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Research on the role of urban rail transit in promoting economic development

HUANG Chang-fu^{a,b*}, XIA Yuan^b

^a*Institute of Industrial Economic of Chinese Academy of Social Sciences, Beijing 100836, China*

^b*China Railway 16th Bureau Group Co, Ltd, Beijing 100018, China*

Abstract

Urban rail transit becomes the important mean for developing urban economy, improving industrial structure and raising citizens' living standard for its great social and economic effects. With the growth of economy, its role of boosting domestic demand and driving economic growth has been more obvious. And it will become the major impetus for fueling green GDP growth and promoting urban sustainable development. This paper, from the urban sustainable development point of view, analyzes the social property and economic property of urban rail transit, and points out the direct effect and indirect effect on economic development by the urban rail transit construction. And advices about urban rail transit construction have been put forward in this paper.

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1. Introduction

Urban rail transit (URT for short) is an important component of public transit system in urban fundamental facilities. Viewing from the practical urban progress of all countries, rail transit becomes a major urban transit tool in developed countries and regions for its advantages such as mass transit capacity, fast speed, safety and reliability, punctuation and comfort. It is widely favored by citizens[1]. Currently, most international modern cities have considerable scale of rail transit routes which have gradually become the first choice of transport tool by citizens, and the major mean for popularizing "Pubic Transport Tool First" policy by government. With its social property and economic property, URT

* Corresponding author. Tel.: +86-10-8775-5336; fax: +86-10-6716-2903.

E-mail addresses: hchf@sohu.com

becomes the key point of urban transportation development strategy, and is regarded as the backbone of urban transit system.

2. Materials and Method

The social property and economic property of URT are mainly manifested as follows.

2.1. Social property

As a public service infrastructure, URT is featured in intensive capital and technology. It requires mass investment, usually over dozen billions of RMB. And it is generally constructed through out the prosperous and densely populated areas in the city. As it involves in a lot of rebuilding and relocating works which should be solved by the government, it can not be completed by a sole enterprise. Its ticket price is set out by the governmental organization after it is put into operation. It usually serves the public with a price lower than its cost to enable the public bearing low travel costs while enjoying convenient travel condition, and thus to improve citizens' social net benefit level. Therefore, URT project belongs to a government-dominant, publically owned and public welfare project.

2.2. Economic property

The construction and operation of URT can promote the development of related industries including industry, transportation and real estate, stimulate employment, raise the land value along it, and expand urban development space. It owns obvious external economic property, namely the total social and economic benefits generated by the project far exceed its book gain. Although the profits gained from the operation of URT project is limited, its economic influence is much more profound. For instance, the affiliated operational assets like advertisements and shops have great potential for appreciation[2]. URT, as a comprehensive network platform, will be able to contain other networks (such as transportation network, service network and trade network) in it when it forms webified operation. The powerful assembling effect and release effect of rail transit network enable the fast circulation of all sorts of resources and services including customer flow, logistics, capital flow and information among areas in the city or even among cities. This has changed the society's way for consumption, living and production, and posed profound influence on urban economic operation. Therefore, URT network has the property of scale economic circle[3]. It affects most areas and surrounding areas within its network.

3. Results and Discussion

The construction of URT has played an important role for realizing great-leap-forward development of economy and improving urban economic structure. It is becoming the source impetus for fueling urban economic growth. According to related research, investing every 100 million in rail transit project, GDP will rise by 263 million, and the job posts will increase by 8000. The economic effect driven by URT can be divided into direct effect and indirect effect. The direct effect refers to the effects directly brought to related industries such as architecture, design, supervision, building materials, mechanical manufacturing, electronics and metallurgy, in the process of constructing and operating URT. And the indirect effect refers to the radiation effects generated by the construction of URT on such industries as real estate, environmental protection, tourism, entertainment and e-commerce[4]. The above two effects are collectively called as scale economic circle effect, namely, the radiation effect which spreads to the

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