

Workshop on
Advancing Urban Sustainability in
China and the United States

Chinese Urban Development in 14th Five Year Plan and Beyond :Issues & Implications

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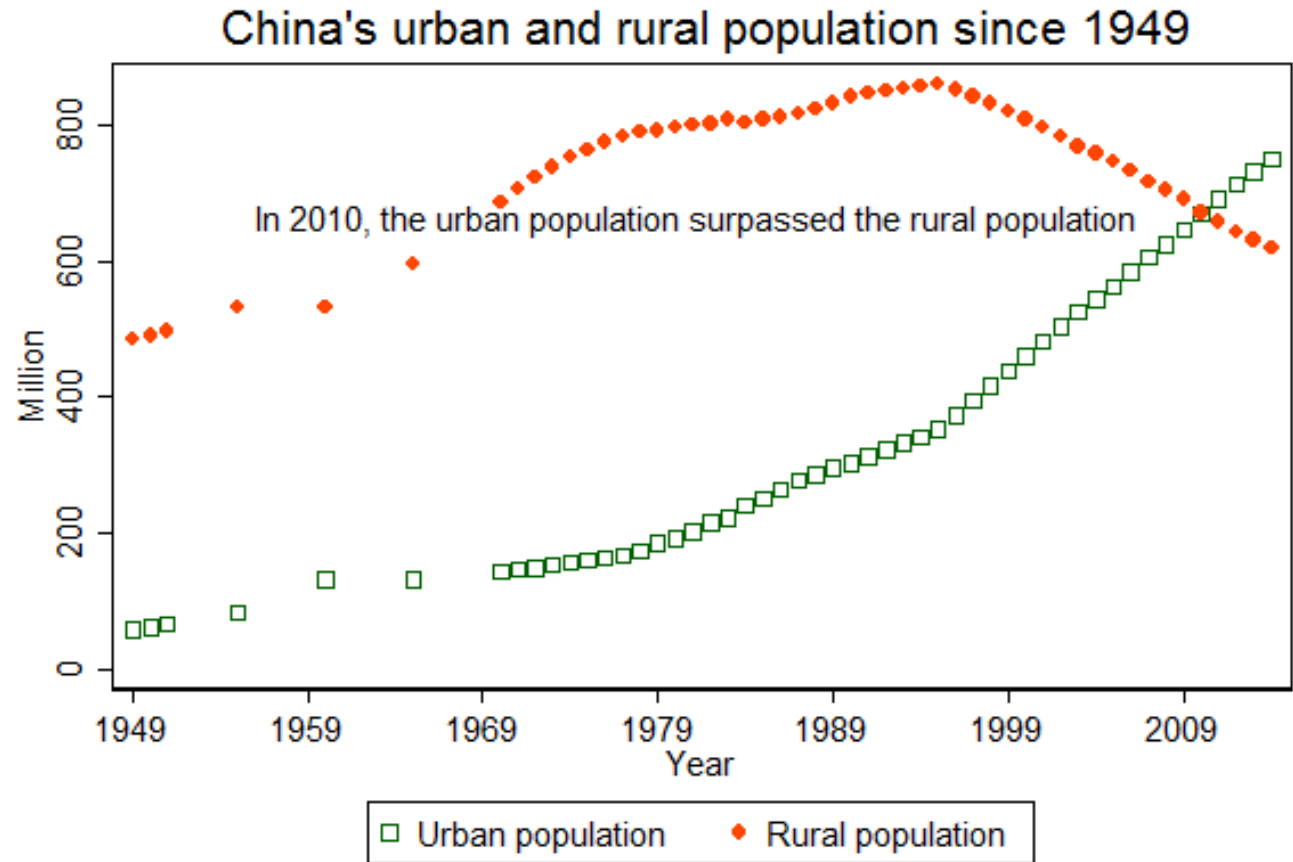
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Urbanization Status Quo in China

- ▶ Fast growth in the past 40 years:
 - ▶ 11% In 1949; 18% in 1978; 50% in 2010; 59.6% in 2018
 - ▶ Annual Growth rate 3-5% during 1980-2010
 - ▶ Up to 300 million floating population staying in cities without *hukou*, i.e. resident registration

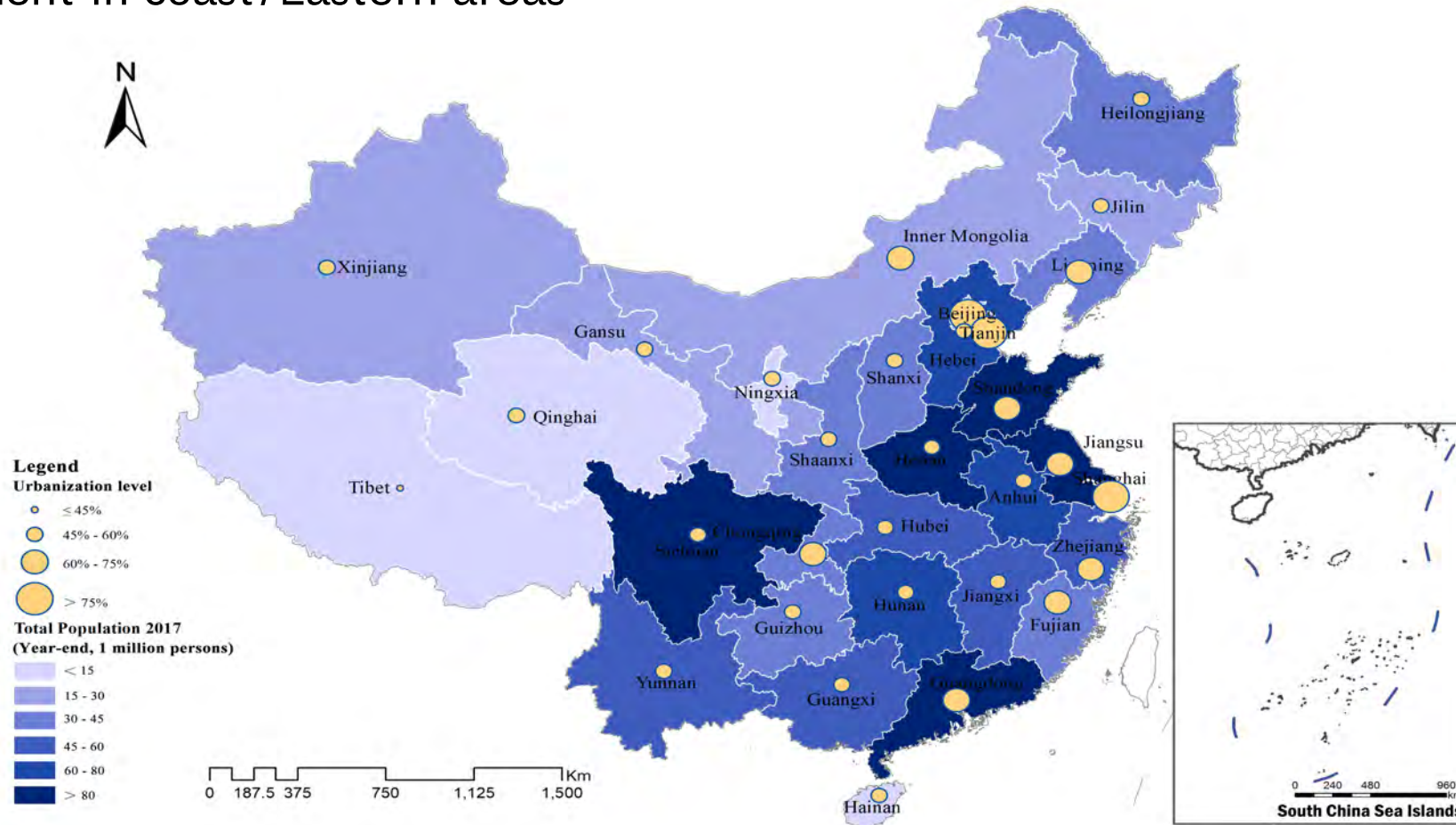


Data source: 2015 China Statistical Yearbook

Urbanization Status Quo in China

► Unbalanced distribution by Province

Preeminent in coast/Eastern areas



Urbanization Status Quo in China

- ▶ 19 identified city clusters
- Play dominated role

items	2012 (%)	2016 (%)
GDP	93.9	90.5
Population	82.6	82.8
Built-up land	88.8	89.8

% of China's Total



Urbanization Challenges

- ▶ Enlarged Urban-Rural disparity
- ▶ Surplus productivities in traditional manufacturing
- ▶ Heavier regional environment pressure
- ▶ Traffic congestion in big cities
- ▶ Land use inefficiency
- ▶ Living cost is going higher, particular for socially vulnerable groups
- ▶ Urban financing is facing new challenges
- ▶ Ineffective regional governance

Under transition (New Urbanization in 2013 & 13th Five Year Plan)

- ▶ China experiencing dramatic socio-economic change, driven internally & externally
 - ▶ Magnified in urban areas which account for 60% of population & >80% of economy
 - ▶ China pursuing a better life for its people (*mei hao sheng huo*) under the ecological civilization framework
- ▶ This presentation based on mega-trends affecting China's urban system & city building
 - ▶ Demography
 - ▶ Consumption preference
 - ▶ Climate change
 - ▶ Rural context
 - ▶ Evolving urban system

1 DEMOGRAPHY

- ▶ Rural-urban transition in late stages
 - ▶ Lewis tipping point close
- ▶ Rural population been declining but magnitude of decline will slow
- ▶ *By 2045-2050 aggregate absolute urban population will decline, urbanization level about 80%*
- ▶ Population decline rates will be highly variable across cities
 - ▶ 30% of cities declining already, especially in north east & natural resource areas
- ▶ Urban population aging rapidly but high variance, from Shenyang to Shenzhen

2020-2025	81.5 Million
2025-2030	61.3 Million
2030-2035	41.8 Million
2035-2040	23.8 Million
2040-2045	8.6 Million
2045-2050	-0.9 Million

Figure 1: Forecast Urban Population Increments China: 2020-2050

Source: UN Population Division, 2018

Year	Population (Unit: 1,000)	Change (Unit: 1,000)
2020	549,472	
2025	482,282	-67,190
2030	423,334	-58,948
2035	373,890	-49,444
2040	334,009	-39,881
2045	302,324	-31,685
2050	272,509	-29,815

Figure 2: Forecast Rural Population & Change by 5 Year Increment

Source: Urban Population at Mid-Year by Country: 1950-2050, UN Population Division, 2018

2. CHANGING SOCIAL / CONSUMPTION PREFERENCES

- ▶ Household preferences expressed through housing market, migration behavior, labor market
- ▶ Amenity migration to places such as Qingdao, Kunming, Shanghai, Sanya, Xiamen, Hangzhou, e.g., US: 40% of population shifted
 - ▶ Climate is dominant driver, but scenery, environmental quality, etc.
- ▶ Quest for quality: construction quality, community design, walkability, access to facilities, types & spacing of buildings, amenity, 3rd spaces
- ▶ Millennials: increasingly desire urbanity, 24/7 environments

3. ECOLOGICAL CIVILIZATION / CLIMATE CHANGE

- ▶ cities key to implementing China's shift towards ecological civilization
 - ▶ programs such as eco-cities, low carbon pilot & sponge cities
- ▶ exposure to intensified flooding, heat waves, water shortages, agricultural production in hinterlands magnified by high concentration of population & assets in urban areas
- ▶ impacts could include coastal flooding, changed amenity migration patterns, changing urban hinterland agricultural patterns

4. CHANGING RURAL CONTEXT

- ▶ urban areas cover <2% of surface area
- ▶ most of China's rural land area depopulating (like North America)
- ▶ Rural vitalization likely will speed up depopulation
- ▶ Changing food consumption (e.g. safer & fresher food) will change agricultural patterns, enhancing urban, peri-urban gardening agriculture
- ▶ Urban hinterland demand for eco services, recreation, second homes

5. CHINA'S EVOLVING URBAN SYSTEM

- ▶ East coast dominance increasing both in GDP & demographic terms
- ▶ Policy attempt to re-orient the focus of demographic growth to the interior have had limited success given the overwhelming momentum & advantages embedded in the cosmopolitan east coast driven by the three mega urban clusters: Greater Bay Area, Yangtze River Delta and Beijing-Tianjin-Hebei urban clusters
- ▶ Fiscal deficits lower on coast than central & west; dependency on public investment higher
 - ▶ as national GDP growth slows, less leeway for inefficiencies in urban system

5. China's EVOLVING URBAN SYSTEM (2): URBAN CLUSTERS

- ▶ Clusters contain full spectrum of settlements & majority of urban population
- ▶ Only 6 “real” in terms of connectiveness: PRD/GBA, Yangtze, West straits, Beijing-Tianjin -Hebei, Shandong Peninsula, South-central Liaoning
- ▶ Very high differentials in performance & challenges, e.g.
 - ▶ By 2035, Yangtze will contain 5th (Shanghai) & 18th (Suzhou) highest GDP cities
 - ▶ Harbin-Changchun Cluster (rust belt) lost 1.3 million people 2012-2016
- ▶ No institutional mechanisms that speak for overall optimal cluster development

IMPLICATIONS OF MEGA-TRENDS: ISSUE AREAS & IMPLICATIONS

IMPLICATIONS 1: URBAN POPULATION DECLINE

- ▶ Virtually all Chinese cities will demographically decline between 2020 and 2065.
- ▶ Improve demographic forecasting & knowledge of demographic dynamics
- ▶ Address urban labor force shrinkage by extending the labor force participation & productivity of older demographic cohorts through public health & vocational retraining measures
- ▶ Plan and invest in urban infrastructure based on long-term population forecasts, not forecast peak populations to avoid “stranded” overbuilt infrastructure systems.
- ▶ Regulate urban physical growth through tools such as red-lining, agricultural land preservation, urban growth and/or service boundaries, to avoid concretized patchy development when urban population growth stagnates, & to protect land for agricultural, eco-system, and recreational uses

IMPLICATIONS 2: SHAPING A MORE RATIONAL URBAN SYSTEM

- ▶ China lacks fully integrated urban system, cluster & metropolitan labor markets which should be one of the prime benefits of cluster development
 - ▶ Much more important in innovation economy than “factory of world economy”
 - ▶ Agglomerating & unleashing talent key to innovation

IMPLICATIONS 2: SHAPING A MORE RATIONAL URBAN SYSTEM

- ▶ *Social benefits*, particularly pensions and health insurance, should be nationally consistent & geographically portable. Otherwise, highly localized social benefits deter migration, contributing to lack of integrated national and urban cluster labor markets
- ▶ Regional development policy in PRC is based on *place prosperity rather than people*. But Often much higher returns on public investment could be realized if the focus were on people, e.g., their education and health, which would give them the option of leaving, & thus facilitate the economic restructuring of these less dynamic cities and regions

IMPLICATIONS 3: URBAN CLUSTER ROLES

- ▶ Cluster institutional & policy frameworks should vary by their stage of development
- ▶ In all cases the emphasis should be on broad issues and policies such as regional-scale land use (particularly the built-up, arable, protected / environmental services land distinctions), cluster scale trunk infrastructure, and structuring social programs to eventually operate cross-cluster

IMPLICATIONS 4: INTERNAL URBAN CLUSTER DEVELOPMENT

- ▶ Within urban clusters, development of metropolitan and local areas should be facilitated based on their comparative & competitive advantages
- ▶ Regional connectivity infrastructure, adjusted for terrain, should be “necklace” form, that is, based on corridors containing the latest transportation modes / technologies, connecting key nodes, with higher density development around stations.
- ▶ For each cluster, an institution needs to be mandated to operate in the interests of the cluster as a whole for planning & development, including borrowing capacity
- ▶ Given the fast-changing development context, & the 15 to 20 years timeline needed to restructure urban systems, a 2040 time horizon for perspective cluster plans is more realistic.

IMPLICATIONS 5: SHAPING FUTURE METROPOLITAN STRUCTURE

- ▶ China's new urban economy is becoming more innovation & consumption driven. Chinese planners need to ask: *“What new types of urban modules, and where, are needed to support China's economic restructuring”*. This would result in a better alignment between city building & rapid economic restructuring / higher productivity.
- ▶ Less land & floor space is needed for offices & manufacturing per unit of output / employee
- ▶ Future cities will be primarily “living platforms”, characterized by mixed land use, a higher proportion of floor space in residential, lifestyle services, organic development
- ▶ Greater diversity in housing types will be demanded

IMPLICATIONS 6: LAND EFFICIENCY

- ▶ Industrial land should be priced closer to (or at) market rates rather than be highly subsidized for local economic development & taxation reasons
- ▶ Densities should be highly variable for land use efficiency reasons
- ▶ TOD development should be encouraged through higher FARs near stations by changing planning regulations to encourage mixed development (horizontal and vertical) & use of PPP modalities emphasizing outcomes. TOD development will result in much higher returns to public investment in urban transit.

IMPLICATIONS 7: PIVOTING TO URBAN QUALITY

- ▶ China has been successful over the last 4 decades in building urban road & rail infrastructure + enough housing
- ▶ now emphasis needs to be on quality
- ▶ China should leapfrog to a new urban paradigm: *the new Chinese city*
- ▶ Question “tower in the park” design
- ▶ Adopt a stepwise urban renewal paradigm for creating a more socially inclusive community.

IMPLICATIONS 8: IMPROVING URBAN QUALITY

- ▶ Build more people friendly mid-rise residential construction, with higher ground coverage and compactness.
- ▶ Organic development of communities with more retrofitting, infilling, and preservation of cultural heritage and vegetation, etc., is needed as population growth declines and the demand for urban quality increases.
- ▶ Fencing and gating of large communities should be administratively discourage
- ▶ Finer road grids are needed with narrower, more human scale streets, incorporating walking and bike lanes, and easily crossable.
- ▶ Cities should be organic & flexible. E.g. parking structures should be adaptable to other uses such as temporary flood storage as part of sponge city design

IMPLICATIONS 9: URBAN FISCAL SUSTAINABILITY

- ▶ The emphasis should turn to soft infrastructure investment such as portable pensions and health care insurance, improving community livability and urban services delivery, environmental quality (e.g., circular economy), housing quality
- ▶ Current funding mechanisms for China's cities are unsustainable, New sustainable mechanisms, such as property taxes, need to be formulated and implemented.
- ▶ New Fiscal Institutions are needed, e.g., Performance Oriented Local Government Finance Vehicles, Special Districts
- ▶ To encourage cross-jurisdictional integrated investment in urban clusters, new mechanisms, which could benefit from international best practice, such as national matching grants and special districts, should be considered.

CALL FOR RESEARCH ON:

- ▶ BRI & CUMMUNITY SHARED FUTURE MANKIND
- ▶ ECO-CIVILIZATION & NEW DEVELOPMENT CONCEPTS
 - ▶ Innovation, Coordination, Green, open & share
 - ▶ Spatial planning
- ▶ LEGILIZTION & MODERN NATIONAL GOVERNANCE
 - ▶ Institutional reform
- ▶ NEW URBANIZATION APPROACH
 - ▶ Urban clusters
 - ▶ Big data, Smart city & Eco-city
 - ▶ Socially inclusive community building & culture embedded place making
- ▶ RURAL REVITALIZATION
 - ▶ Precision poverty reduction
 - ▶ Heritage-based tourism



Thank You