fact that these distributions are unimodal in Indonesia, India, and Mexico. And they attribute the common perception of a missing middle to the focus of earlier studies on employment shares that have been constructed in a particular way.

I write to comment on two issues raised by their paper. The first is whether a general misperception about the shape of the plant size distribution can be traced to employment share figures. The second is whether the unimodal plant size distributions documented by Hsieh and Olken really imply the absence of a missing middle.

The fifth section of their paper, titled “How Did the ‘Missing Middle’ Misconception Arise?” deals with the first issue. Here, Hsieh and Olken characterize earlier studies of the missing middle as referring “to the fact that in most developing countries, there is substantially lower employment share in the mid-sized category (that is, 10–49 employees) than in either the small category (fewer than 10 employees) or the large category (50 or more employees).” This sets up their observations that 1) the relative share of the middle category reflects the size cutoffs that define it, and 2) when bins are constrained to have equal width, plant size distributions in Indonesia, India, and Mexico do not exhibit bimodal shapes. It further leads them to suggest that earlier studies erroneously inferred the existence of a missing middle because they overlooked these facts.

This is a coherent story, but Hsieh and Olken do not tell their readers where in the literature this misperception can be found. They state only that “the main evidence typically cited for the missing middle is Table 1 of Tybout (2000).” However, that paper uses Table 1 solely to establish an emphasis on small-scale manufacturing in low-income countries, and it makes no attempt to infer a missing middle from intracountry comparisons of employment shares. I could be convinced otherwise, but sans supporting citations, I am disinclined to presume a general confusion about the implications of the employment shares reported in my survey. Rather, I would venture that most people who reference Tybout (2000) in the context of a missing middle discussion do so simply because it summarizes some of the relevant literature.

Let me turn now to the second issue. Hsieh and Olken do not discuss whether unimodal distributions disprove the missing middle; they take this as axiomatic. But in my view, the central thesis of the missing middle literature is not bimodality. Instead, it is that policies and market conditions in some developing countries have discouraged production at mid-sized firms, as opposed to small or large firms, relative to an undistorted plant size distribution. By this definition, a missing middle is quite consistent with a unimodal shape, and the evidence presented by Hsieh and Olken does not speak to the relevance of the earlier literature.

Of course, it is difficult to say what an undistorted firm size distribution should look like, since low-income countries tend to have small firms for a variety of reasons that have little to do with distortions, including the mix of products they consume and their relatively low degree of urbanization. But drawing on the firm size literature, it

seems reasonable to approximate undistorted size distributions as Pareto. Then, allowing the shape parameter of this distribution to vary across countries, and thus crudely controlling for the general tendency toward small-scale production in low-income regions, one can ask whether deviations from the Pareto shape imply a missing middle in the developing world. This exercise, repeated for a variety of countries, suggests they do. Details can be found in a short paper available online with this comment at <http://e-jep.org>. Using the same data as Hsieh and Olken, I find mid-sized firms are underrepresented in India and Indonesia, while small and large firms are not. Further, I find the Pareto shape obtains in Mexico, which enjoys a substantially higher per capita income. And using additional data sources, I find an overrepresentation of mid-sized firms in countries that are still more developed, including South Korea, Taiwan,

and (especially) the United States. Interestingly, despite its modest per capita income, China in 2004 also showed an overrepresentation of mid-sized firms, perhaps because its eastern provinces were already extraordinarily industrialized and much of its output was destined for high-income markets. Admittedly, my assumption that undistorted distributions of firm size are Pareto is restrictive. But I think it is reasonable to conjecture that one would find similar cross-country contrasts in labor shares for the 10–50 worker category under a variety of other distributional assumptions. Accordingly, I am inclined to believe that the notion of a missing middle is empirically relevant after all.

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3. Golam Rabbani, Rajesh Raj S. N.. 2023. Small firms in Indian manufacturing: Some stylized facts. *Journal of the International Council for Small Business* **4**:4, 374-386. [[Crossref](#)]
4. José-Maria Da-Rocha, Diego Restuccia, Marina M. Tavares. 2023. Policy distortions and aggregate productivity with endogenous establishment-level productivity. *European Economic Review* **155**, 104444. [[Crossref](#)]
5. Ali Moghaddasi Kelishomi, Roberto Nisticò. 2023. Economic Sanctions and Informal Employment. *SSRN Electronic Journal* **34**. . [[Crossref](#)]
6. Kaleb Girma Abreha, Xavier Cirera, Roberto N. Fattal Jaef, Hibret Belete Maemir, Elwyn Davies, Hibret Belete Maemir. Deconstructing the Missing Middle: Informality and Growth of Firms in Sub-Saharan Africa . [[Crossref](#)]
7. Swati Agrawal, Poonam Singh, Mainak Mazumdar. 2021. Innovation, Firm Size and Ownership: A Study of Firm Transition in India. *International Journal of Global Business and Competitiveness* **16**:1, 15-27. [[Crossref](#)]
8. Sanday Amos, Doungahire Abdoul Karim Zanhouo. 2019. Financial constraints, firm productivity and cross-country income differences: Evidence from sub-Saharan Africa. *Borsa Istanbul Review* **19**:4, 357-371. [[Crossref](#)]
9. Brian McCaig, Nina Pavcnik. 2018. Export Markets and Labor Allocation in a Low-Income Country. *American Economic Review* **108**:7, 1899-1941. [[Abstract](#)] [[View PDF article](#)] [[PDF with links](#)]
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12. Gianluigi Giorgioni. Issues and Challenges: An Assessment of the Empirical Evidence 19-51. [[Crossref](#)]
13. Antonio Cruz, Carol Newman, John Rand, Finn Tarp. 2017. Learning by Exporting: The Case of Mozambican Manufacturing. *Journal of African Economies* **26**:1, 93-118. [[Crossref](#)]
14. Kunal Dasgupta. 2016. The missing middle in developing countries revisited. *Indian Growth and Development Review* **9**:1, 32-52. [[Crossref](#)]