

# How Has High-Speed Rail Improved Quality of Life in People's Republic of China?

Zhihai XIE

Kyoai Gakuen University

Nov.15, 2018@ADB

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# Rapid Development of High-Speed Rail (HSR) in PRC

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- First HSR started in 2007. By August 2018, 25,000 km of HSR, 66% of world HSR length
- By Sept.30, 2017, population transported by HSR reached 7 billion (almost world population)
- Transportation time shortened greatly; Distances between cities reduced greatly.
- **Research questions:** What are the social and well-being effects of HSR in China? Has HSR improved quality of life (QoL) in China? If so, how?



# Literature Review

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- HSR in China has great potential impacts on urban and regional development. (Tang, Savy&Doulet, 2011)
- HSR stimulates development of second and third-tier cities. By offering households and firms a large menu of location alternatives, HSR helps to **protect QoL of growing urban population**. (Zheng & Kahn, 2013)
- HSR has great impact on regional combination of living and working and **improves efficiency and quality of commuting**. (Wang&Zhao, 2010)

# OECD Quality of Life & Well-being Indicators



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- *Health*
- ***Work and family life balance***
- *Education*
- *Social connections*
- *Personal security*
- *Civic engagement and governance*
- *Environment*
- ***Subjective well-being***

## **Materials Conditions**

- ① Income and wealth
- ② Jobs and earning
- ③ Housing



# OECD's Five Indicators Describing work and family life balance

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- Long working hours
- Commuting time
- Time for leisure and personal care
- Satisfaction with time allocation
- Employment rate of mothers with children of compulsory school age



# QoL more and more important in China

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- Government attaches importance to QoL: Concept of “Minsheng” (well-being)
- New normal: alternative criteria than GDP
- QoL ranking by country 2018 released by US News and World Report: China ranks 21
- Factors that exacerbate QoL in China: Environmental pollution, population explosion, roaring real estate price, etc.
- Does HSR help reduce these negative factors?



# How has HSR improved QoL in China?

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- Fast, comfortable, relatively cheap
- Safe, convenient, punctual
- HSR as a “Minsheng(well-being) project”: greatly improved quality of transportation for people
- Four traditional criteria for people’s quality of life: Clothing; Food; Housing; and **Transportation**
- Spring Festival travel rush(*Chunyun*) alleviated
- Technology helps improved efficiency of HSR: the way people buy tickets; the way people take the train, etc...

# A glance at the HSR seats



- The Second Class Seats

- The First Class Seats

- Business Class Seats



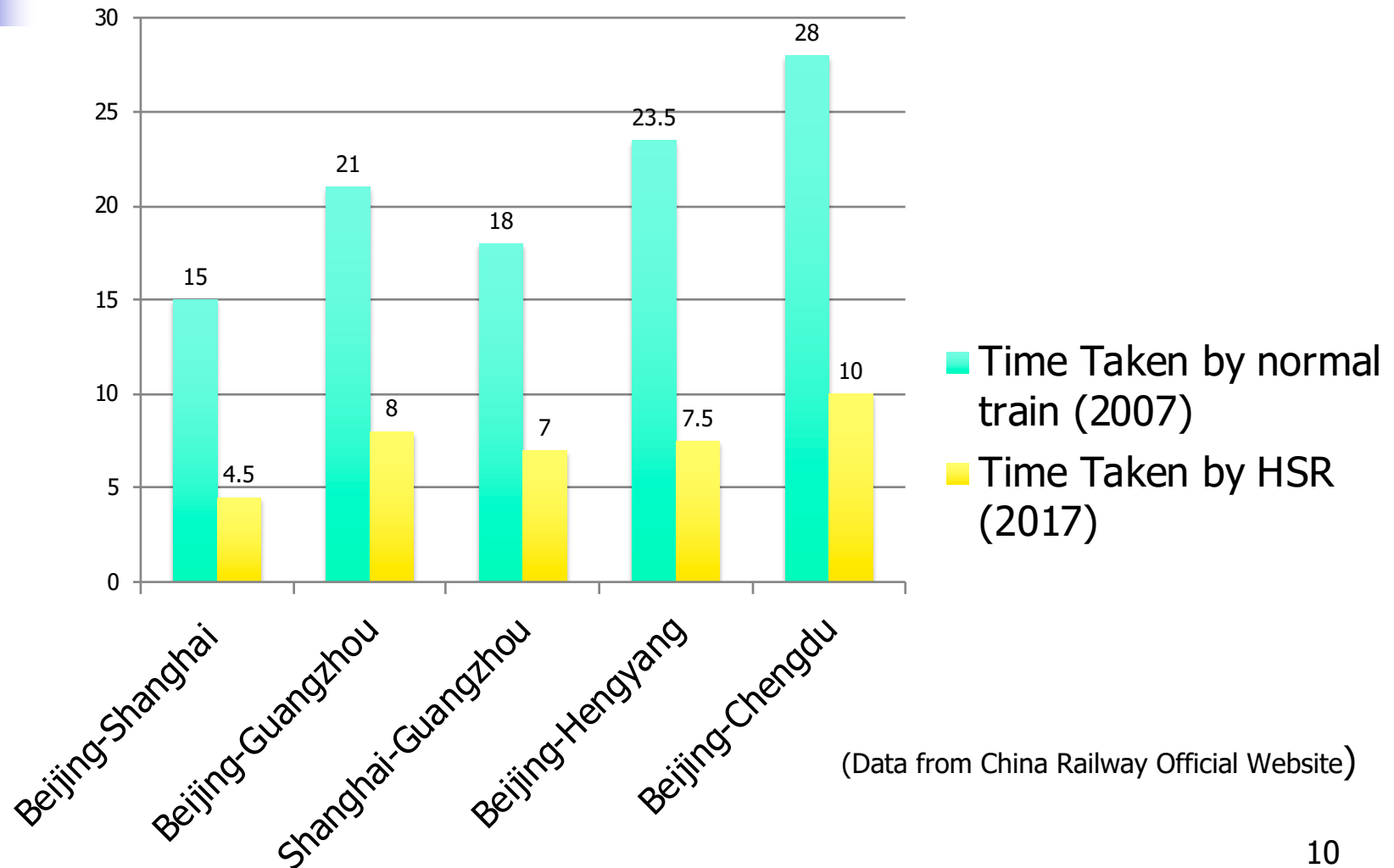


# Three Characters Featured in Documentary *HSR Changing Life* (2015)

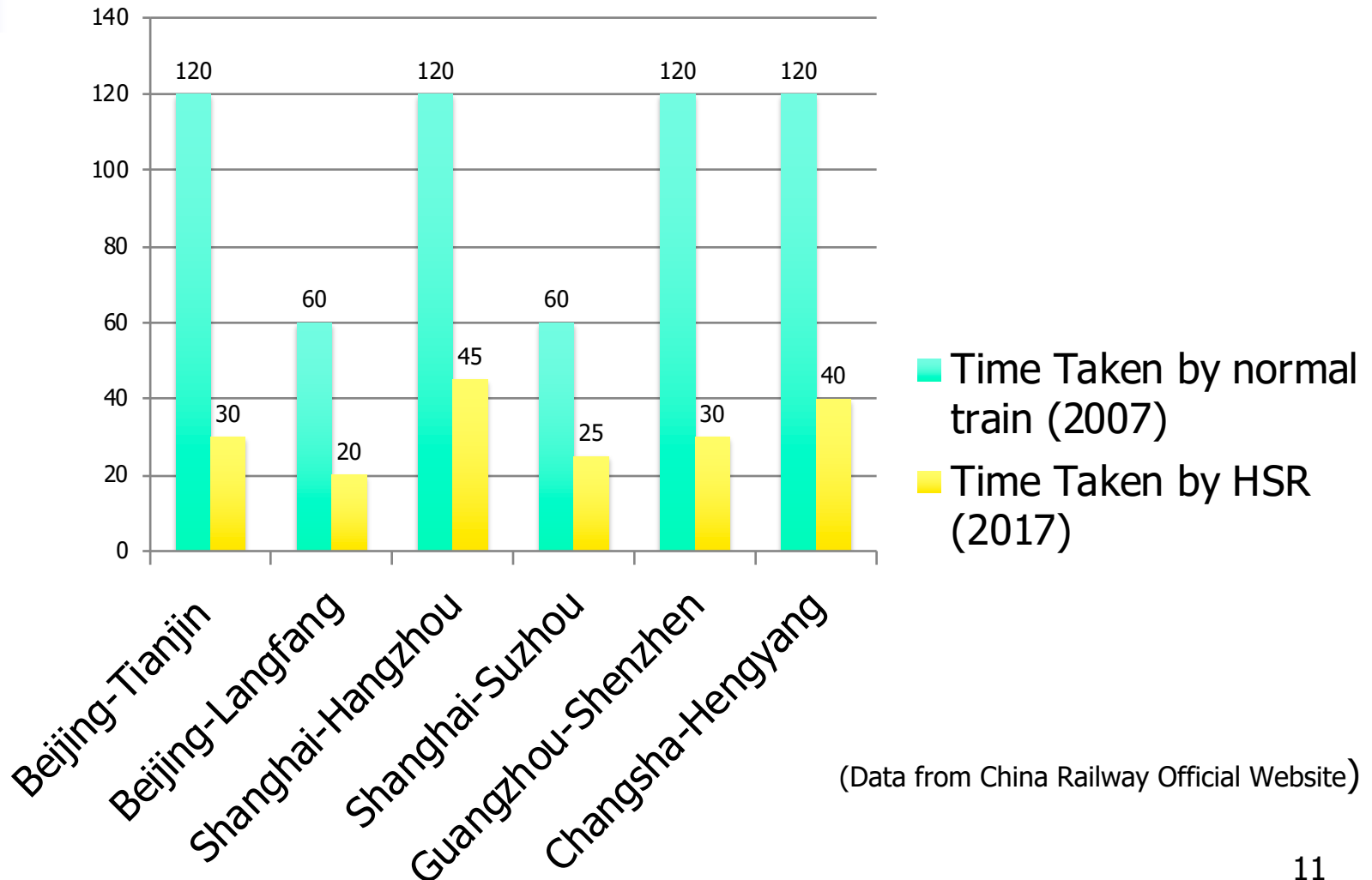
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- Shafiq, college student at Peking Uni.  
Fast and convenient travel by HSR to different places in China
- Zhang Jian, a common blue-collar in Beijing  
Beijing-Tianjin HSR connects company and home (family)
- Yang Zonghua, CEO of a consulting company  
Change from flights to HSR for frequent domestic business trips; SMEs business opportunities

# Time Taken Comparison between Normal Train and HSR (in Hours) (Long Distance)



# Time Taken Comparison between Normal Train and HSR (in Minutes) (Short Distance)



# Time Taken, Frequency and Price of Major HSR Trains (As of 2018)

	Time Taken	Average Frequency	Price (Yuan)
Beijing-Tianjin	30 mins	5 mins	54.5~174.5
Shanghai-Hangzhou	45 mins-1.5h	5 mins	73~147.5
Shanghai-Suzhou	23~39 mins	5 mins	34.5~64.5
Guangzhou-Shenzhen	29 mins~1.5h	5 mins	74.5~99.5
Beijing-Shanghai	4.5~6 h	15 mins	553~933
Beijing-Guangzhou	8h~10.5 h	1.5h(5mins 20:10~20:35)	709~1380
Shanghai-Guangzhou	7h~11h	2.5h(5mins 19:55~20:05)	525.5~1302.5

(Data from China HSR Official Website)

# HSR Commuting Phenomenon and Twin-City Lifestyle

- HSR makes trans-city commuting convenient
- HSR commuting in three most developed economic zones: Jingjinji Zone; Yangtze River Delta Zone; and Pear River Delta Zone
- 20 mins to one hour HSR commuting between Beijing, Shanghai, Guangzhou and their surrounding cities



# One Typical Example of Twin-City Lifestyle

- Mr. Wang: living in Kunshang, Jiangsu Province, and working in center of Shanghai
- 8:05(home)→8:25(Kunshang)→8:46(Shanghai)→9:20(Office)
- Housing saving 3,500 yuan - HSR cost 1,900 yuan = 1,600 yuan saved per month
- **Merits:** Door to door commuting time almost the same; Contributing to alleviating air pollution and urban traffic jam; More decent job and higher salary; Cheaper but better housing condition in 2<sup>nd</sup> tier city. → **QoL up**



# Two-Hour Economic Zone: Example of My Hometown Hunan Province

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- 70 million population
- HSR spread to 14 cities in the province
- Two-Hour Economic Zone by 2020: Transportation from any city in the province to its capital Changsha within two hours
- Lifestyle change: Congregation in center area close to workplace, school, market (air pollution, traffic jam and **QoL down**) → Diffusion to satellite cities commuting to workplace, school, market by HSR (air pollution and traffic jam alleviated and **QoL up**)



# Conclusion

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- HSR improved the quality of transportation, one of the four traditional criteria of QoL.
- HSR improved work and family life balance by reducing commuting time
- Twin-City Lifestyle between major city and 2<sup>nd</sup>-tier city improved QoL indicators
- Material conditions for QoL and well-being (income, jobs and housing) improved greatly

**Thank you for your attention!**