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A Note on the Use of Amenities to Attract Creative Class Members to a City¹

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Abstract

We study the decision problem faced by a city authority (CA) who seeks to attract members of the creative class to his city by providing amenities. Creative class members care about their own incomes and about the amenities that the city provides. We construct a stylized model of this interaction and shed light on three questions. First, we determine how much additional income must be paid to a representative creative class member to maintain her utility if amenities are withdrawn. Second, we compute the cost of generating amenity benefits that equal a specific fraction of the representative creative class member's income. Finally, we discuss whether the provision of amenity benefits is a cost-effective way of raising the representative creative class member's utility.

Keywords: Amenity Benefits, City Authority, Cost-Effectiveness, Creative Class, Income

JEL Classification: R11, R50

1. Introduction

How does a city authority (CA) ensure that his city flourishes economically in this era of globalization? This salient question has occupied the minds of regional scientists, urban economists, and urban planners for several decades. Even so, it is fair to say that in the last two decades, primarily because of the influential writings of Richard Florida---see Florida (2002, 2003, 2005, 2008, 2014)---on this subject, CAs have begun to place emphasis on establishing *creative* cities by attracting creative people to their cities.

In the Floridian view of economic growth and development, cities and more broadly regions that want to prosper in this era of globalization need to do all they can to attract and retain members of what he calls the *creative class*. The creative class “consists of people who add economic value through their creativity” (Florida, 2002, p. 68). In particular, this class is made up of specialists such as engineers, information technology professionals, lawyers, physicists, university professors, and, noticeably, bohemians such as artists, musicians, and sculptors.

We concentrate on a city in this note and we acknowledge Florida’s (2002) basic contention that cities seeking to flourish economically need to attract and retain members of the creative class. Once this is done, the following question arises naturally: “How are cities to do this?” Qian (2010), Van Holm (2014), Dalwai (2016), Smiley *et al.* (2016), Rao and Dai (2017), and Vossen *et al.* (2019) have all shed light on this question by using empirical research to make the point that urban amenities² such as art galleries, cafes, parks, and restaurants can be used by a CA to carry out the twin “attract” and “retain” tasks mentioned above.

That said, even though there is now a fairly large *empirical* literature on the extent to which amenities matter in different urban settings in attracting and retaining the creative class, to the best of our

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More generally, an amenity is a desirable or an advantageous feature of either a building or a place such as a city. Amenities help provide comfort, convenience, or enjoyment.

knowledge, there is virtually *no* theoretical research on whether the provision of amenity benefits in a city is a *cost-effective* way of attracting and retaining the creative class.

Given this lacuna in the literature, our objective in this note is to theoretically study the decision problem faced by a CA who seeks to attract members of the creative class to his city by providing urban amenities. Creative class members in our model care about their own incomes and about the amenities that the CA provides. Section 2.1 constructs a stylized model of this interaction. Section 2.2 determines how much additional income must be paid to a representative creative class member to maintain her utility if amenities are withdrawn. Section 2.3 computes the cost of generating amenity benefits that equal a particular fraction---on which more below---of the representative creative class member's income. Section 2.4 discusses whether the provision of amenity benefits is a cost-effective way of raising the representative creative class member's utility. Finally, section 3 concludes and then suggests two ways in which the research delineated in this note might be extended.

2. The Model

2.1. Preliminaries

We begin by pointing out that the creative class, in general, consists of a variety of professionals such as artists, engineers, medical doctors, sculptors, university professors, and is therefore heterogeneous. That said, as noted by Batabyal and Yoo (2020), a city that is looking to attract members of the creative class is generally *not* looking to attract every possible type of member. Put differently, a city like New York is more likely to be interested in attracting banking and finance professionals and, in contrast, a city like San Francisco is probably more interested in drawing in information technology professionals. In addition, even if a CA wanted to attract multiple types of creative class members to his city, it is unreasonable to think that he would be able to do so by offering a single or even a small number of amenities.

Therefore, to focus our subsequent discussion, we suppose that a CA is looking to attract a specific *subset* of members in the creative class such as artists or bankers. Because these members of the subset are

either all artists or all bankers, and so and so forth, we can think of this subset of members as *homogeneous*.³ Now, consider a city with a CA who is seeking to attract creative class members such as, for instance, bankers, to his city. Because these bankers are all homogeneous, we can work with a representative banker without any loss of generality. As such, suppose that this representative banker derives utility U from her own income I and from the amenities A that the CA provides.

For concreteness, suppose that the amenity offered to the representative banker by the CA is a café. Then, we shall think of A as the *total number* of workers that are employed in all the cafes provided by the CA. Note that this way of conceptualizing the amenity benefit clearly shows the *two* sides of the provision question. The representative banker cares about the total number of cafés that are provided and, *ceteris paribus*, the greater the number of workers the greater is the actual number of cafés that are provided. In contrast, the CA is concerned not just about the number of cafes that he makes available to the representative banker but also about the cost of running these cafés. This latter cost is the total wage bill and this explains why we are interpreting A as the total number of employed café workers.⁴

The representative banker's utility is given by the homogeneous of degree one Cobb-Douglas function

$$U = I^{1/2}(1 + A)^{1/2}. \tag{1}$$

With this specification of the utility function, the first question we now answer concerns how much extra income must be paid by the CA to the representative banker to maintain her utility if the amenities (cafés) are withdrawn.

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See Batabyal and Beladi (2018) for a discussion of related matters.

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It is also possible to think of A as the total number of workers employed in *multiple* amenities provided by the CA. So, if the total number of amenities provided include one café, one art gallery, and one museum, then A would represent the total number of workers employed in the café, the art gallery, and the museum.

2.2. Additional income

If the CA withdraws the amenity benefits, i.e., the total number of cafes that are on offer then, using equation (1), the representative banker's utility is simply

$$U = \hat{I}^{1/2}, \quad (2)$$

where $\hat{I} = I + \Delta I$ and ΔI is the additional income that is required to compensate the representative banker for the removal of the amenity benefits from the various cafes.

Let us equate the representative banker's utility with and without the amenity benefits. Using equations (1) and (2), we get

$$I^{1/2}(1 + A)^{1/2} = (I + \Delta I)^{1/2}. \quad (3)$$

Solving equation (3) for the additional income ΔI , we obtain

$$\Delta I = IA. \quad (4)$$

In words, the additional income that is needed to compensate the representative banker for the loss of her amenity benefits is given by the product of her own income and the total benefit to her from the aggregate employment of all the workers in the different cafes that the CA provides for her. We now proceed to our second task and that is to compute the cost of generating amenity benefits that equal a specific fraction of the representative banker's income.

2.3. Cost of amenity benefits

We begin by supposing that the “specific fraction” of the representative banker’s income that we are interested in is $I/2$.⁵ We know that A represents the total number of workers that are employed in the various cafés provided by the CA. To this end, assume that each café worker is paid a wage $w > 0$. Since the value of the amenity benefits must now equal $I/2$, we deduce that A must solve the equation

$$I/2 = IA. \tag{5}$$

Solving equation (5) for A , we get $A = 1/2$. This last finding tells us that the cost we seek equals $w/2$. In words, the cost of generating amenity benefits whose value is one-half the representative banker’s income is given by one-half the wage paid to the individual café workers in the city under study. Our third and final task is to discuss whether the provision of amenity benefits is a cost-effective way of raising the representative creative class member’s utility.

2.4. Cost-effectiveness of amenity benefits

From the section 2.3 analysis, we know that the CA incurs a cost of $w/2$ to generate an increase in the representative banker’s utility that is equivalent to an income increase of $I/2$. Using this line of reasoning, it is clear that the amenity benefits on offer are cost-effective as long as the inequality

$$I > w \tag{6}$$

holds. In other words, it makes sense for the CA to provide amenities to attract the representative banker to his city as long as this banker’s income *exceeds* the wage that is paid to each of the café workers in the city. This concludes our discussion of the use of amenities to attract creative class members to a city.

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The analysis can be generalized to other possible fractions in a straightforward manner.

3. Conclusions

In this note, we analyzed the decision problem faced by a CA who seeks to attract creative class members to his city by providing amenities. Creative class members cared about their own incomes and about the amenities provided by the city. We constructed a stylized model of the interaction between the CA and creative class members and shed light on three questions. First, we determined how much additional income needed to be paid to a representative creative class member to maintain her utility when amenities were withdrawn. Second, we calculated the cost of generating amenity benefits that equaled one-half of the representative creative class member's income. Finally, we discussed whether the provision of amenity benefits was a cost-effective way of raising the representative creative class member's utility.

Here are two possible extensions of the research described in this note. First, it would be interesting to analyze the interaction between a CA and creative class members in a repeated game framework in which the amenities demanded and those provided are the subject of bargaining. Second, it would also be instructive to partition the relevant creative class population into different groups and to then analyze how effective a CA is in attracting these different groups of members to his city with cultural amenities and other policy instruments. Studies that analyze these aspects of the underlying problem will provide additional insights into the nature of the static and the dynamic interactions between creative class members and city authorities.

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