

**China Data Institute** 

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# Survey Data Analysis with China and US Geo-Explorers

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## Topics

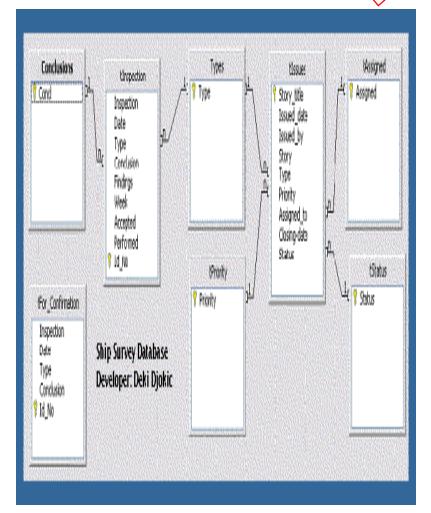
**1. Exploring local amenity data** 

(environmental data) with China Geo-Explorer

- 2. Integrating survey data with local amenity data for spatial analysis
- 3. Mapping survey data with Geo-Explorers
  4. Comparative analysis with China and US Geo-Explorers
- **5.** Future directions

## **1. Exploring Local Amenity Data**

**Survey Data** 

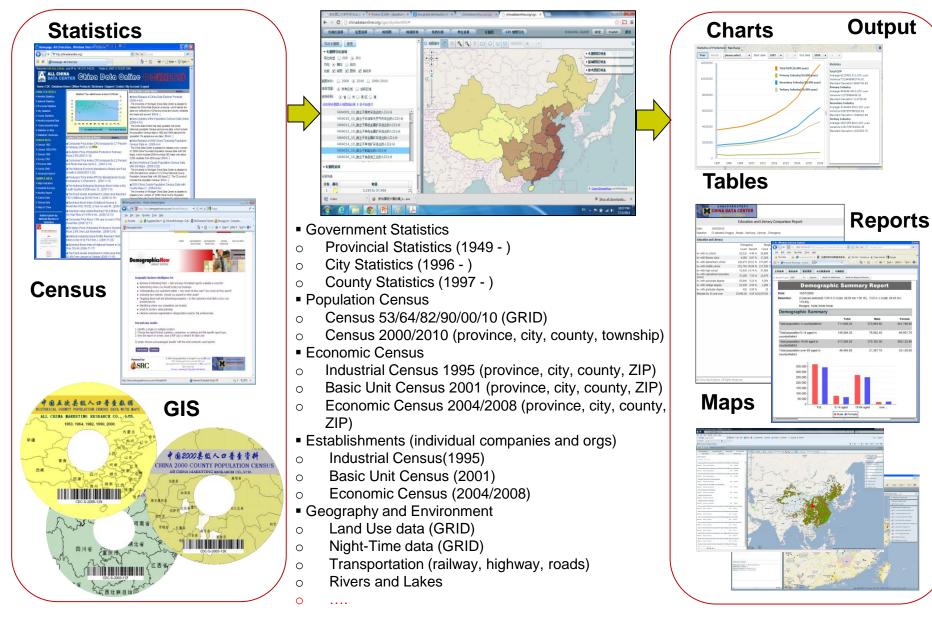


#### **Community Data**

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- 1	A C	DE	F	G	Н	I J	K		
11	Rank	Name	Total Households I	Family Households H	Collective Iouseholds	Total Population	Average Size: Family HHs		
13	1	Yongqiao	440,628	436,292	4,336	1,586,132	3		
17	2	Huoqiu	401,296	399,845	1,451	1,459,696	3		
21	3	Yingshang	348,157	346,925	1,232	1,307,813	3		
25	4	Guoyang	342,514	341,817	697	1,292,115	3		
29	5	Lixin	329,396	329,208	188	1,324,424	4		
33	6	Suining	328,036	326,763	1,273	1,204,585	3		
37	7	Huaian	307,072	305,571	1,501	1,189,673	3		
1	8	Shouxian	302,723	301,575	1,148	1,10 🐠 51	3		
5	9	Suixi	302,600	301,647	953	1,135,536	3		
9	10	Huaiyuan	301,671	300,425	1,246	1,230,866	4		
3	11	Lujiang	301,121	298,547	2,574	1,126,347	3		
7	12	Mengcheng	285,037	284,154	883	1,100,569	3		
1	13	Siyang	280,836	279,214	1,622	1,157,467	4		
55	14	Feidong	270,171	268,323	1,848	1,001,306	3		
69	15	Sihong	265,808	263,554	2,254	1,019,168	3		
73	16	Lingbi	262,759	261,686	1,073	1,048,773	3		
7	17	Baoying	261,203	256,452	4,751	861,370	3		
31	18	Jiaoqu	247,088	227,714	19,374	770,390	2		
85	19	Gaoyou	245,744	241,884	3,860	788,988	3		
89	20	Jiangning	245,086	235,600	9,486	769,701			
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#### **US Geo-Explorer**

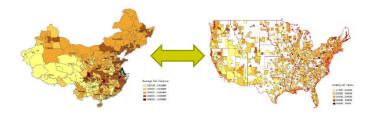
#### An Integration of Spatial Data and Analysis for China Studies



#### **US Geo-Explorer**

#### More than 45,000 variables

- Population Census (State, County, Tract, Block, Metropolitan, CCD, Place)
  - Population Census1970
  - Population Census1980
  - Population Census1990
  - Population Census2000
  - Population Census2010
  - American Community Survey
- Business Patterns
   (State, County, Metropolitan)
- Yearly business patterns 1986 2013
- Business Units
- **o** Business Records 2013 (85 industries)
- Aggregated reports 1997-2013 (State, County, Metropolitan, CCD, ZIP)



State

Metropolitan

County

SCO

### **Data: China**

- Government Statistics
  - Provincial Statistics (1949 )
  - City Statistics (1996 )
  - County Statistics (1997 )
- Population Census
  - o Census 1953
  - o Census 1964
  - o Census 1982
  - Census 1990
  - Census 2000/2010 (province, city, county, township, GRID)
- Economic Census
  - Industrial Census 1995 (province, city, county, ZIP)
  - Basic Unit Census 2001 (province, city, county, ZIP)
  - Economic Census 2004/2008 (province, city, county, ZIP)
- Establishments (more than 7 millions companies and organizations)
- Geography and Environment
  - Land Use data (GRID)
  - Night-Time data (GRID)
  - Transportation (railway, highway, roads)
  - Rivers and Lakes
- Health Surveys

County

Province

### Data: US

- Population Census (State, County, Tract, Block, Metropolitan, CCD, Place)
- o Census 1970
- o Census 1980
- Census 1990
- Census 2000
- Census 2010
- American Community Survey

Economic Census (State, Metropolitan, County)

- Business Data (State, Metropolitan, County, Tract, CCD, Place)
- Establishments (individual business and organizations)
- Firm level records (more than 13 million records with 85 fields for each business)

### **US** Data

P	opulation (	Census		
index code 1pop10	ename Population	Busines	siness Data	
2rac10white 3rac10black 4rac10amind	hite Race White Alone Alone Race Black Alone COMPANY NAME		Household Data	
5rac10asian 6rac10hawai	Race Asian Alone Race Native Hawaiian	ADDRESS	ADULT AGE RANGE MARITAL	
7 rac10other 8 rac10mult 9 his10nhisp	Race Some Other Rac Two or More Races Population Non-Hispan	CITY / STATE / ZIP + 4	GENDER RELIGION	
10his10hisp 11rch10whnhs 12rch10blnhs	Population Hispanic or Non Hispanic White Ale Non Hispanic Black Ale		CREDIT CARD EXPENDABLE	
13rch10amnhs 14rch10asnhs 15rch10hanhs		POPULATION FIRM/INDIVIDUAL/PROFE	HOUSEHOLD INCOME SSIONAL HOME VALUE	
16rch10otnhs 17rch10munhs 18rch10whhis	Non Hispanic Some Ot Non Hispanic Two or M Hispanic White Alone	EMPLOYEE SIZE	HOME SALE PRICE MORTGAGE	
19rch10blhis 20rch10amhis 21rch10ashis	Hispanic Black Alone	SALES VOLUME	LANGUAGE RESIDENCE	
22rch10hahis 23rch10othis	Hispanic Native Hawaii Hispanic Some Other F	SIC / NAICS	NIELSON REGION YEARS OF SCHOOLING	
24rch10muhis 25sex10mal 26sex10fem	Population Male Population Female	ADSIZE	MFDU - # OF UNITS OCCUPATION	
27age100004 28age100509 29age101013	Population Age 0-4 Population Age 5-9 Population Age 10-13	YEAR 1ST APPEARED	METRO/MICRO DELIVERY SERVICE	
30age101417 31age101820	Population Age 14-17 Population Age 18-20	PUBLIC/PRIVATE	POLITICAL PARTY VEHICLE	
Sheet1		LATITUDE	AIRCRAFT PILOT LICENSE	
		LONGITUDE	BOAT PROPULSION INTERNET	

- 01: Agricultural Production Crops
- 02: Agriculture production livestock and animal specialties
- 07: Agricultural Services
- 08: Forestry
- 09: Fishing, hunting, and trapping
- 10: Metal Mining
- 12: Coal Mining
- 13: Oil And Gas Extraction
- 14: Mining And Quarrying Of Nonmetallic Minerals, Except Fuels
- 15: Building Construction General Contractors And Operative Builders
- 16: Heavy Construction Other Than Building Construction Contractors
- 17: Construction Special Trade Contractors
- 20: Food And Kindred Products
- 21: Tobacco Products
- 22: Textile Mill Products
- 23: Apparel And Other Finished
- 24: Lumber And Wood Products, Except Furniture
- 25: Furniture And Fixtures
- 26: Paper And Allied Products
- 27: Printing, Publishing, And Allied Industries
- 28: Chemicals And Allied Products
- 29: Petroleum Refining And Related Industries
- 30: Rubber And Miscellaneous Plastics Products
- 31: Leather And Leather Products
- 32: Stone, Clay, Glass, And Concrete Products
- 33: Primary Metal Industries
- 34: Fabricated Metal Products
- 35: Industrial And Commercial Machinery And Computer Equipment
- 36: Electronic And Other Electrical Equipment And Components
- 37: Transportation Equipment
- 38: Measuring Instruments; Photographic; Watches And Clocks
- 39: Miscellaneous Manufacturing Industries
- 40: Railroad Transportation
- 41: Transit And Interurban Highway Passenger Transportation
- 42: Motor Freight Transportation And Warehousing
- 43: United States Postal Service
- 44: Water Transportation
- 45: Transportation By Air
- 46: Pipelines, Except Natural Gas
- 47: Transportation Services
- 48: Communications

- 49: Electric, Gas, And Sanitary Services
- 50: Wholesale Trade-durable Goods
- 51: Wholesale Trade-non-durable Goods
- 52: Building Materials, Hardware, Garden Supply, And Mobile Home
- 53: General Merchandise Stores
- 54: Food Stores
- 55: Automotive Dealers And Gasoline Service Stations
- 56: Apparel And Accessory Stores
- 57: Home Furniture, Furnishings, And Equipment Stores
- 58: Eating And Drinking Places
- 59: Miscellaneous Retail
- 60: Depository Institutions

#### changes, And Services

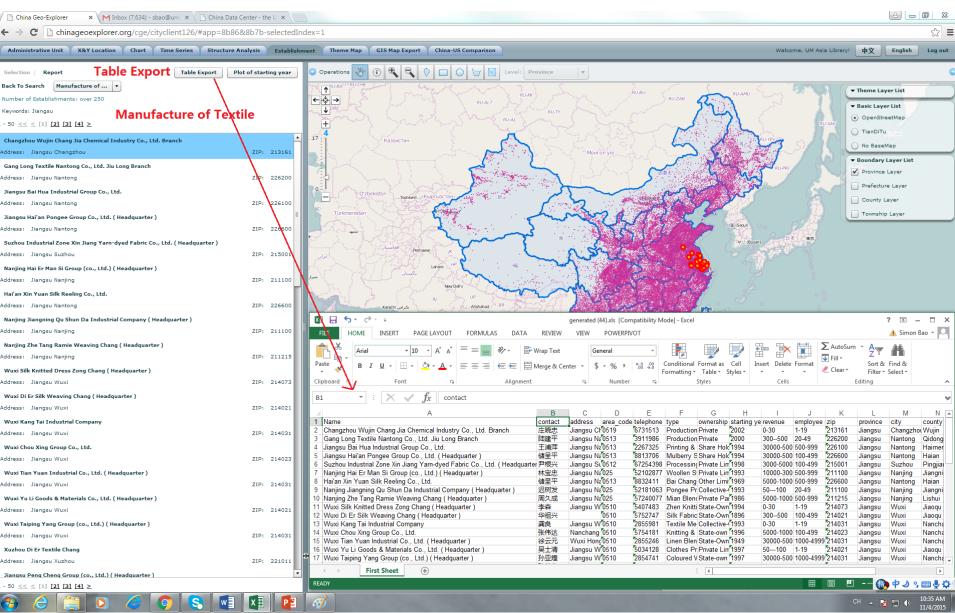
#### 65: Real Estate

**US Business Categories** 

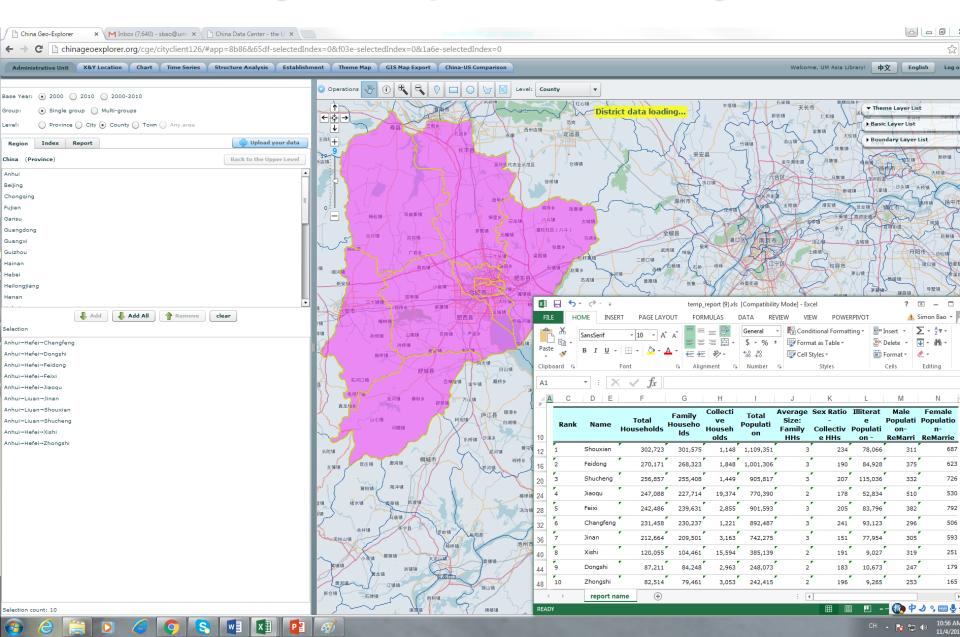
- 67: Holding And Other Investment Offices
- 70: Hotels, Rooming Houses, Camps, And Other Lodging Places
- 72: Personal Services
- 73: Business Services
- 75: Automotive Repair, Services, And Parking
- 76: Miscellaneous Repair Services
- 78: Motion Pictures
- 79: Amusement And Recreation Services
- 80: Health Services
- 81: Legal Services
- 82: Educational Services
- 83: Social Services
- 84: Museums, Art Galleries, And Botanical And Zoological Gardens
- 86: Membership Organizations
- 87: Engineering, Accounting, Research, Management
- 89: Miscellaneous Services
- 91: Executive, Legislative, And General Government, Except Finance
- 92: Justice, Public Order, And Safety
- 93: Public Finance, Taxation, And Monetary Policy
- 94: Administration Of Human Resource Programs
- 95: Administration Of Environmental Quality And Housing Programs
- 96: Administration Of Economic Programs
- 97: National Security And International Affairs
- 99: Non-classifiable Establishments

#### **Business Data**

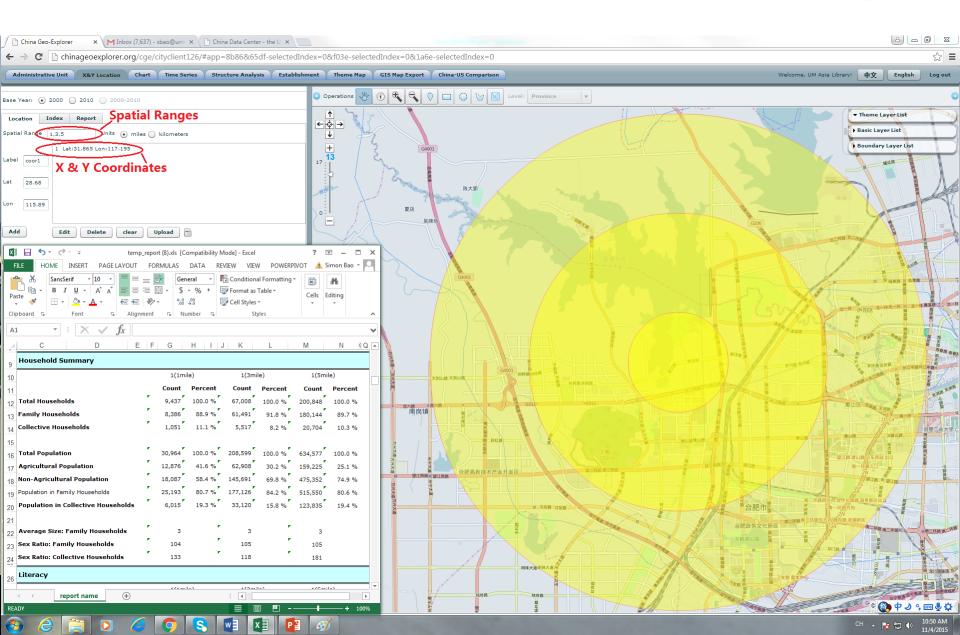
#### > Cover more than 13 million establishments



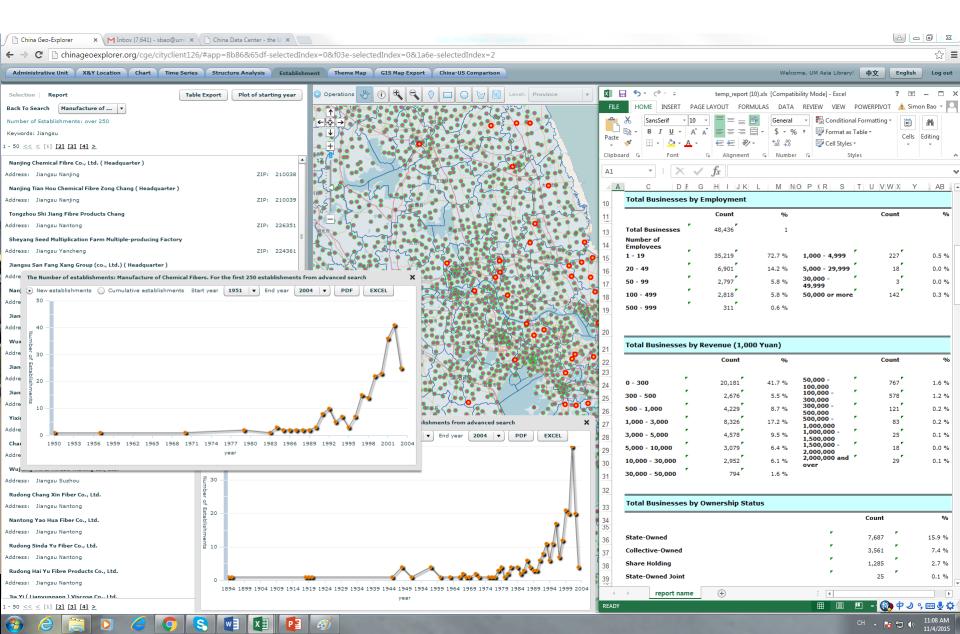
#### Selection by Metropolitan, County or Place



#### Selection by X&Y Location and Spatial Ranges

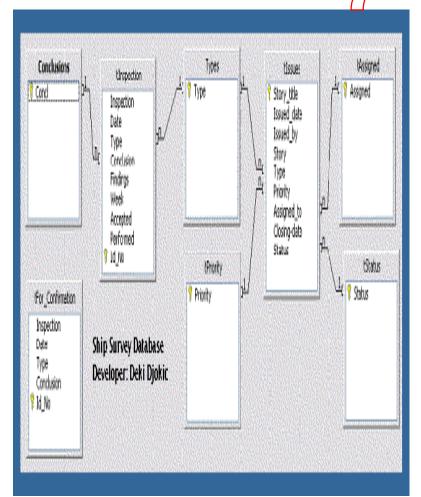


### **Selection by Business Establishments**



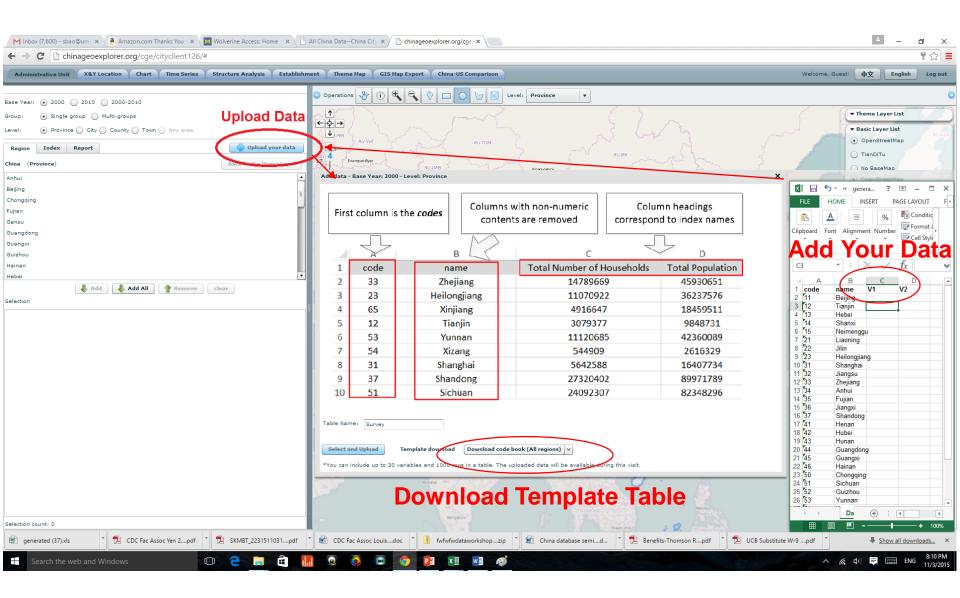
## 2. Integrating Survey Data with Local Amenity Data in US Geo-Explorer

**Survey Data** 

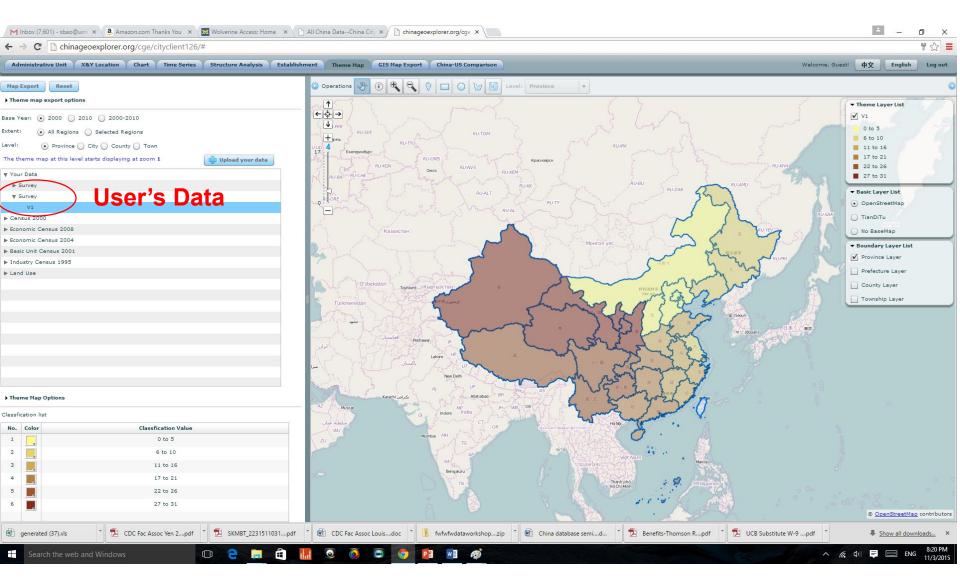




#### **Upload Survey Data to US Geo-Explorer**



## 3. Mapping Survey Data in UGE



# **Future Directions**

- Spatial Explorer for Survey Data Analysis
- Pre-survey sampling
- Pre-survey analysis
- Integration of survey and big data with baseline data
- Post-survey projection
- Post-survey analysis
- Prediction and simulation

# http://china-data-online.com

# Contact

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