

Mobility for All ?

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- **Total area of 6,340.5 km²**

Population of around 24 million(2015)

**Inner Ring
4 million,
100 sq.km**

**Outer Ring
12 million
600sq.km**



Poor Mobility for All, Less Choice

Transport in Early 1990's

Less Vehicle :

**210 thousands motorized
6264 buses**

Weakness in Road Network

Bee-waist, Bottleneck

No ring-road

7 % road with > 4 lanes

Heavy Congested Motor Vehicle

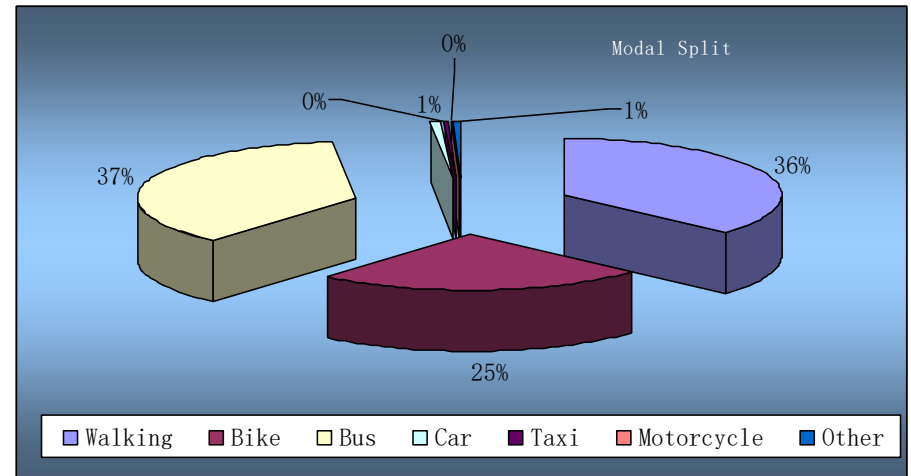
In peak hour average speed

11.9km/h(1988),

<10km/h count for 34%

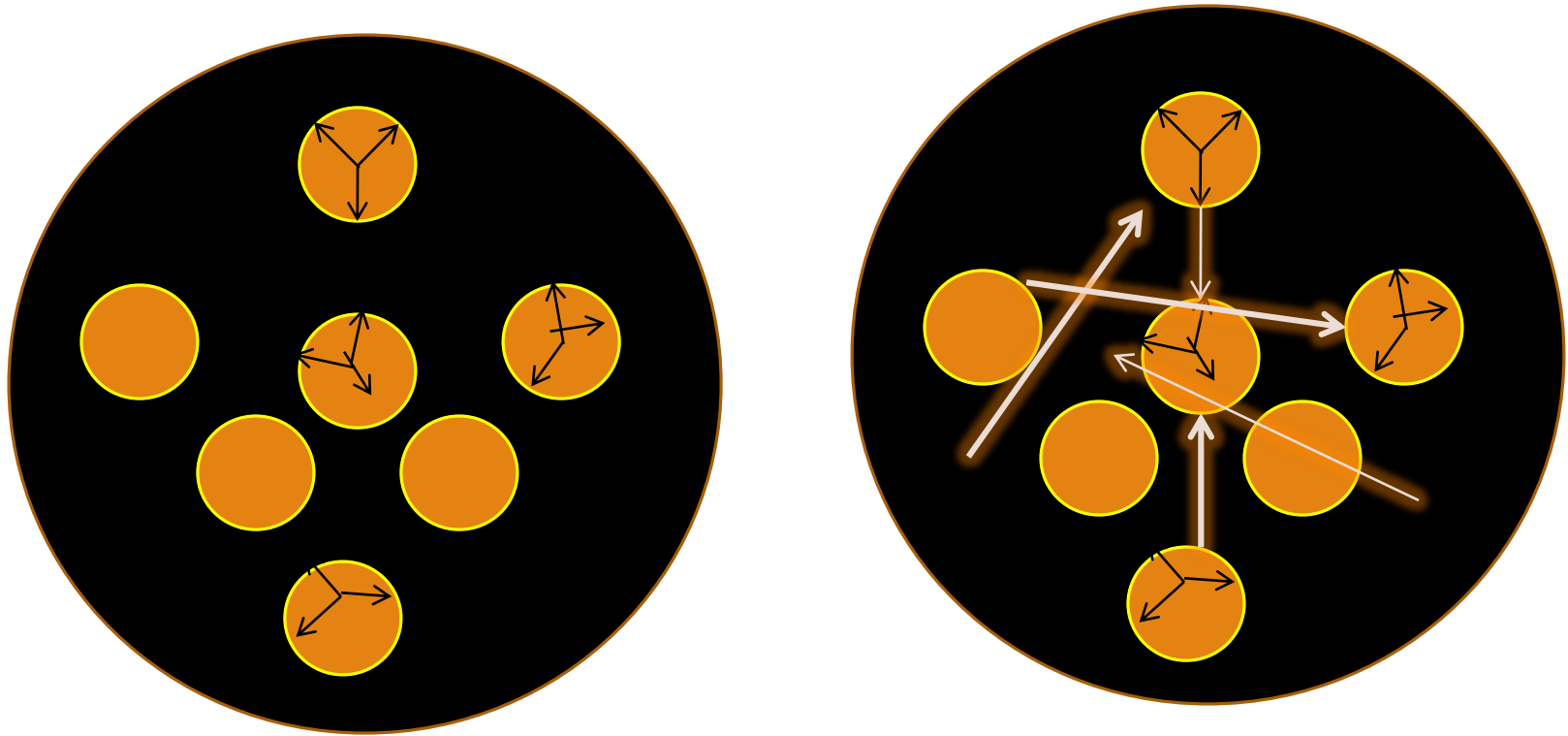
in central area

Wide Use of Bike



大城市与大集镇的集合的差别

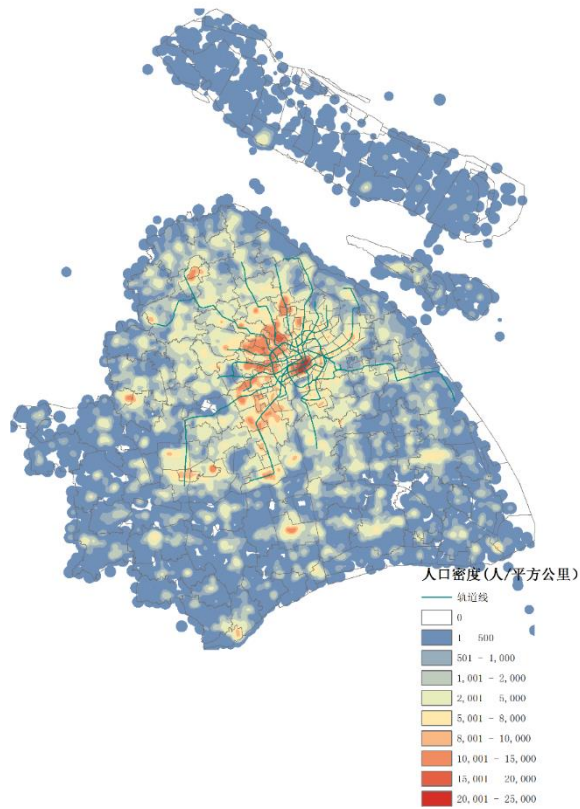
Self-Contained only, not Acceptable



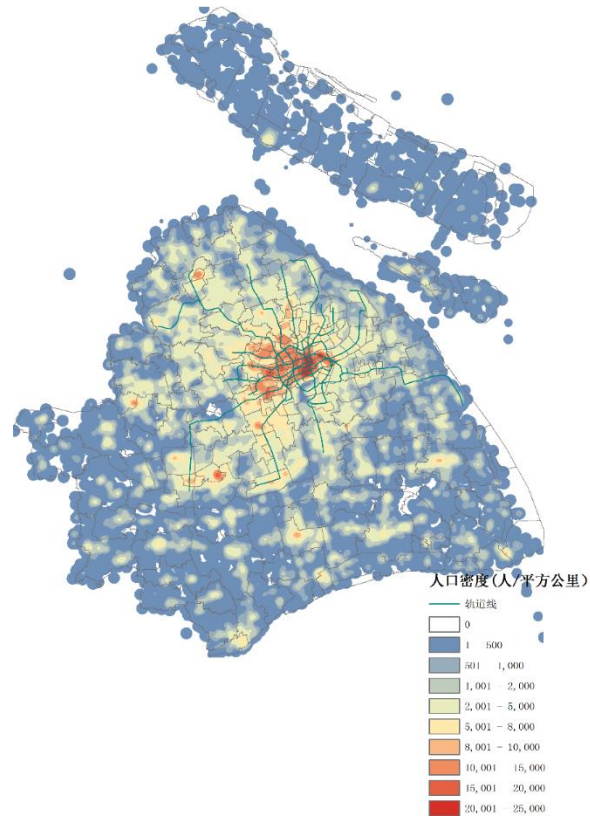
Less Traffic, but Low City Wide Mobility, Less Competitiveness

No agglomeration effects

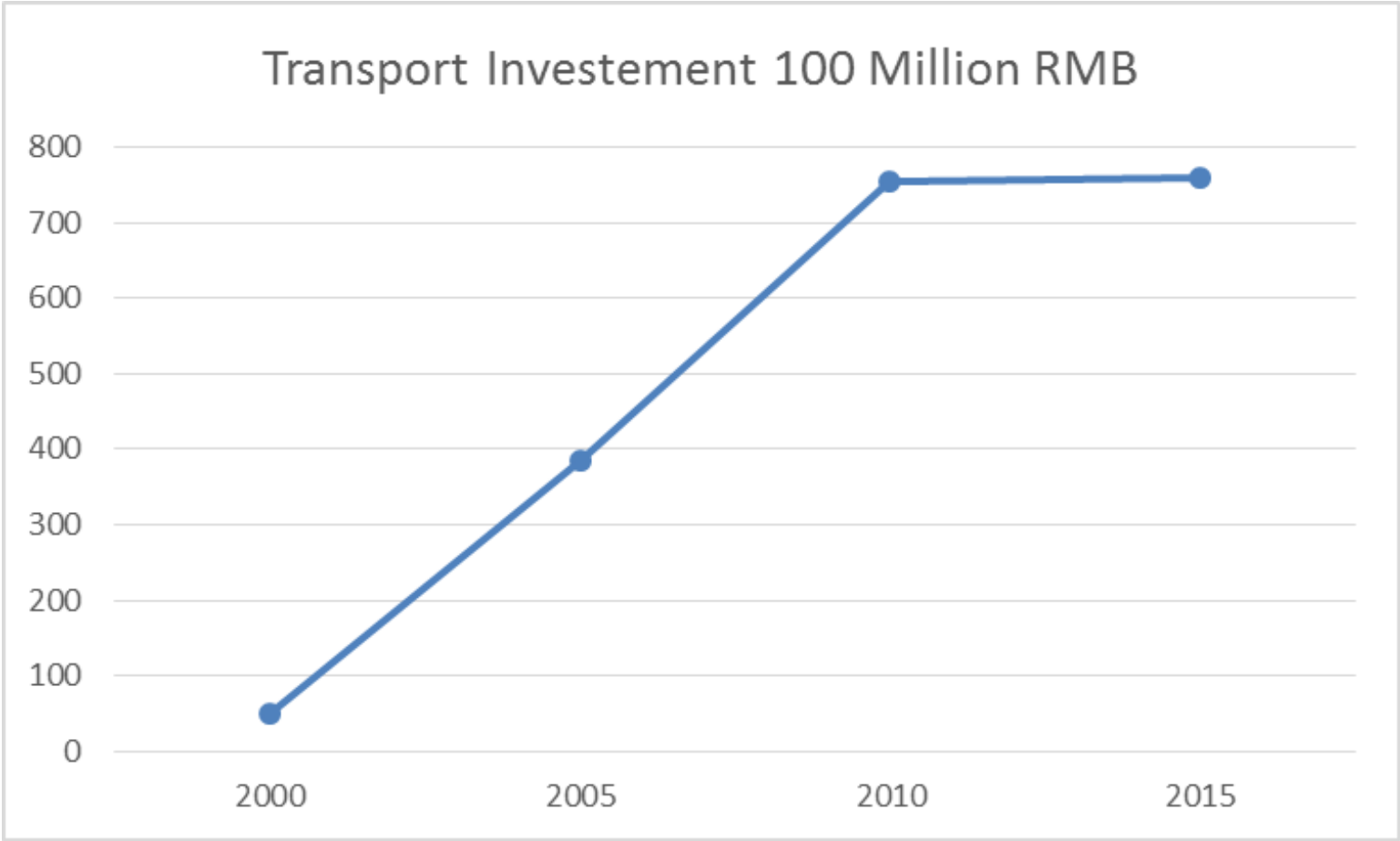
Population



Employment



Heavy Investment in Urban Transport Construction



Up to 3~5% of GDP



2015

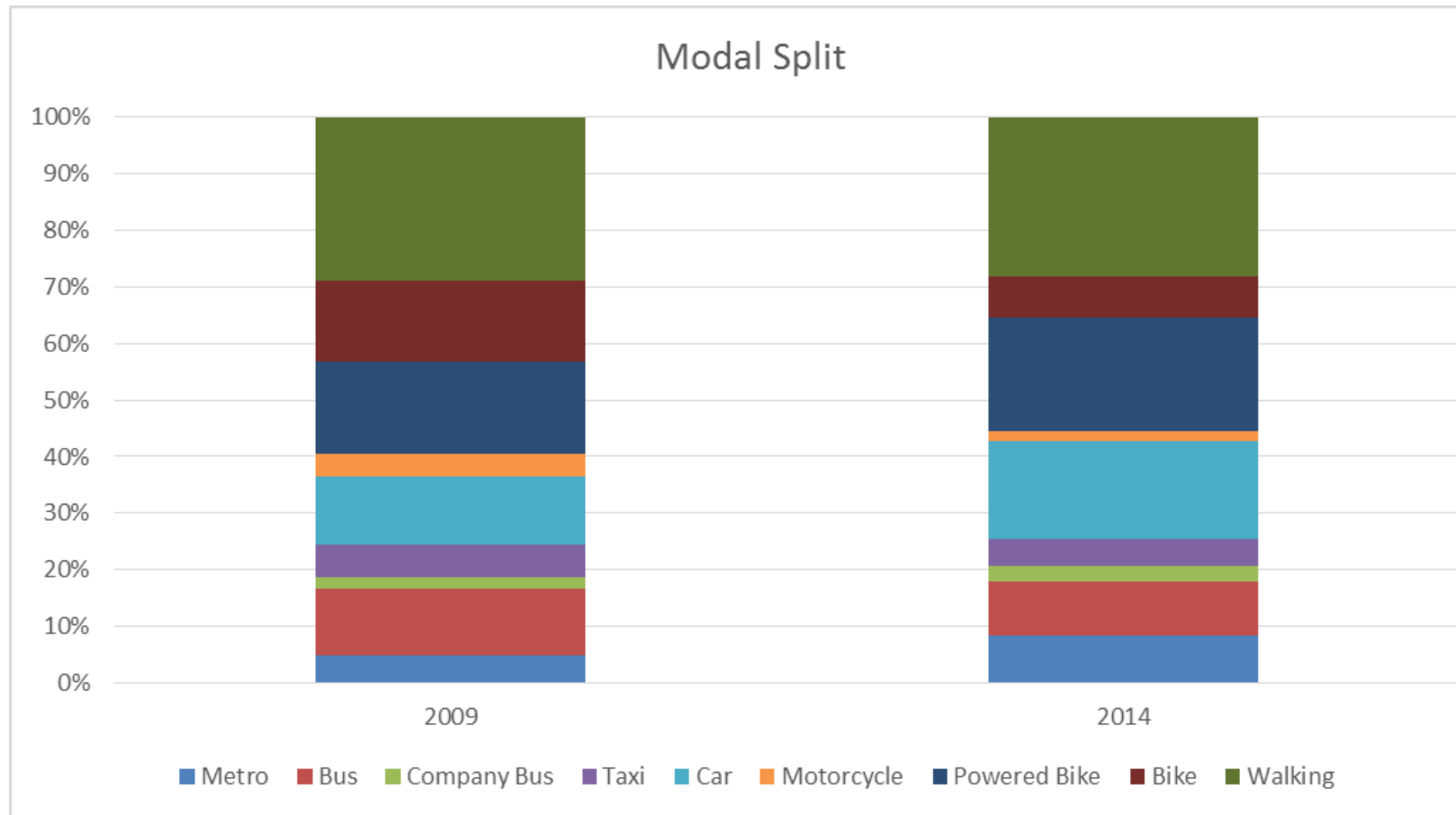
15 Metro Line
8.4 million Pax/day



Travel modal split

55.5 million trips in one day,

Heavy investment for small proportion travel

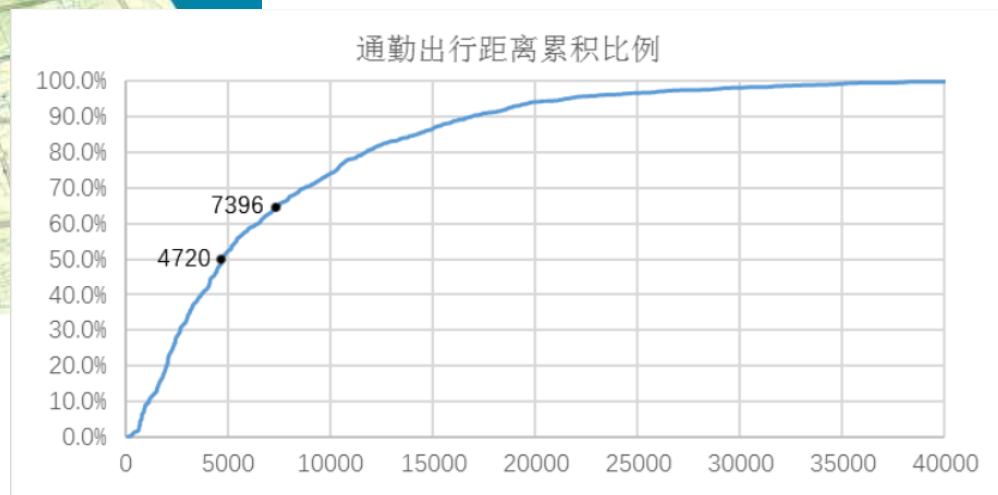


出行需求的广谱特点——短距离出行 Mega city, Short Distance High Share

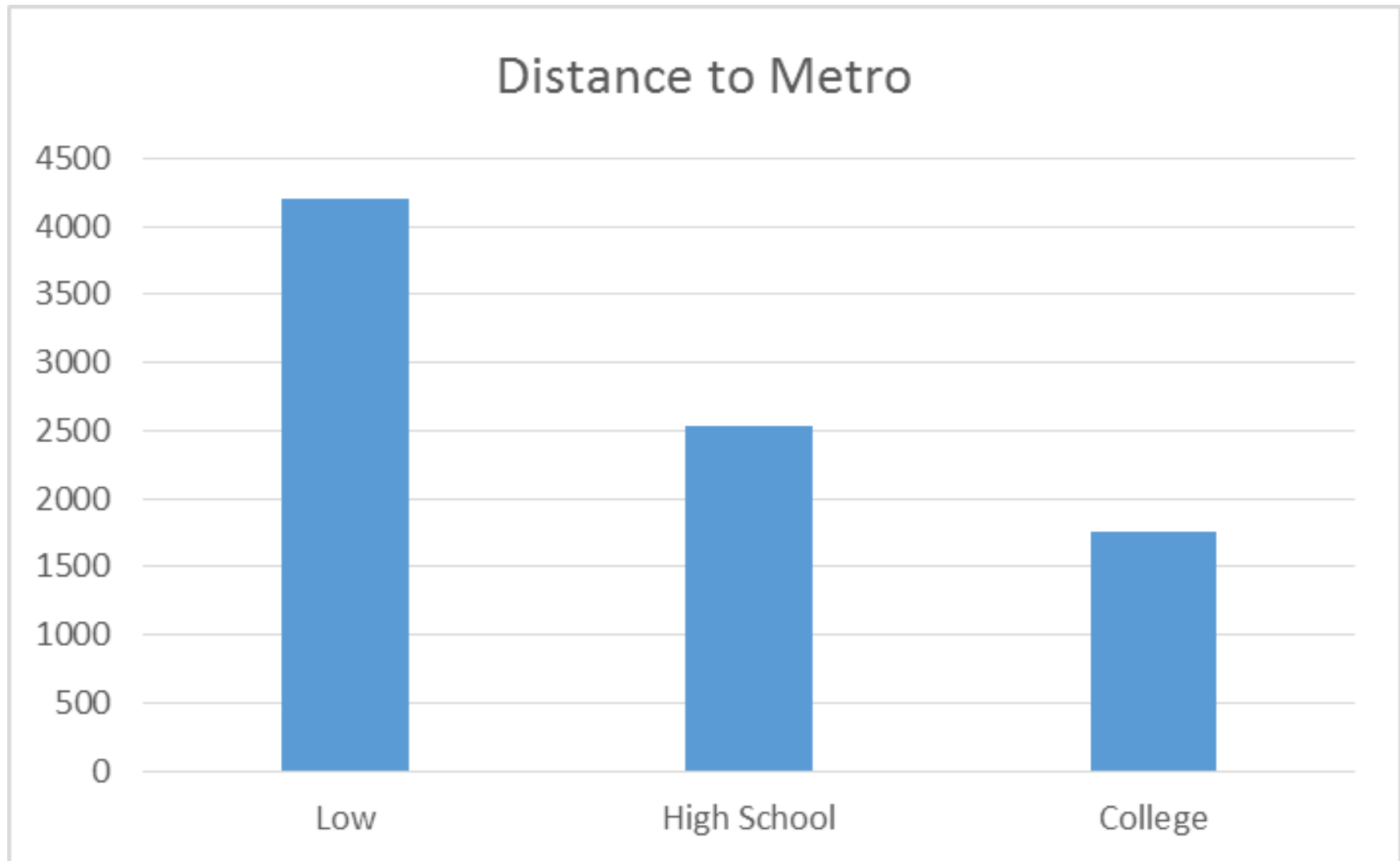


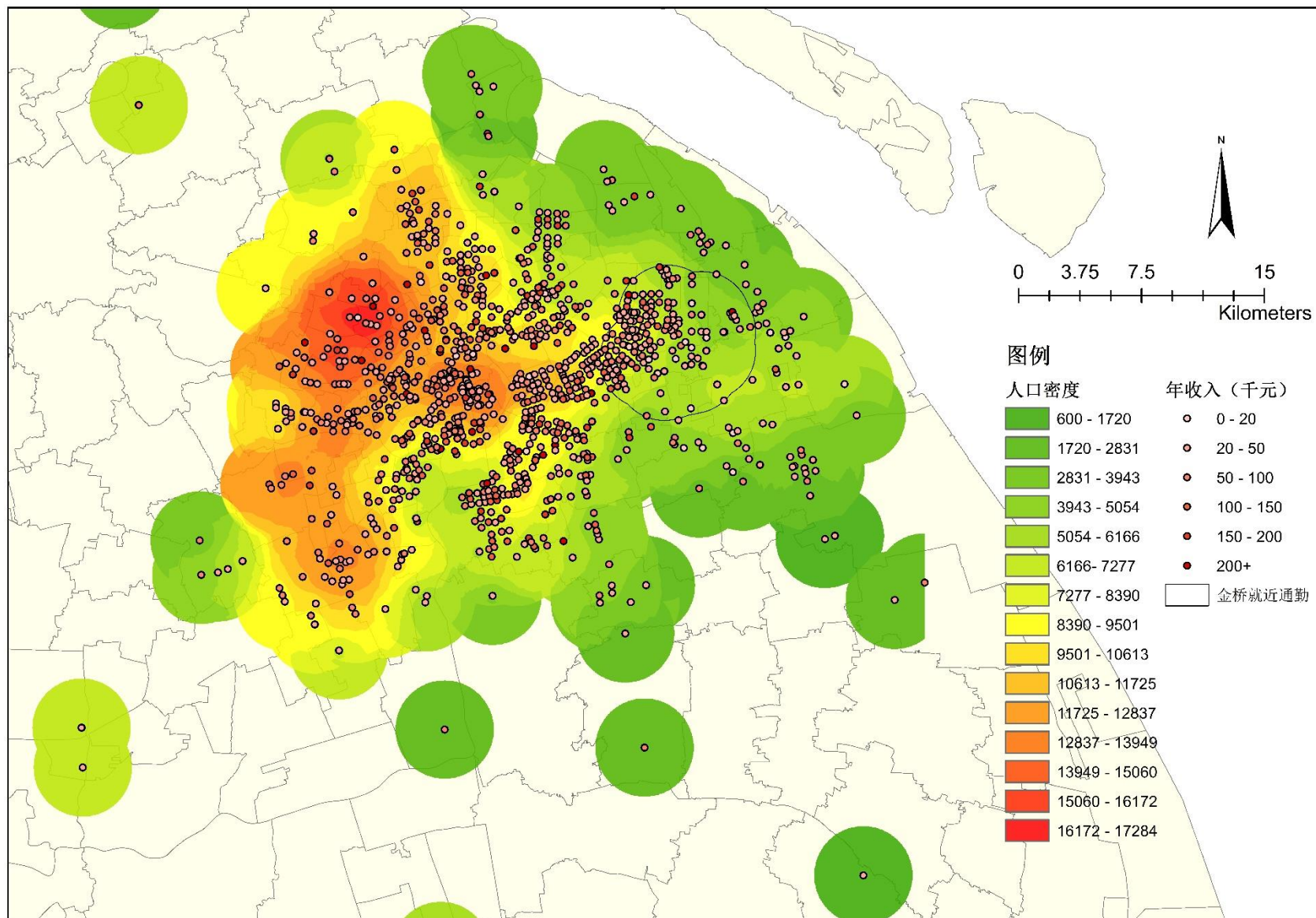
Commuting Dist. In Shanghai

50% < 4.7km



Education Level and Access to Metro





- **Bicycle**

28% modal split, 20% Powered Bike

Limited, less road space to bike



“Poor Image” out of dated

Conflicts with M-V, decrease the efficiency

More road space than bus per passenger

Can be substituted by well developed public transport

Free Floating Bike Sharing System, Free of Charge

Modern Image, Full Scale Social Experiment



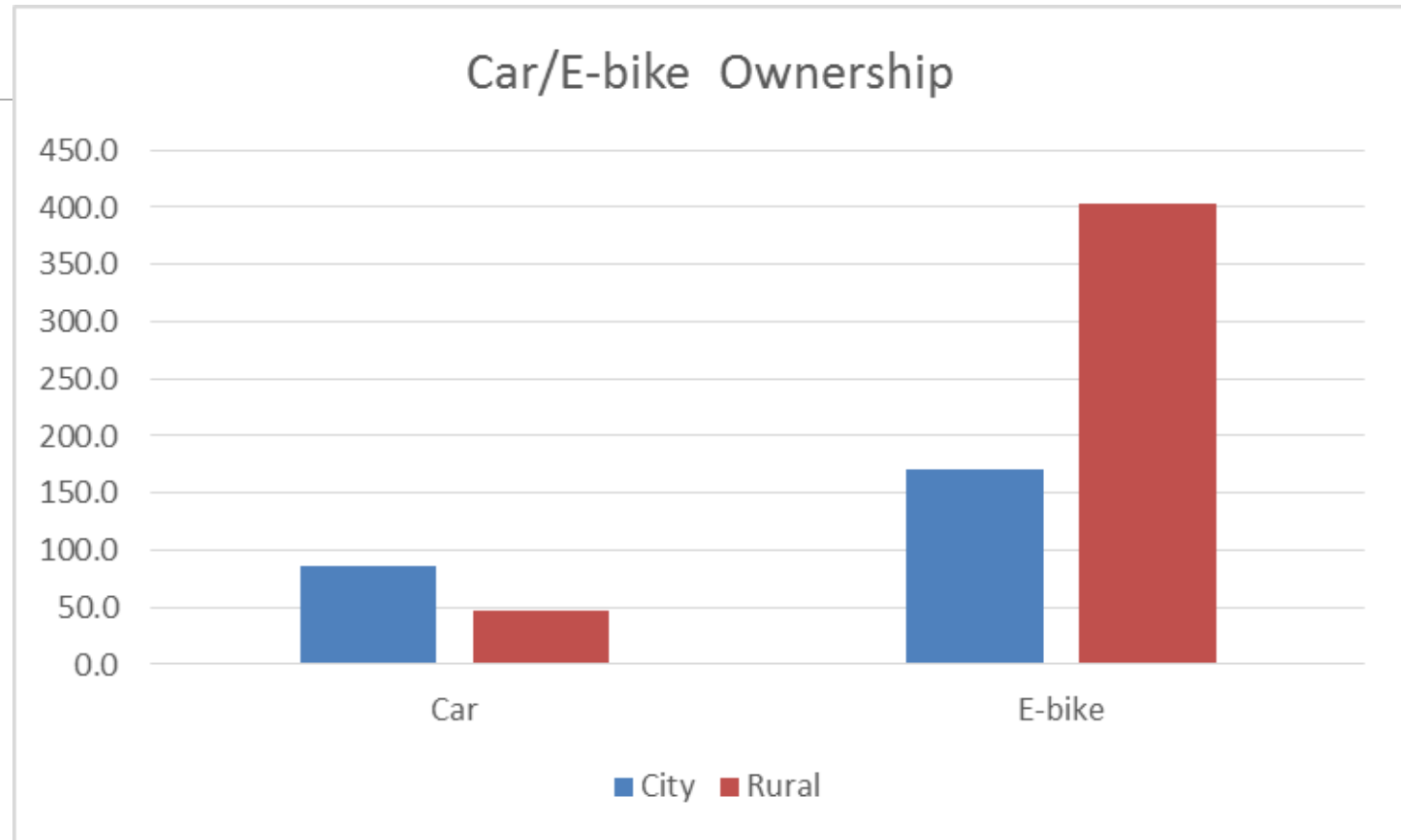


Bike/E-bike 28% modal split, 20% E-Bike

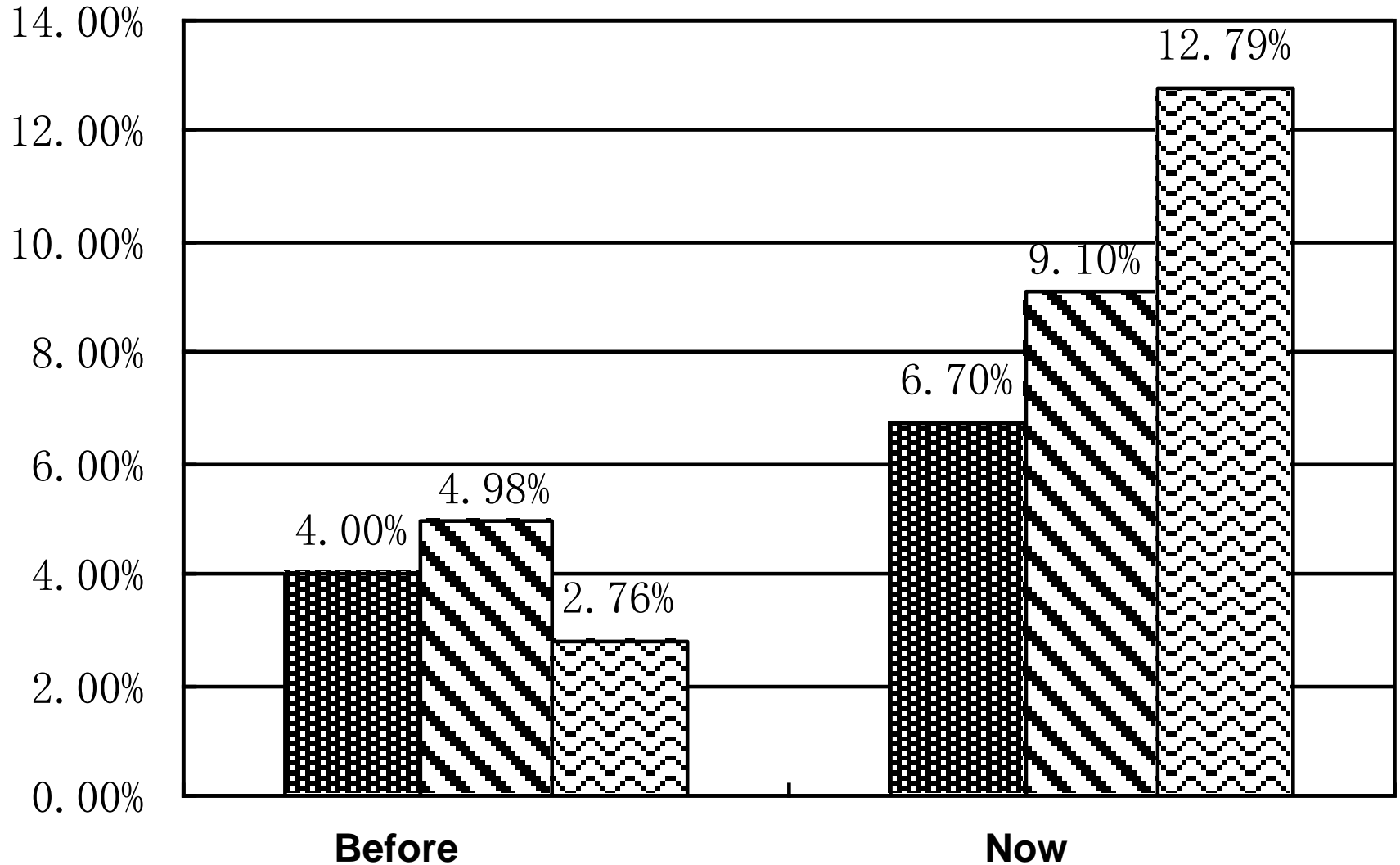
Time saving one month Salary/Year



Car/E-bike/1000 p. in City/Rural



Travel cost/income Big increasing for the forced people



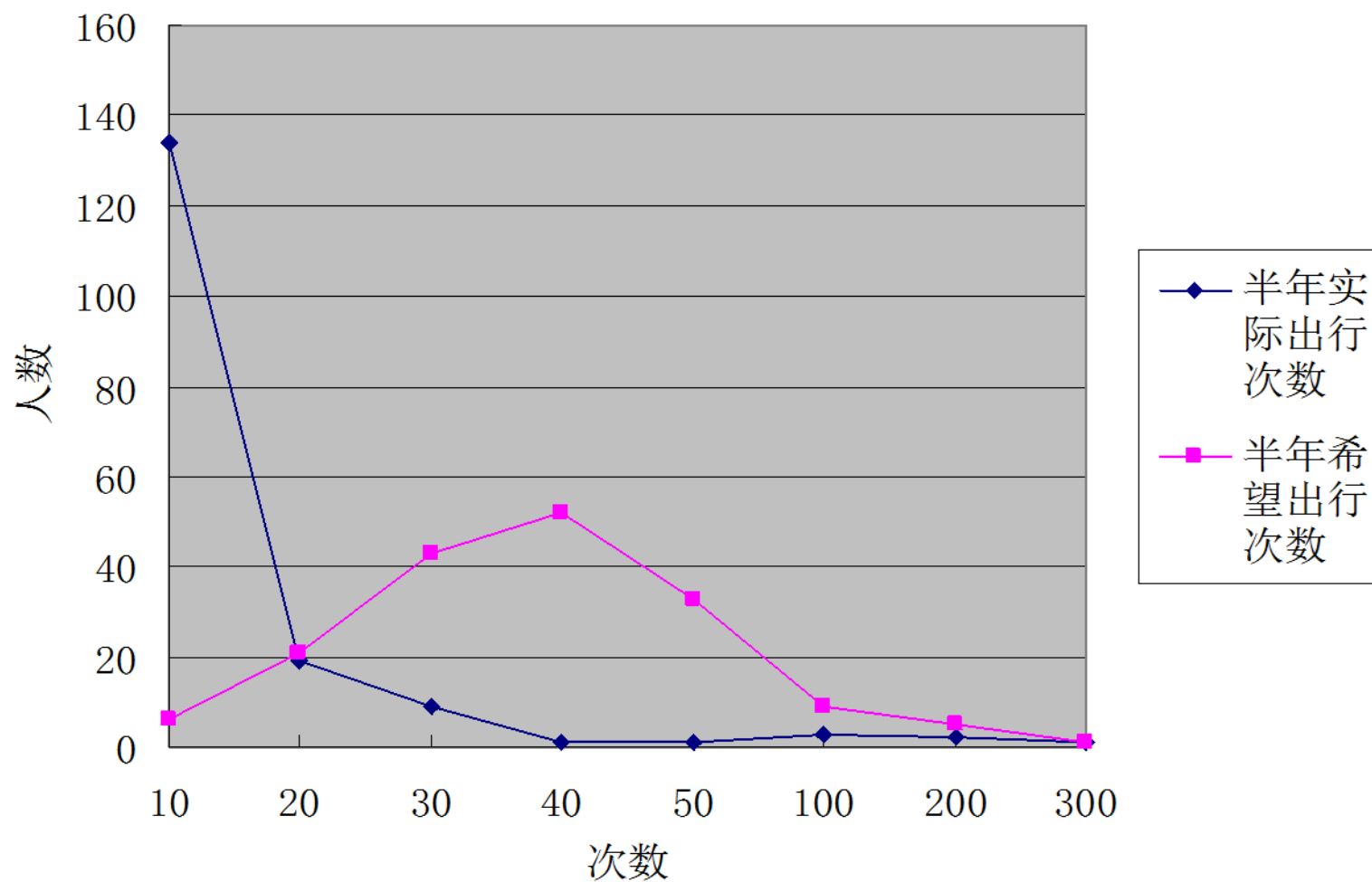
Mobility for the Disabled and Senior Citizen



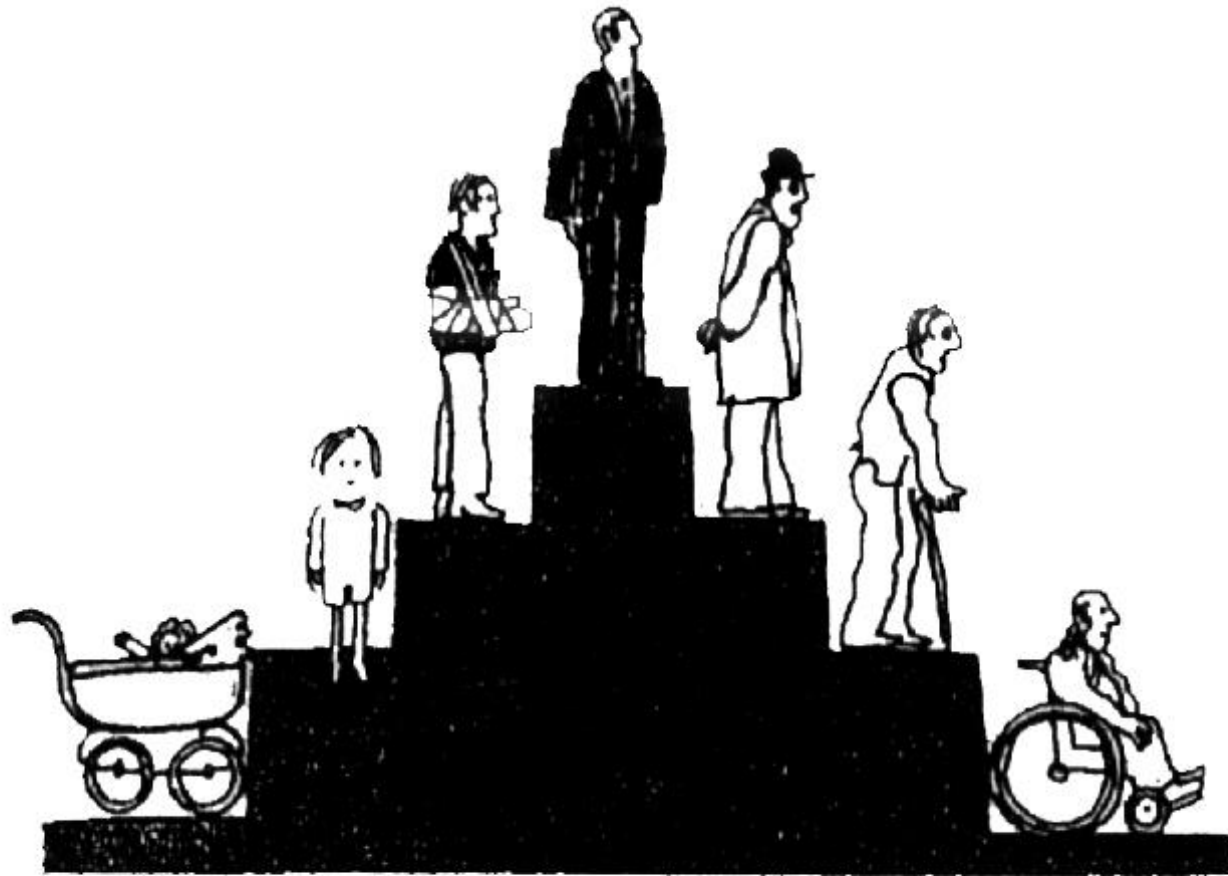
One million disabled people
Sight: 158 t
Physical : 272 t

Trips Wish to have, Trip Made

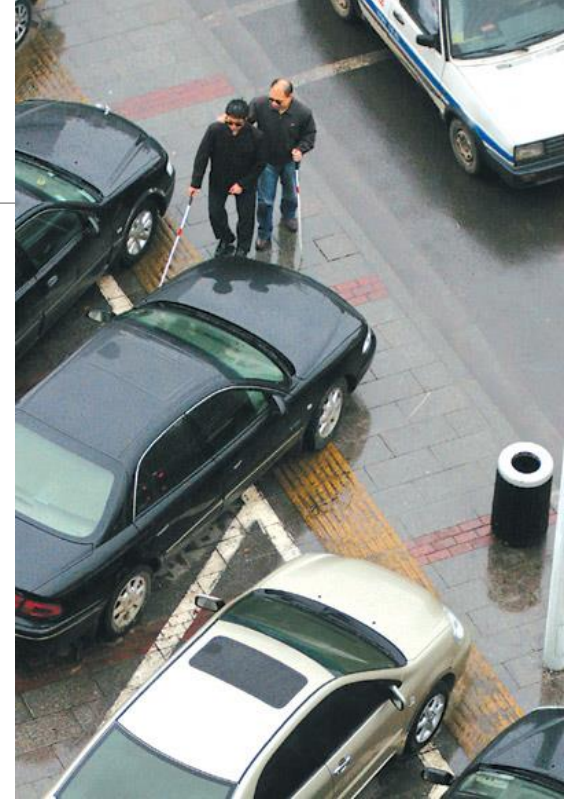
残疾人出行次数

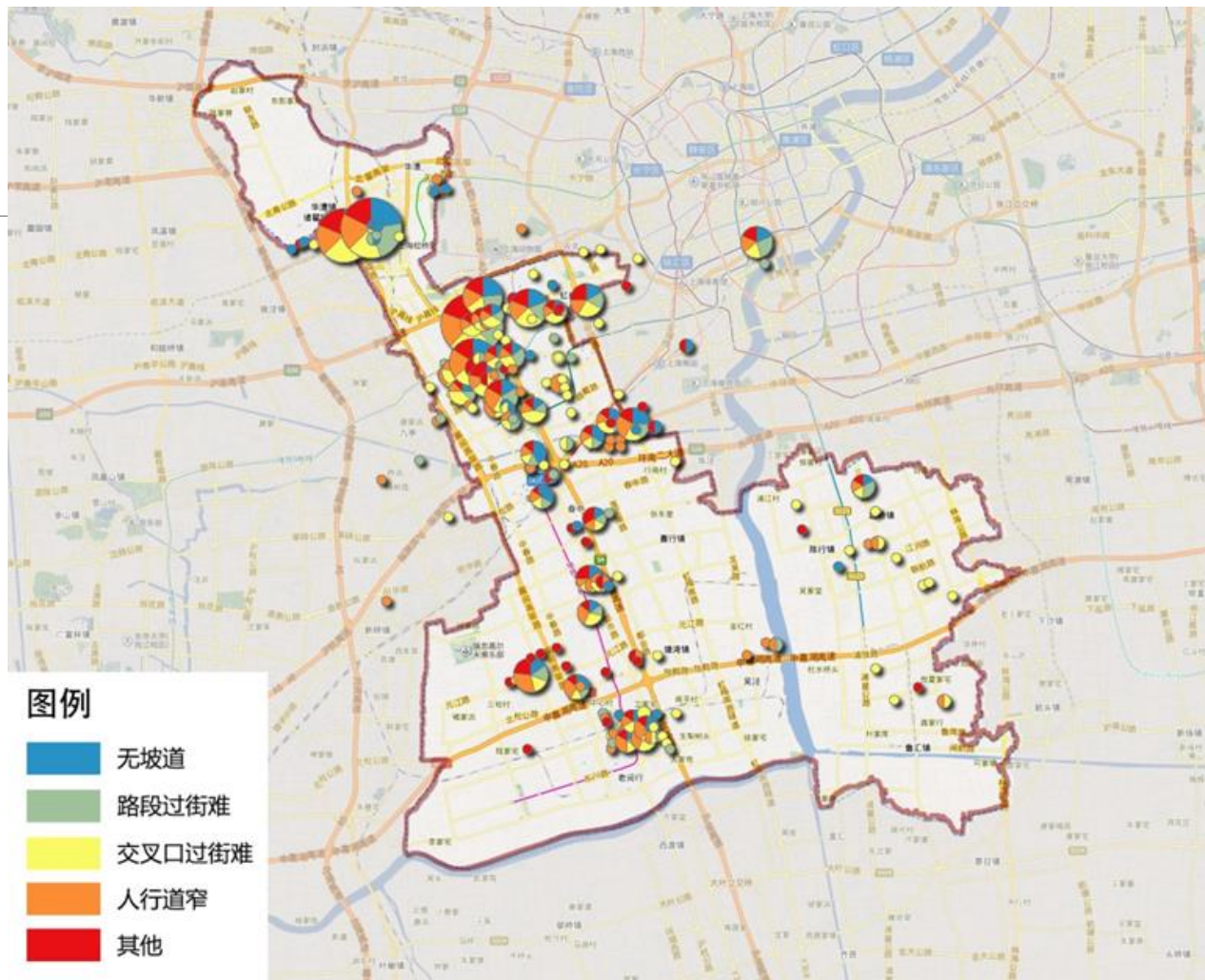






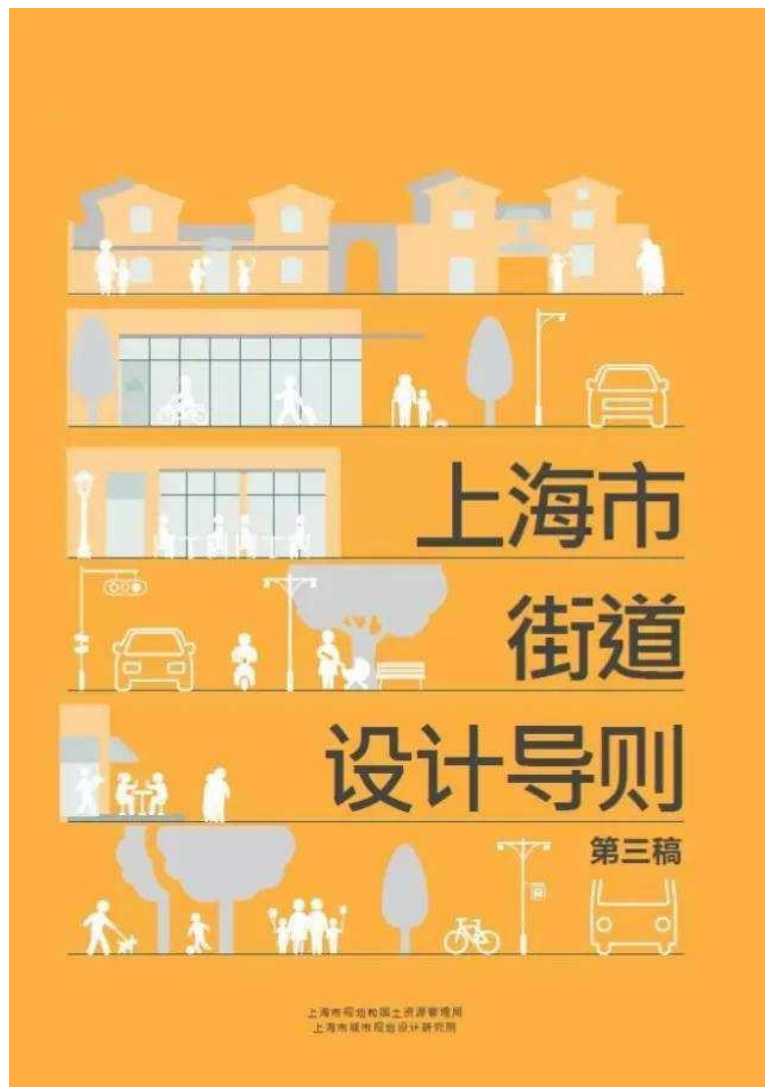
Every one will be/ was disabled







IVM, Shanghai Handicapped Association



Walkability Around Metro Station



$$P_{sc} = 0.454 * W_{kw} + 0.24 * M_{nS} - 0.137 * W_{all} + 0.062 * B_{uf} + 2.033,$$
$$R^2 = 0.652$$

Thank you!

