



Smart Café Cities: Testing human capital externalities in the Boston metropolitan area

Shihe Fu

*Research Institute of Economics and Management, Southwestern University of Finance and Economics,
55 Guanghua Cun Street, Chengdu, Sichuan 610074, PR China*

Received 8 February 2005; revised 1 June 2006

Available online 13 July 2006

Abstract

Existing studies have explored only one or, in some cases, two mechanisms by which human capital externalities percolate at the macrogeographic levels. This study, however, uses the 1990 Massachusetts census data to test four mechanisms at the microgeographic levels, in the Boston metropolitan area labor market. We propose that individual workers can learn from their occupational and industrial peers in the same local labor market through four channels: depth of human capital stock, Marshallian labor market externalities, Jacobs labor market externalities, and thickness of the local labor market. We find that all types of human capital externalities are significant across census blocks. Different types of externalities attenuate at different speeds over distances. For example, the effect of human capital depth decays rapidly beyond three miles away from block centroids. We conclude that knowledge spillovers are very localized within a microgeographic scope in cities that we call, “Smart Café Cities.”

© 2006 Elsevier Inc. All rights reserved.

JEL classification: C21; J24; J31; R23

Keywords: Human capital externalities; Labor market agglomeration; Hedonic wage model; Marshallian externalities; Jacobs externalities; Spatial attenuation

E-mail address: fush@swufe.edu.cn.

Even walking with any two other people, I will always find a teacher among them.

Confucius, *Analects*, Book 7, 21

Most of what we know we learn from other people. We pay tuition to a few of these teachers... but most of it we get for free, and often in ways that are mutual—without a distinction between student and teacher... What can people be paying Manhattan or downtown Chicago rents for, if not for being near other people?

Robert E. Lucas, Jr., 1988, pp. 38–39

1. Introduction

A high concentration of skilled workers can promote the creation, diffusion, acquisition, and accumulation of knowledge across individual workers, geographic space, and time. Workers benefit from being close to a dense, skilled, labor market where, through different channels, they can learn from others without compensation. For example, “if one man starts a new idea, it is taken up by others and combined with suggestions of their own; and thus it becomes the source of new ideas” (Marshall [32, p. 271]). Such productivity-enhancing external benefits of labor markets are called human capital externalities, knowledge spillover effects, learning externalities, or labor market local agglomeration economies, whichever you choose. Uncompensated externalities from aggregate human capital stock have long been considered one of the important forces of economic growth (Romer [41], Lucas [29]). Further, local human capital externalities are considered to be one of the predominant reasons for the existence of cities (Henderson [22], Fujita and Ogawa [15], Lucas [30]) and urban endogenous growth (Palivos and Wang [34], Eaton and Eckstein [12], Black and Henderson [6]).

Empirically, firm data, wage data, and housing or land price data have been used to test human capital externalities. The disadvantage in using firm data is that it requires a broad set of control variables to separate it from other sources of benefit that firms obtain from being close to each other, such as natural advantage, input sharing, and forward or backward linkages. Land prices usually are not directly observable. Estimating hedonic housing models to infer human capital externalities is reasonable, but it omits information on individual workers. Other indirect methods may be possible; for example, Jaffe, Trajtenberg, and Henderson [26] used patent citation data to study the geographical localization of knowledge spillovers. The ideal direct way to identify human capital externalities is to employ wage data (assuming workers are paid by their marginal value of products). A good example of this is the paper by Wheaton and Lewis [49], where wage data is used to test labor market agglomeration across Metropolitan Statistical Areas (MSAs).

Two important questions have not yet been answered in the literature. The first question is: “What are the microfoundations of knowledge spillovers?” Or, put another way, “How do human capital externalities percolate?” Though people do exchange information and ideas and learn from each other by socializing in downtown cafés, unfortunately, we can not directly observe how knowledge spills out among buildings and across streets. We hypothesize, by distilling the existing literature, that there exist the similar mechanisms of agglomeration economies in a dense labor market as those of firms’ concentration, and interpret the positive effects of local labor

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات