Abstract: An economy is an interlinked web of production units. This paper examines both theoretically and empirically how offshoring reshapes firms' domestic production networks. We build a buyer-seller model that features supplier heterogeneity in efficiency and distance, as well as intermediate inputs that vary in the degree of specificity to the relationship with the buyer. Sourcing inputs from more regions requires additional up-front search costs, but reduces variable costs due to the use of the more efficient suppliers. The more productive buyers source inputs from the more distant locations, including foreign countries. Buyers tend to offshore generic inputs rather than relationship-specific inputs if for the latter, the increased transaction costs outweigh the benefits of searching due to higher variation in suppliers' productivity. A reduction in offshoring costs leads to buyers' displacement of the less efficient or distant domestic suppliers by foreign suppliers. The resulting reduction in variable costs will in general induce buyers to expand their scope of domestic outsourcing, offsetting some if not all of the displacement effect. Using unique and exhaustive data on the buyer-seller network in Japan, we find evidence supporting the main predictions of the model.