

Urban Economics

Introduction

April 8, 2026

Minoru Osawa

Institute of Economic Research

Course Overview

- **Lecture:**

- Wednesdays 8:45–10:15, in KIER 105

- **Instructor:**

- Minoru Osawa (osawa@kier.kyoto-u.ac.jp)

- **Grades:**

- 30% Occasional problem sets to be posted on LMS
- 70% Final exam: Details TBA

- **Other:**

- Asking questions during the class is strongly encouraged.
- Latest announcements, including class cancellations: LMS
- Lecture slides: My personal website (www.minoruosawa.com/teaching/)

Course References

- **Main reference:**

- Fujita, M. (1989). *Urban Economic Theory*. Cambridge.

- **Additional sources:**

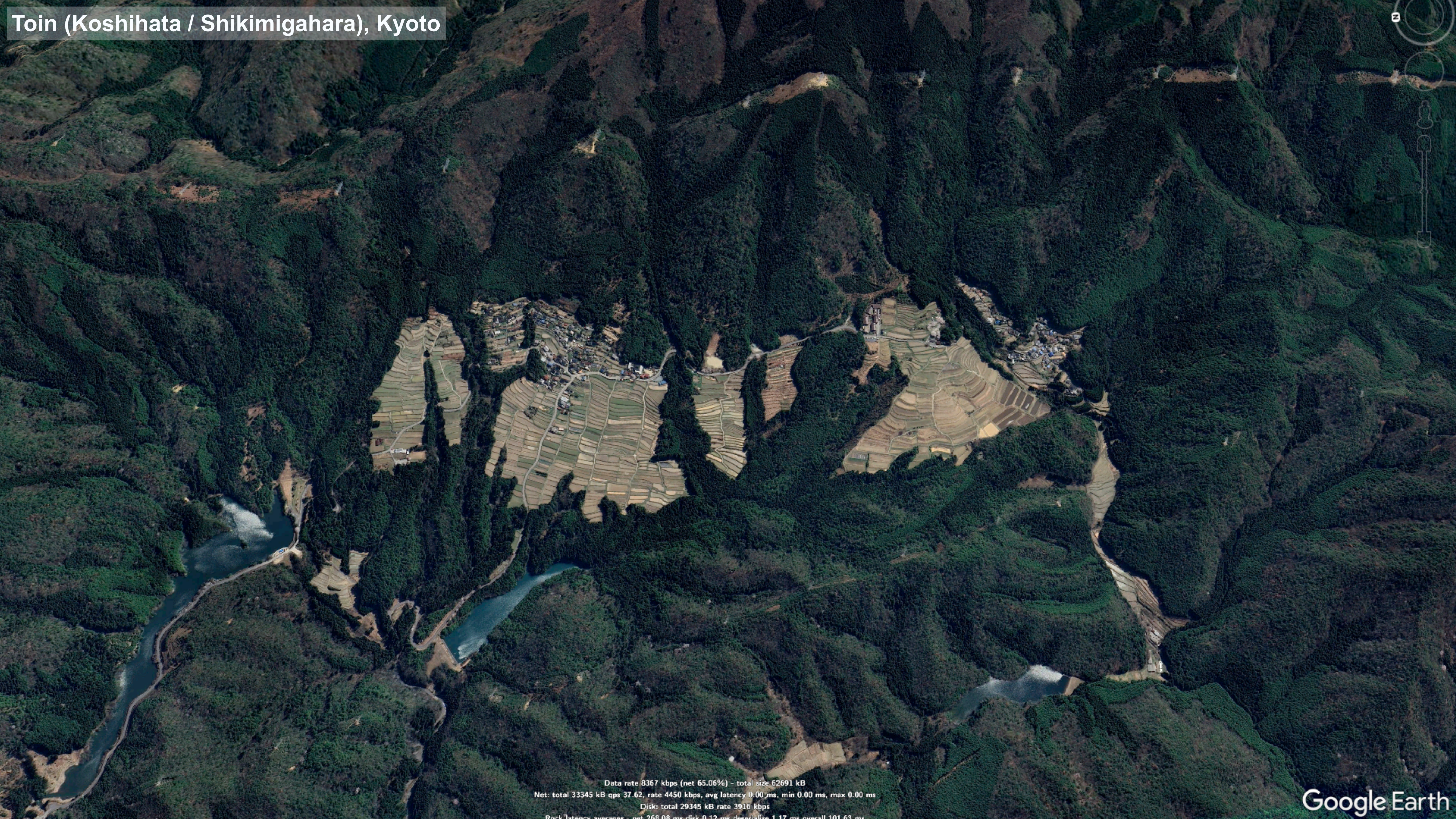
- Brückner, J. K. (2011). *Lectures on Urban Economics*. MIT.
- Fujita and Thisse (2002). *Economics of Agglomeration*. Cambridge.
- Kanemoto and Fujiwara (2016). *Urban Economics*. Toyo Keizai. (in Ja)
- Duranton and Puga (2015). “Urban land use.” In *Handbook of Regional and Urban Economics* (Vol. 5, pp. 467-560). Elsevier.
- Lecture Notes by A. Yamagishi (Hitotsubashi U.): [Applied Microeconomics B](#)
- Lecture Notes by G. M. Ahlfeldt (Humboldt U.): [Urban Economics](#)



Data rate 873 kbps (net 74.05%) - total size 6521 kB
Net: total 4161 kB qps 5.87, rate 557 kbps, avg latency 0.00 ms, min 0.00 ms, max 0.00 ms
Disk: total 2360 kB rate 315 kbps
Peak latency: average: 0.00 ms, disk: 0.00 ms, download: 0.00 ms, upload: 0.00 ms

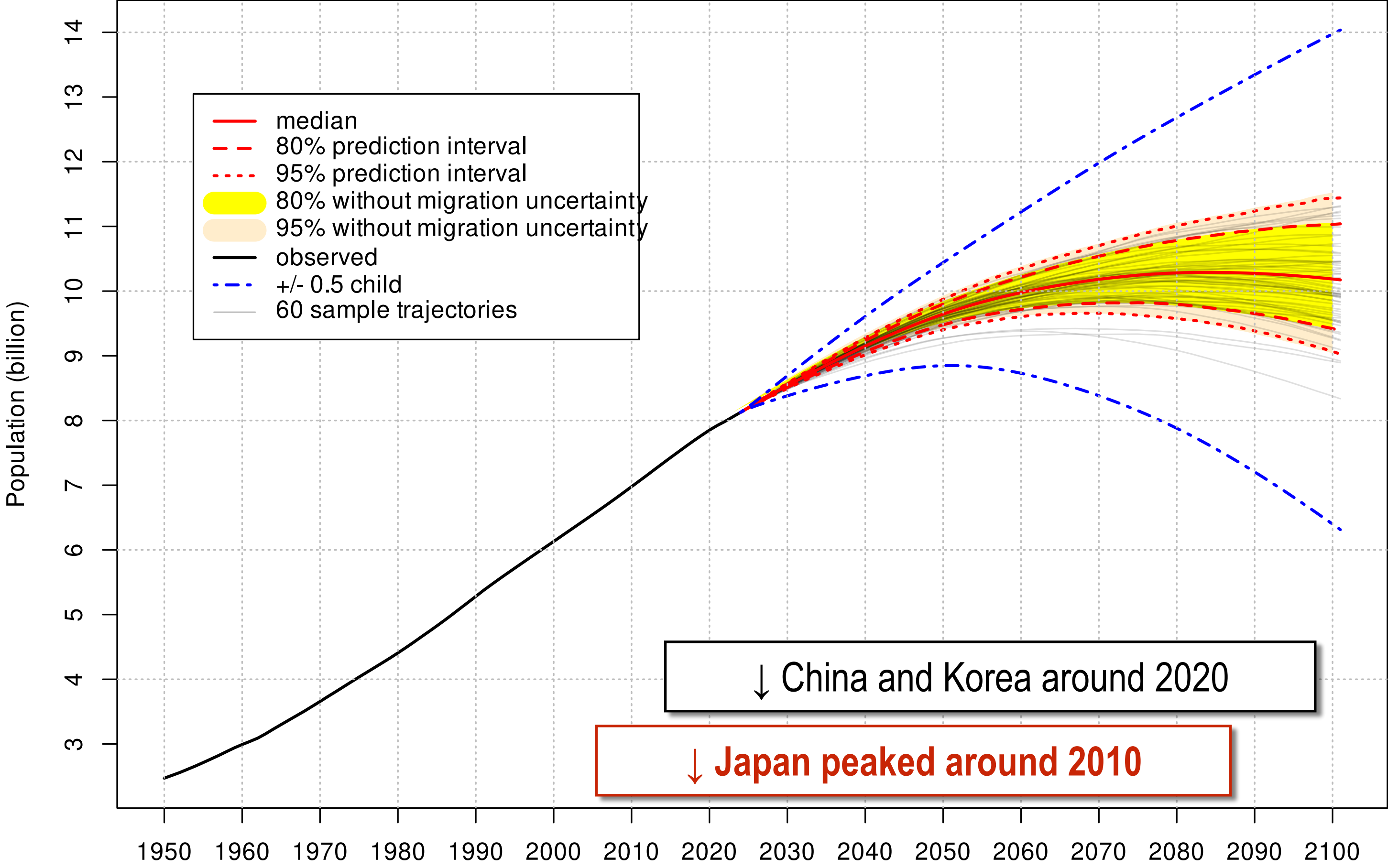


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Peak latency: net 266.62 ms disk 0.12 ms downloading 1.16 ms overall 96.98 ms

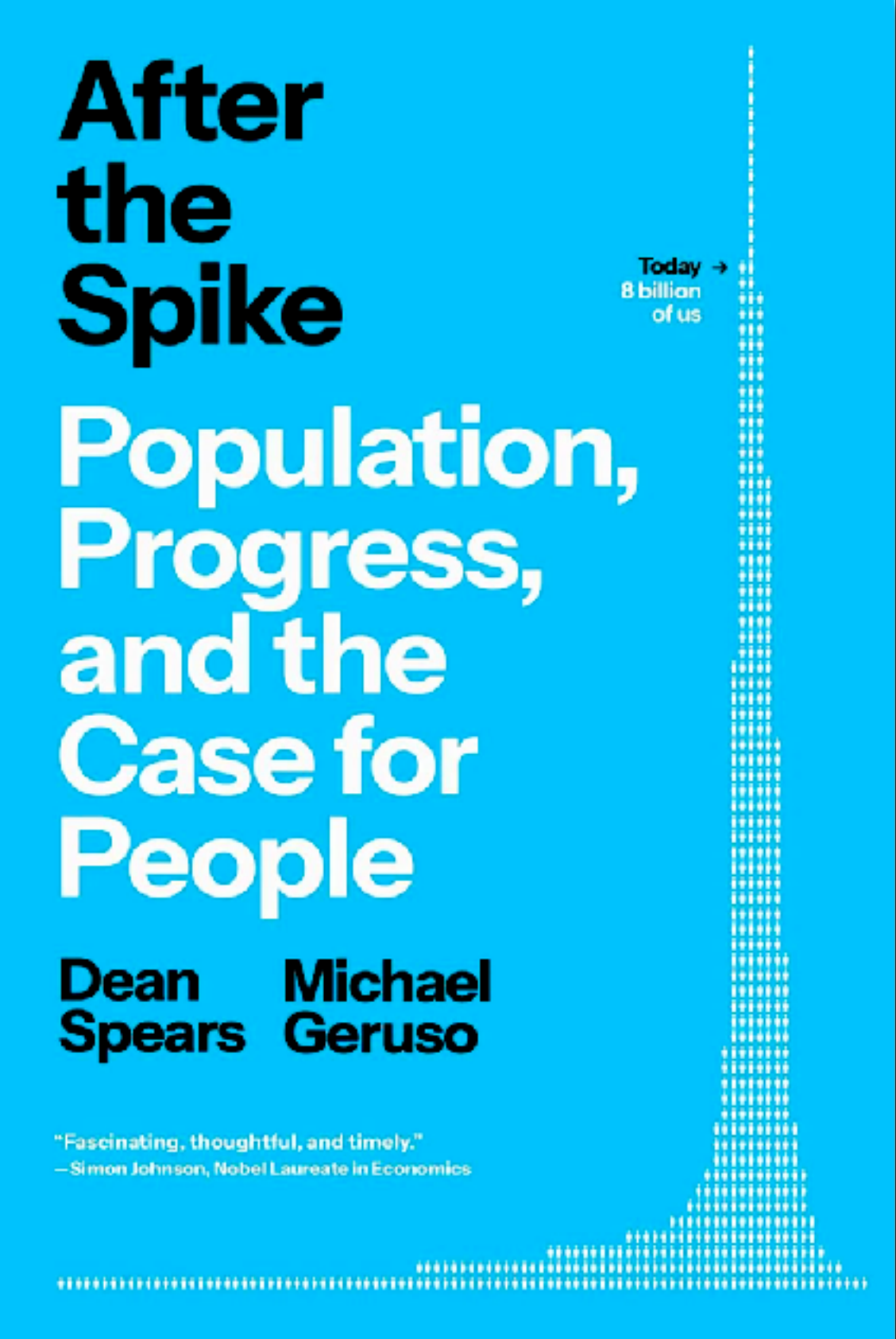


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Disk: total 29345 kB rate 3916 kbps
Back latency averages: net 268.08 ms disk 0.12 ms deserialize 1.17 ms overall 101.63 ms

World: Total Population



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 United Nations, DESA, Population Division. *World Population Prospects 2024*. <http://population.un.org/wpp/>



Spears and Geruso (2025)

「消滅可能性自治体」マップ

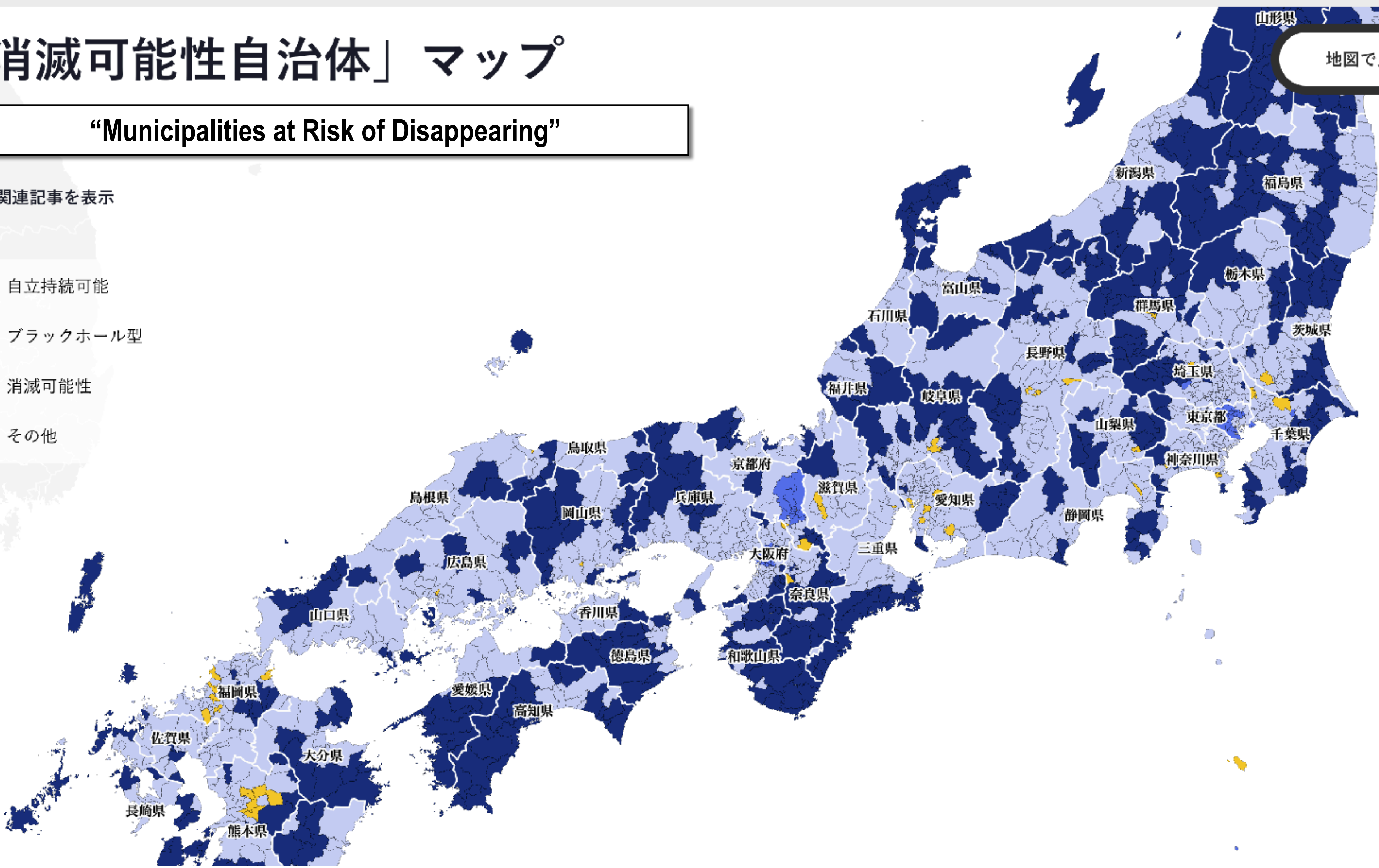
“Municipalities at Risk of Disappearing”

地図で見る リストで見る ⓘ 概要

+
-

関連記事を表示

- 自立持続可能
- ブラックホール型
- 消滅可能性
- その他



<https://www.asahi.com/special/population2024/>

Caveats: 近藤 (2024) 消滅可能性自治体の再検証：過去40年間のデータは何を語るのか？ https://www.rieti.go.jp/jp/special/special_report/208.html

50 km

「消滅可能性自治体」マップ

地図で見る

リストで見る

i 概要

“Municipalities at Risk of Disappearing”

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京都府 京都市

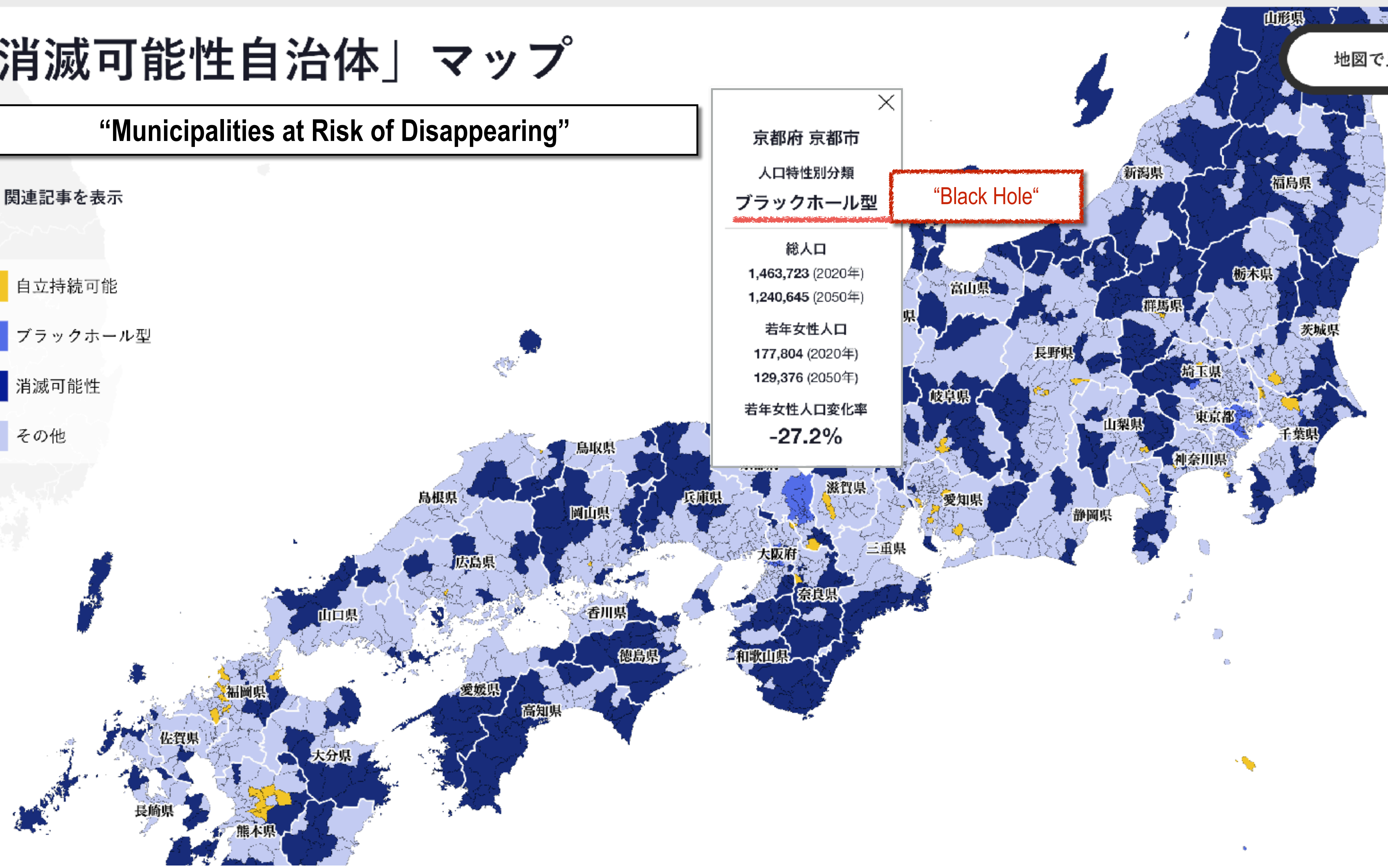
人口特性別分類
ブラックホール型

総人口
1,463,723 (2020年)
1,240,645 (2050年)

若年女性人口
177,804 (2020年)
129,376 (2050年)

若年女性人口変化率
-27.2%

“Black Hole”

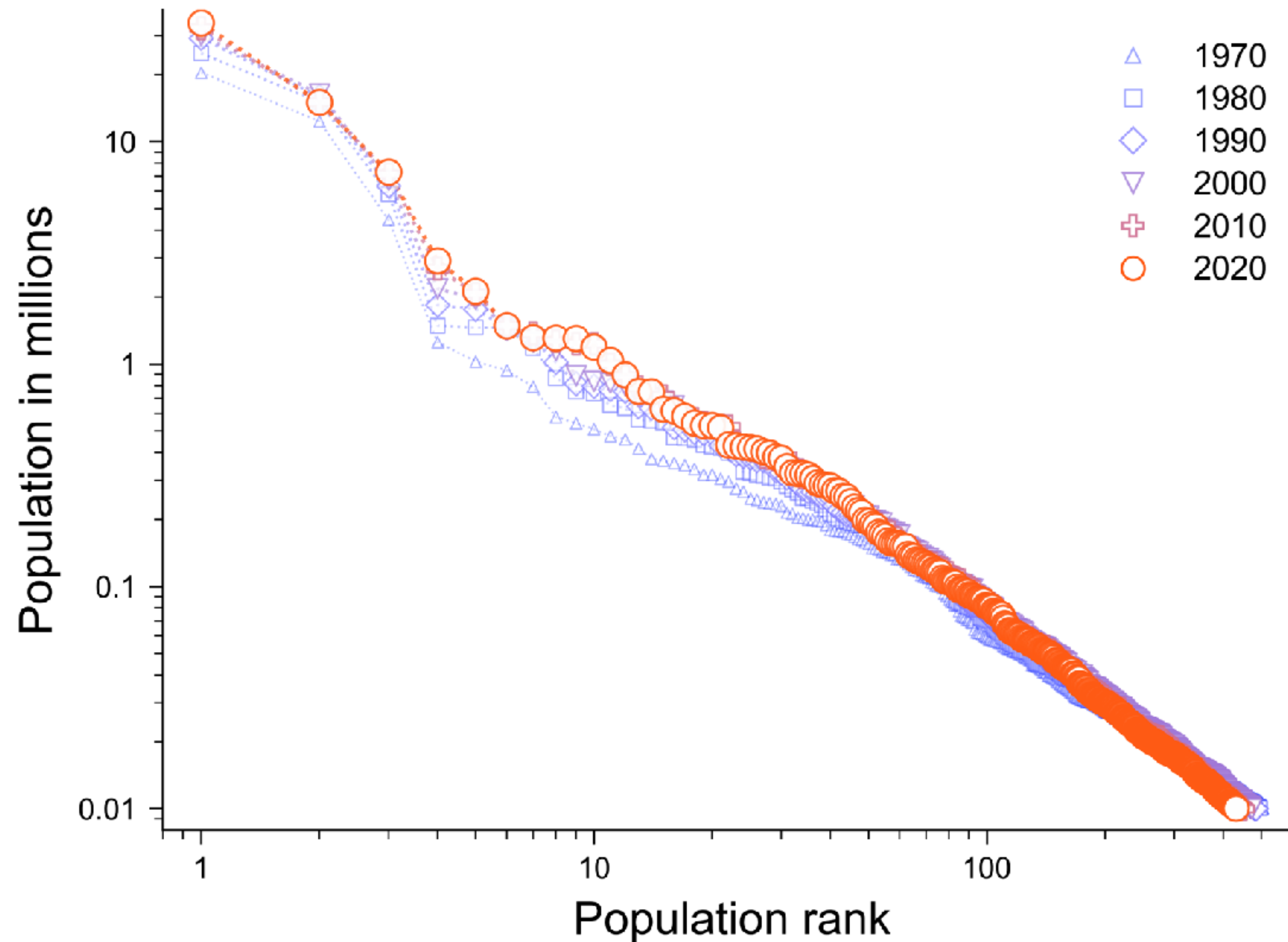


<https://www.asahi.com/special/population2024/>

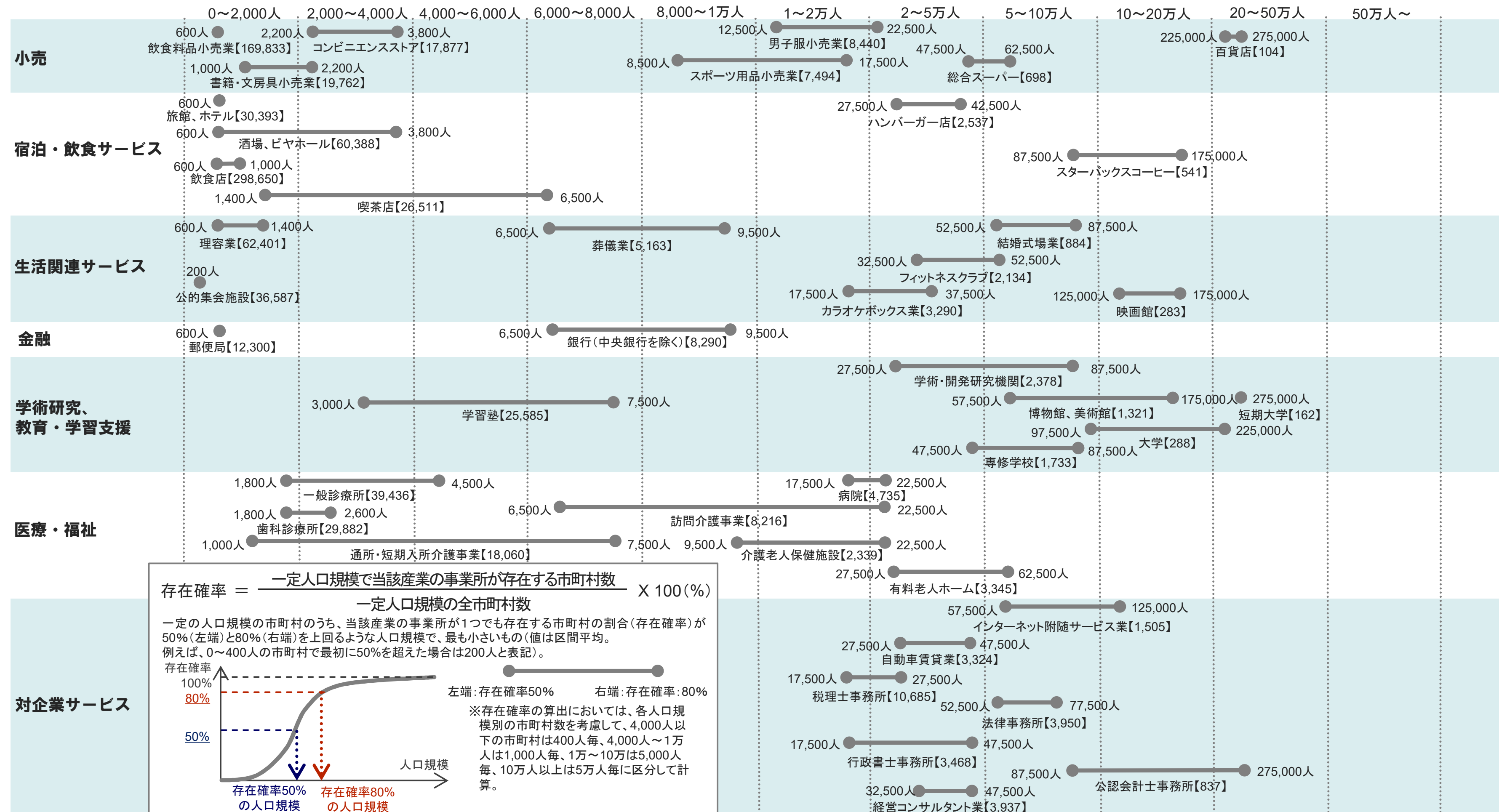
Caveats: 近藤 (2024) 消滅可能性自治体の再検証：過去40年間のデータは何を語るのか？ https://www.rieti.go.jp/jp/special/special_report/208.html

50 km

Evolution of cities: Japan 1970–2020



○ 市町村別に人口規模と生活サービス産業等の立地状況にもとづき、産業の存在確率が一定以上になる市町村の人口規模を整理すると、下図のとおり。
 ○ 多くの市町村が、人口減少に伴い現状では立地確率が低くなっている人口規模に移行していくことが想定され、そういった地域では産業の撤退等により、これまで通りの生活サービスの維持が困難になっていくことが懸念される。

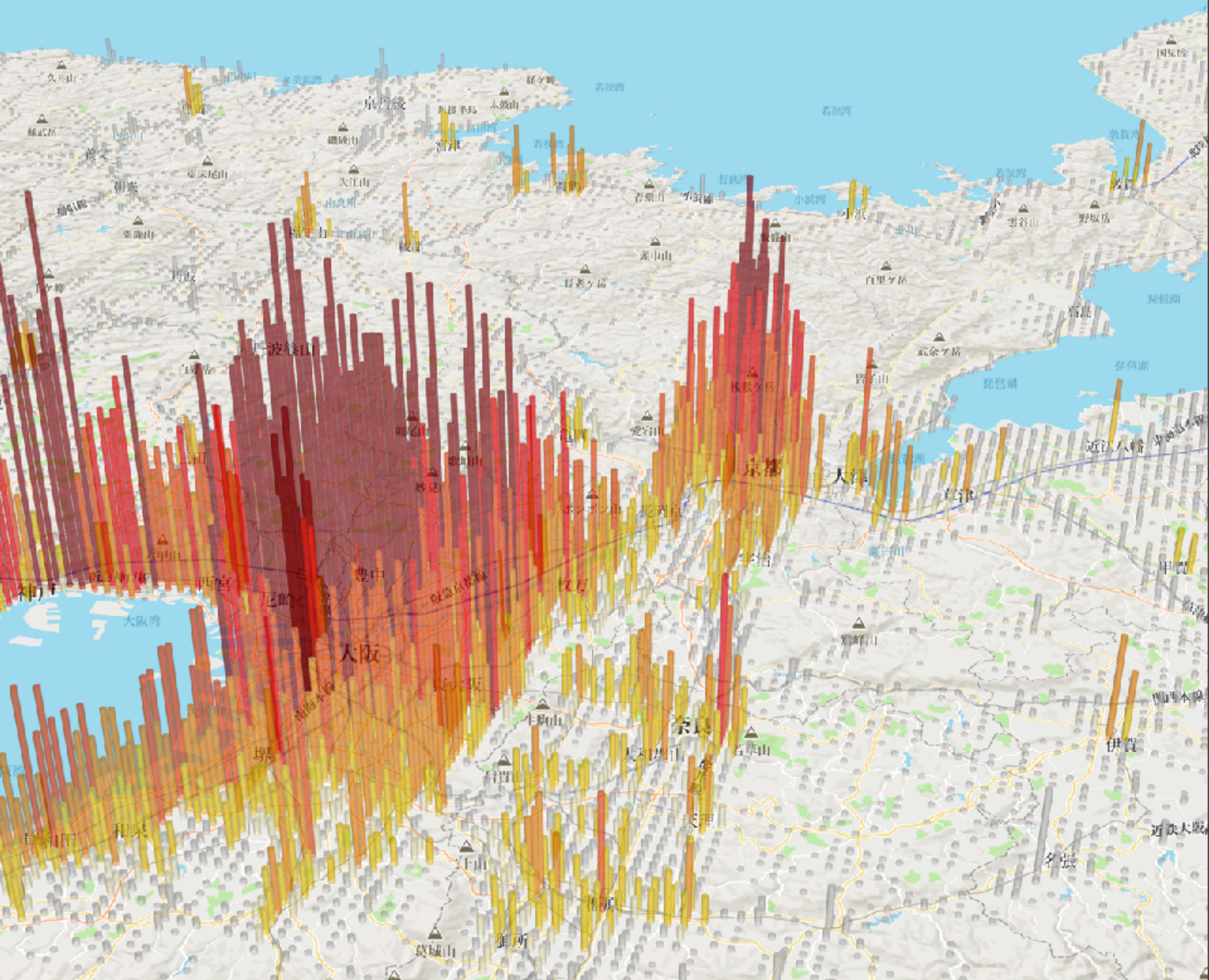


(参考) 2015年と2050年における人口規模別の市町村数 (三大都市圏*を除く) ※三大都市圏: 埼玉県、千葉県、東京都、神奈川県、岐阜県、愛知県、三重県、京都府、大阪府、兵庫県、奈良県

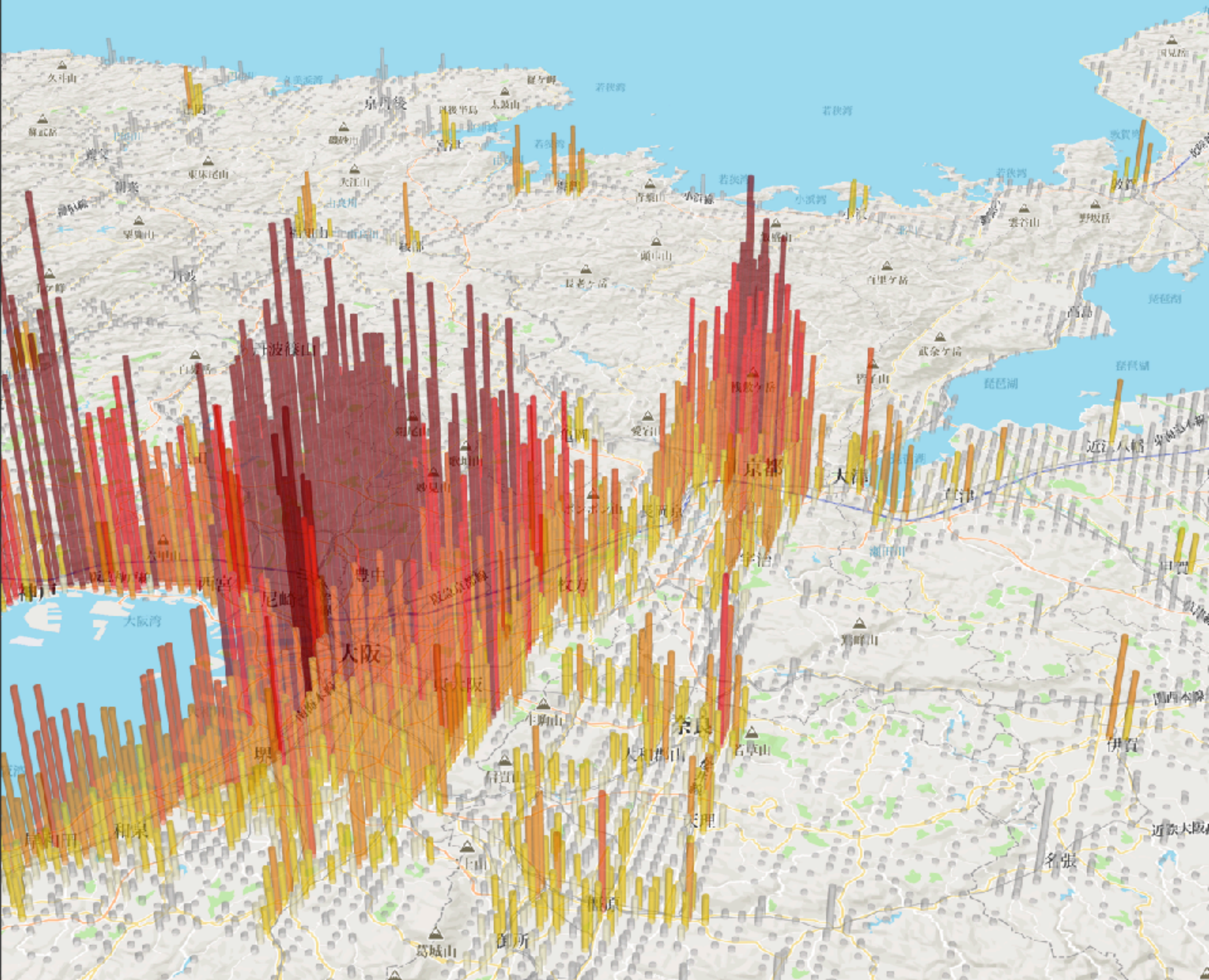
市町村数	上: 2015年	75	108	107	83	71	224	303	156	75	40	13
	下: 2050年	208	173	101	84	69	194	238	101	47	30	10

(注1) 2050年の市町村別人口は、国土交通省国土政策局推計値
 (注2) 人口規模別の市町村数は、平成27(2015)年10月1日現在の三大都市圏を除く1,255市町村を基準に分類
 (出典) 総務省「平成26年経済センサス-基礎調査」、経済産業省「平成26年商業統計」、「全国学校総覧2016」、「国土数値情報」、「スターバックスホームページ」もとに数値を算出のうえ、国土交通省国土政策局作成。

1970

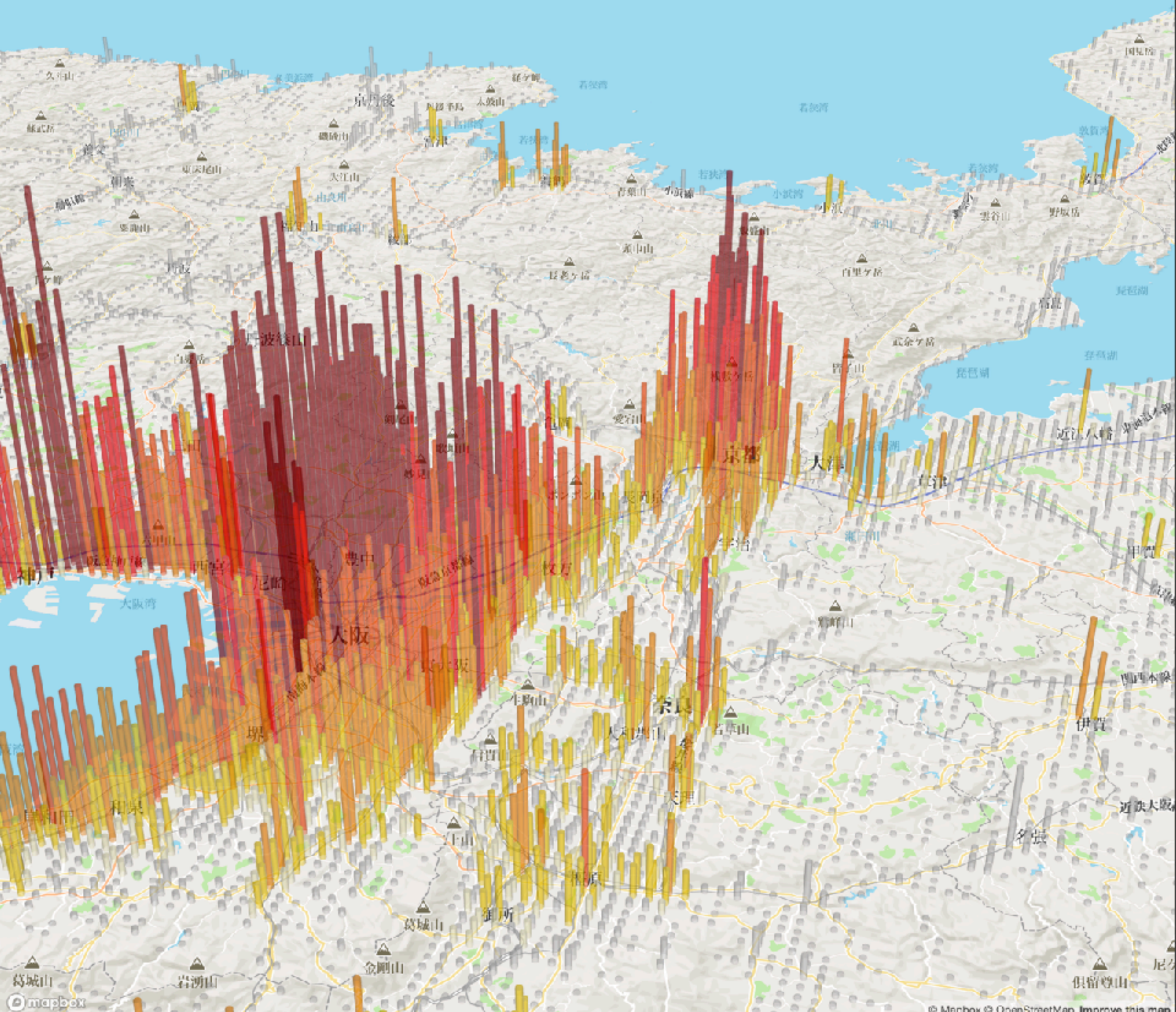


1970

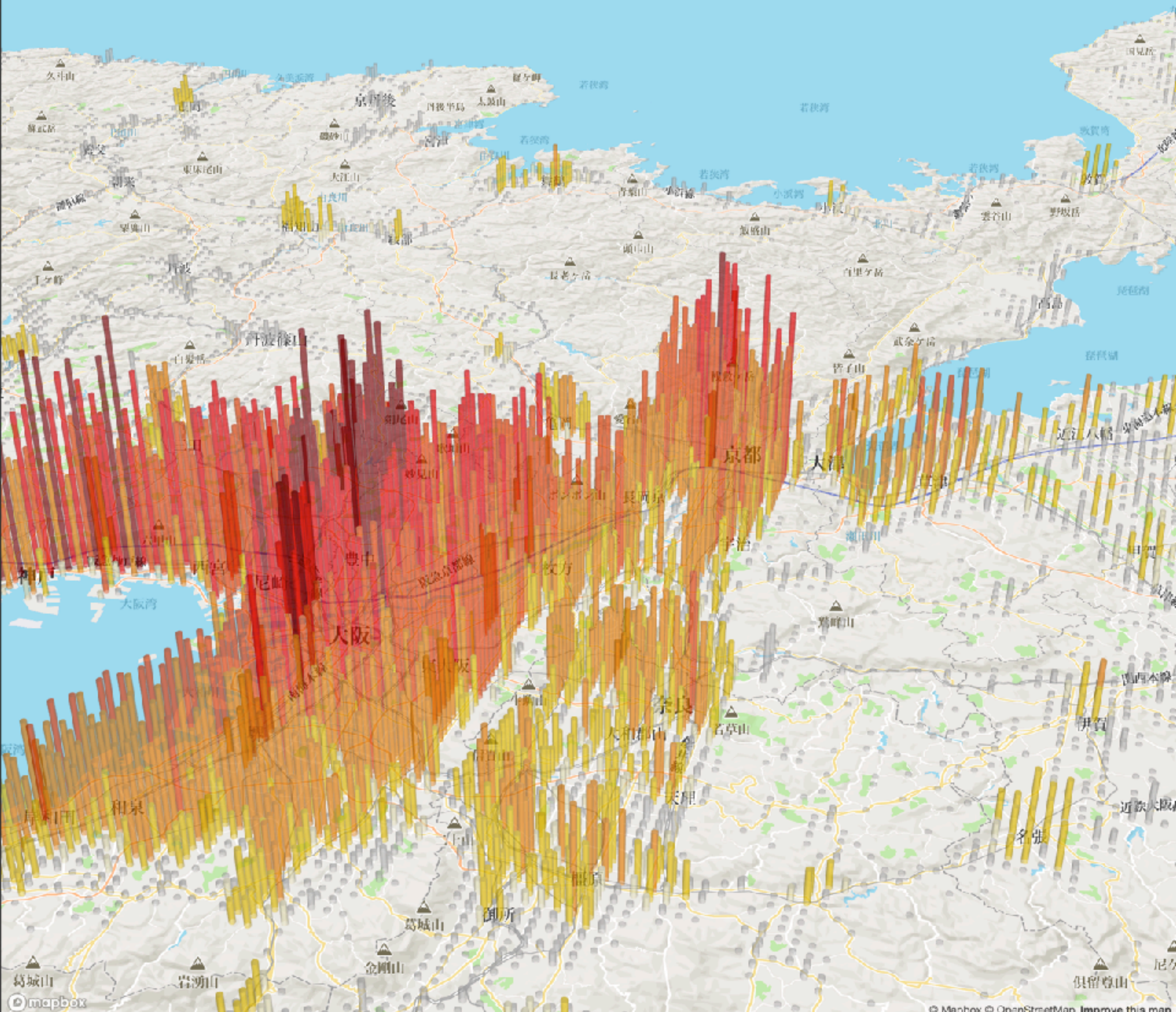


<https://mori-tomoya.github.io/pop-sync-map/>

1970

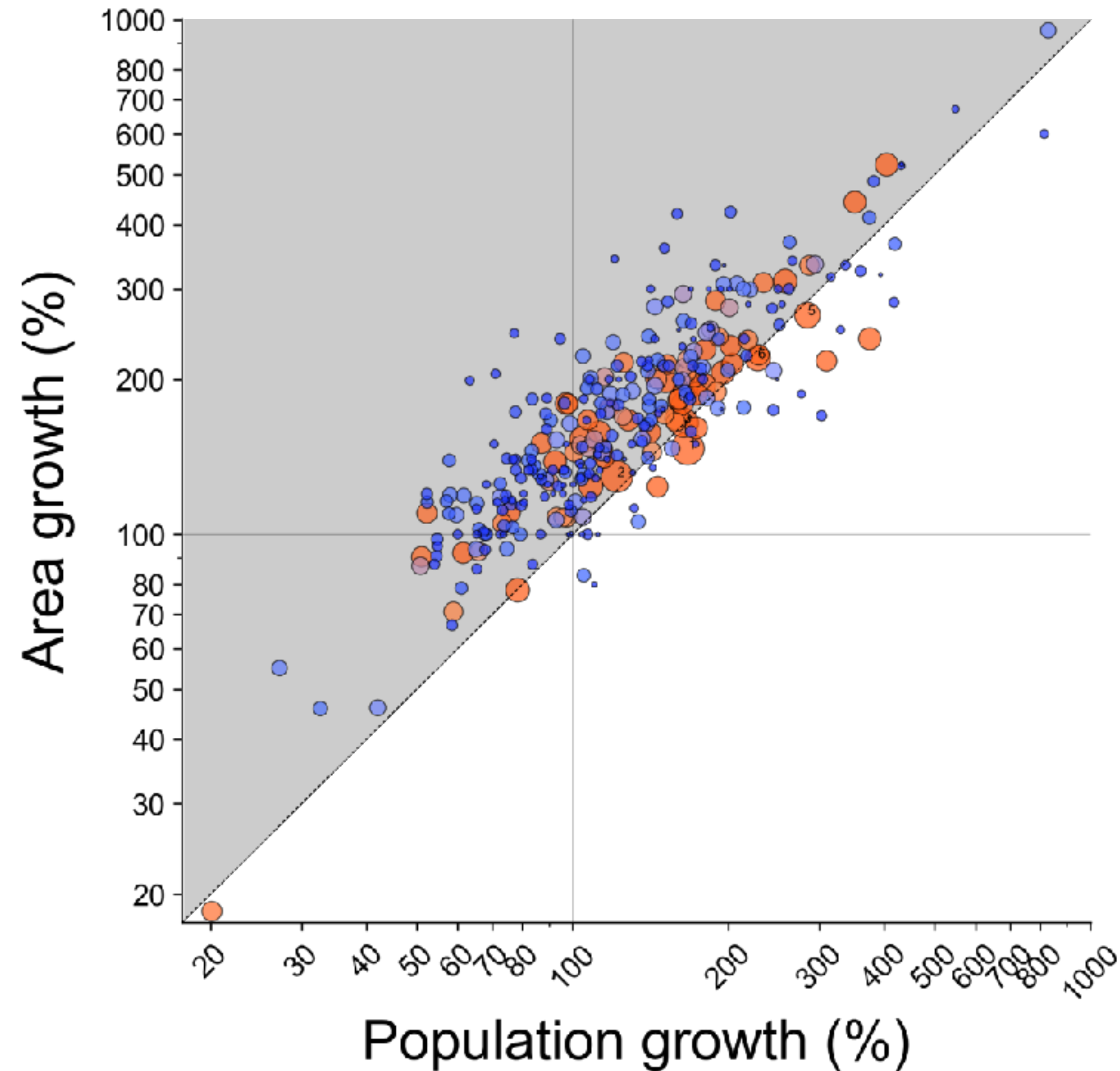


2020

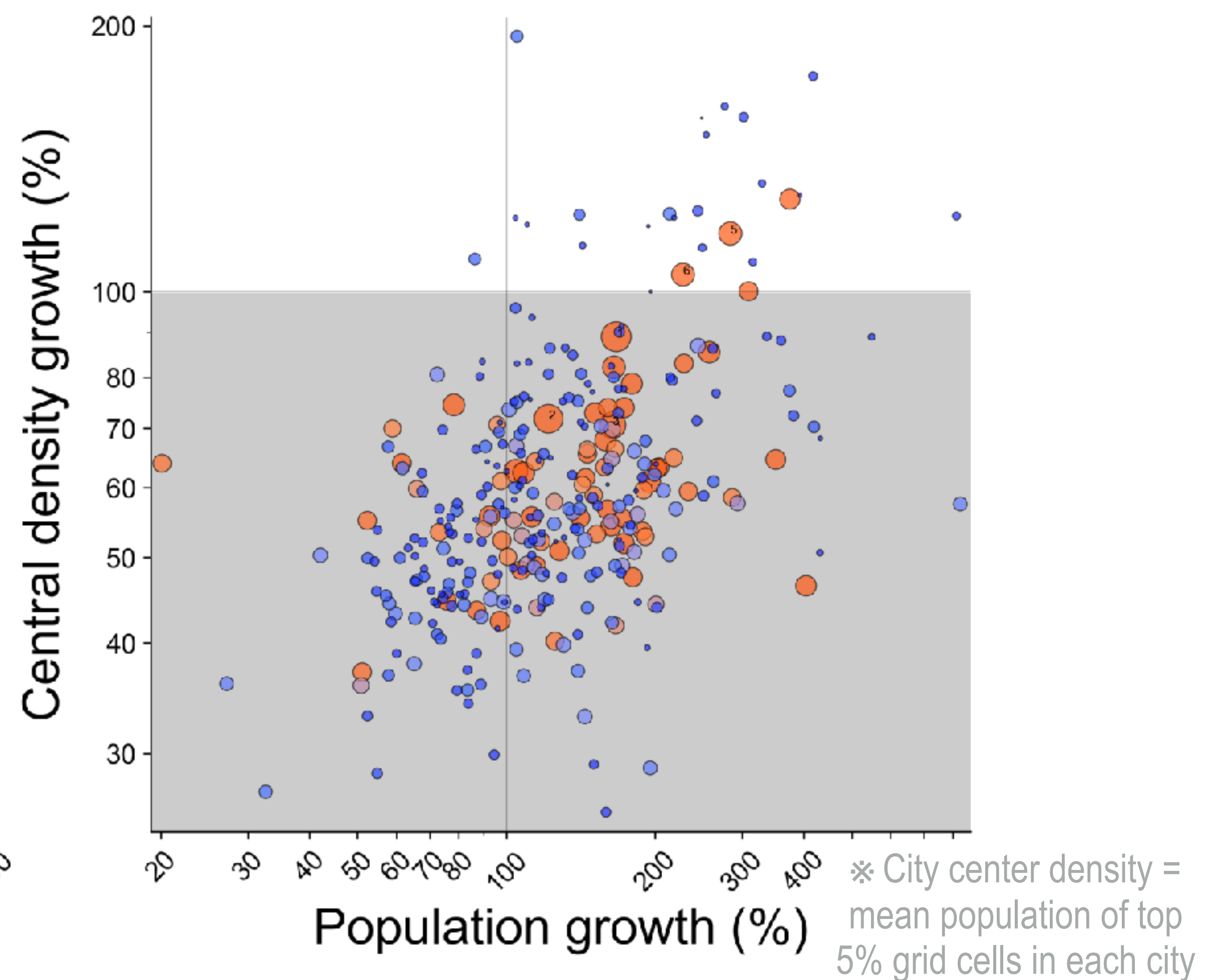


Evolution of cities: Japan 1970–2020

Suburbanization/Urban sprawl



Depopulation at the city center



Spatial Equilibrium: A Primer

- **Focus on a single city and suppose the following:**

- Each of its residents enjoys the following payoff (indirect utility):

$$u = w + A - R$$

- A : Amenities, w : Wage, R : Housing costs
- Suppose the utility \underline{u} of the *outside economy* is unaffected by this city.

- **Then, the city is in spatial equilibrium if : $u = \underline{u}$**

- Why? Also, what size is this city?
- What can we learn from this? Empirical implications?
- What are the simplifications in this parsimonious model?
- What if there are many cities?

“The Spatial Impossibility Theorem” (Starrett, 1978)

Assume a two-region economy with a finite number of consumers and firms. If space is homogeneous, transport is costly, and preferences are locally non satiated, there is **no competitive equilibrium involving transportation**.

- **Theory of the making of spatial agglomeration or specialization needs:**
 - Exogenous asymmetries (“first nature”)
 - Externalities in production or consumption (“second nature”)
 - Imperfect competition

First nature and second nature in spatial theory

Natural conditions ("first nature")

- Climate
- Topographic conditions (estuary, navigable river, mountain pass)
- Natural resources (mines, fossil fuels, fertile land)

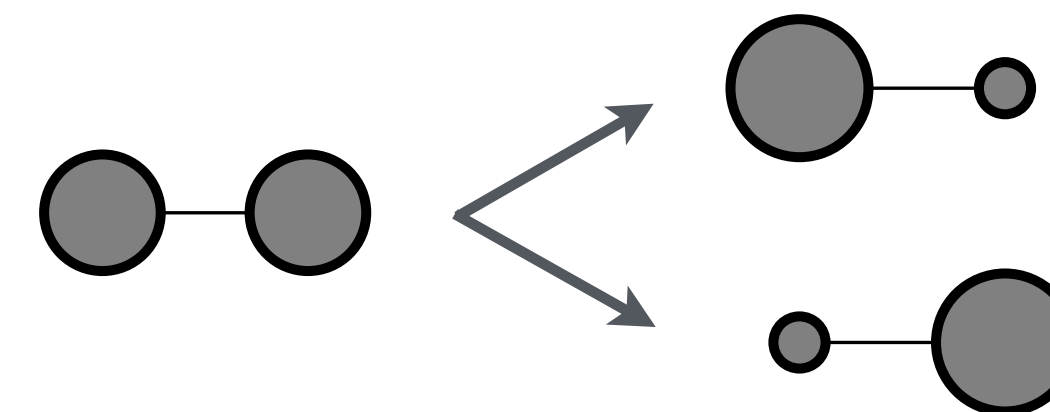
Endogenous conditions ("second nature")

- Externalities of the proximity to *others* (congestion, knowledge spillovers)
- Scale economy
- Product varieties
- Intermediaries

Economics of agglomeration: 1980s–

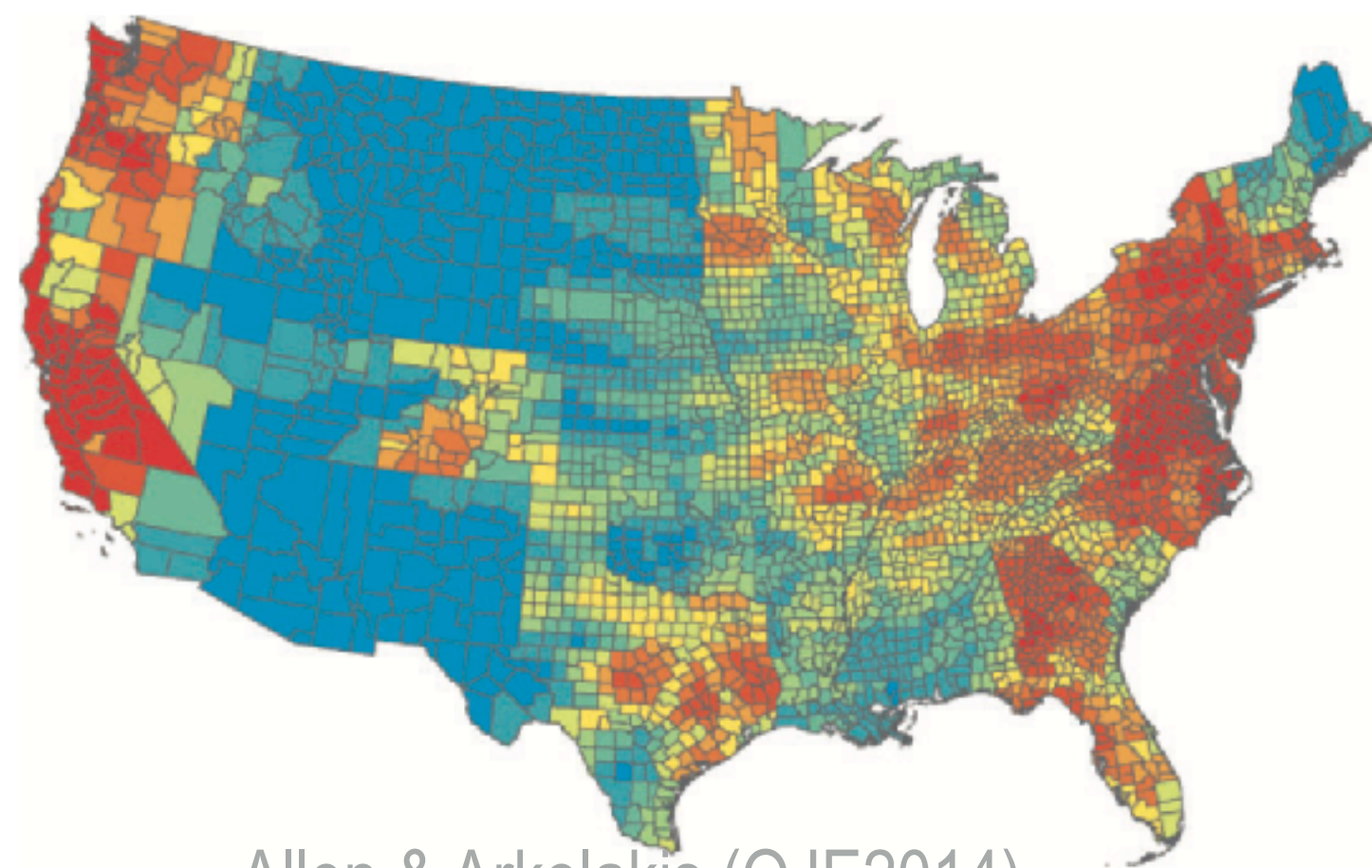
Stable spatial patterns = agglomeration forces versus **dispersion forces**
(mediated by **transport frictions** for goods, people, etc)

- Where do these forces originate from?
- What spatial patterns can arise?
- Who gains and who loses? etc.
- **Rich implications**
 - E.g., spatial agglomeration despite *ex ante* symmetry
 - Strong influence on regional policies in, e.g., EU (e.g., European Commission, 2024)
- **Bridging theory and data remained a major challenge until 2010s**

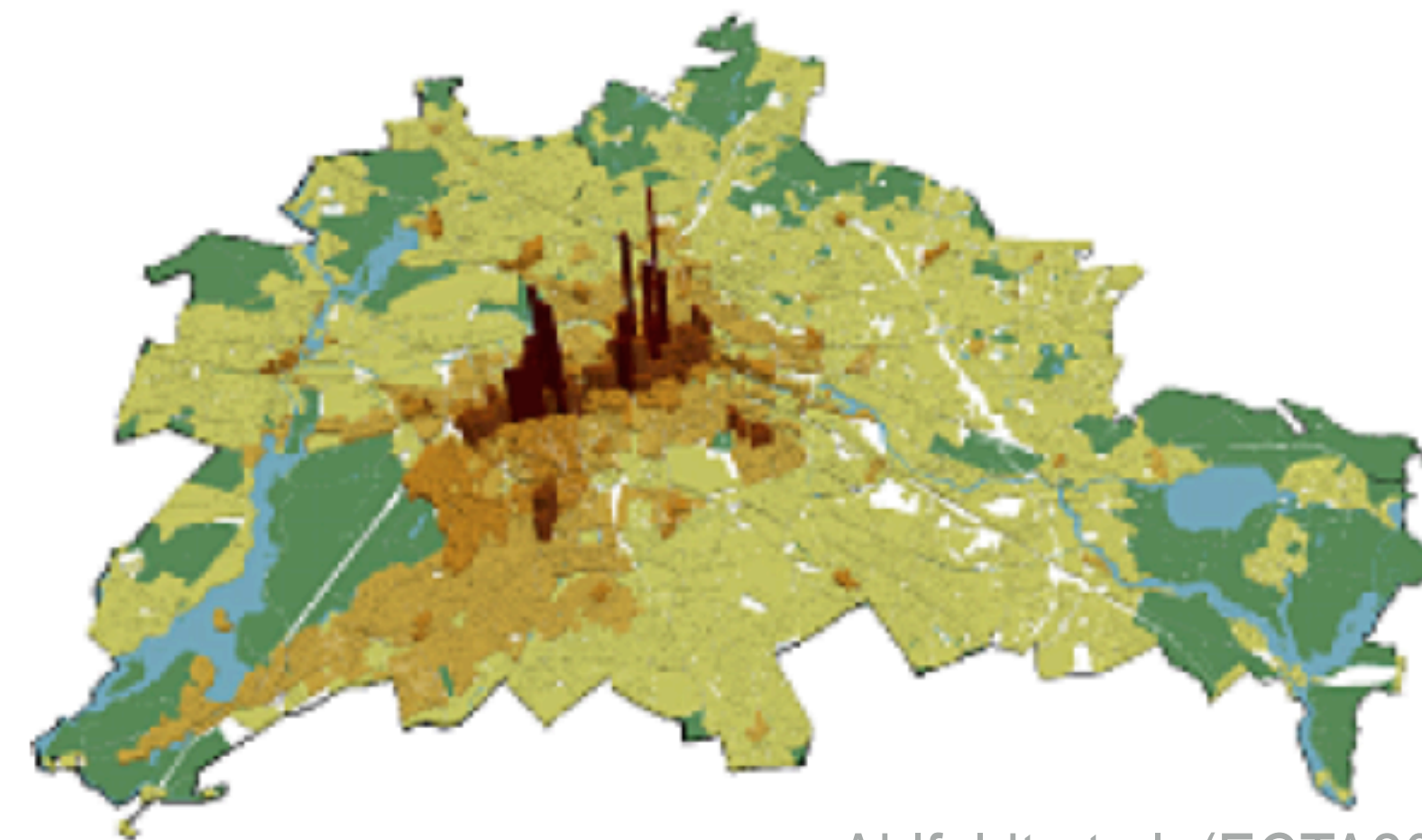


Quantitative Spatial Models (QSMs): 2010s–

- **Quantitative revolution in spatial economics**
 - Seminal works around 2010 sparked an explosion of research on QSMs.
(Redding–Sturm, AER2008; Allen–Arkolakis, QJE2014; Ahlfeldt et al., ECTA2014)
 - QSMs allow large scale general equilibrium analyses allowing for asymmetries
(for survey, see HB of Regional and Urban Economics, 2025, Ch.1–2)



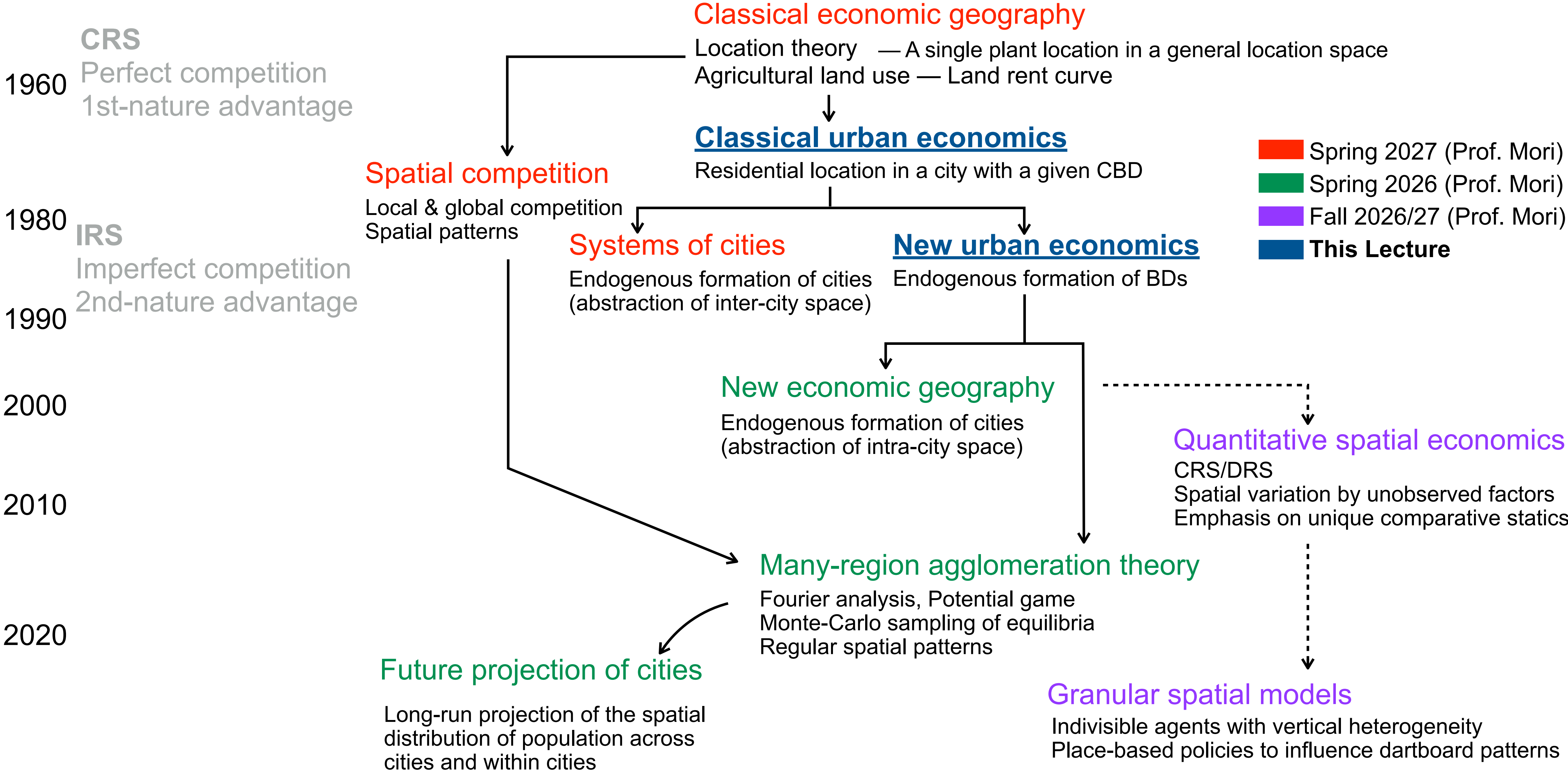
Allen & Arkolakis (QJE2014)



Ahlfeldt et al. (ECTA2014)

A Map of Spatial Economic Theory

Edited by Osawa based on Prof. Mori's slide



Problem Sets 1: Why is your city structured this way?

Choose your hometown, or a city you know very well, and think about its internal spatial structure. Please answer the following three questions briefly but concretely.

1. Observe the internal structure of your city.

Think about the city center and the surrounding neighborhoods.

- Where is the “center” of the city?
- How do residential areas spread out from that center?
- Where are shops, offices, and major commercial facilities concentrated?
- How does the atmosphere of the city change as you move away from the center?

Write a short description based on your own observation and experience.

Prob. Sets 1: Why is your city structured this way?

2. Why do you think this pattern emerged?

Now think about the mechanism behind the pattern you described.

In particular, consider the following points:

- Why are many commercial activities concentrated near the center?
- Why do residential areas tend to spread farther out?
- Why do locations closer to the center tend to be more convenient but also more expensive?

Focus on the economic logic behind the observed spatial pattern.

Prob. Sets 1: Why is your city structured this way?

2. If all households face the same trade-off, what city pattern should we expect?

Suppose many households want to:

- live closer to jobs and urban amenities,
- keep rent or housing costs low, and
- enjoy larger living space.

If many people make decisions under this same trade-off, what kind of internal city structure would you expect to emerge?

Compare your prediction with the actual structure of your city.

- In what ways does your city match this prediction?
- In what ways does it differ?