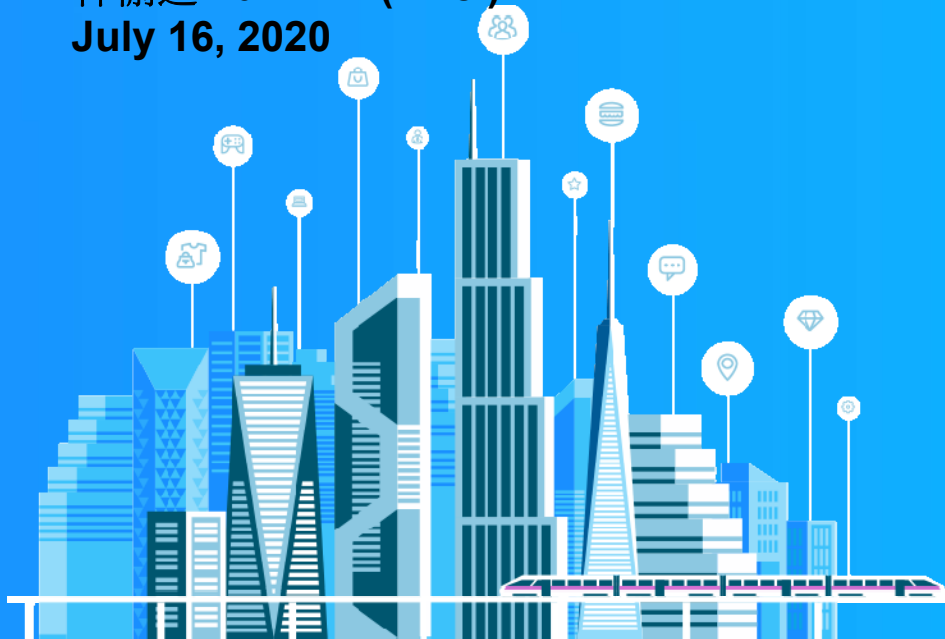# 經濟學觀點下的都市發展、都市政策、和都市治理

An Economic Perspective on Urban Development, Urban Policy, and Urban Governance

林榆芝 **Yu-Chih (Ariel) Lin**
July 16, 2020

A research framework

- 從<u>經濟學</u>的角度分析：<mark>不同行動者的行為</mark>，如何<u>型塑都市發展</u>、<u>影響政策成效</u>、或<u>決定治理的有效性</u>?

  - **型塑都市發展**：
    How do the actions of people as citizens, home buyers, developers, government officials, or global citizens, shape the current urban development?

  - **影響政策成效**：
    How do people's reactions to policies affect policy outcomes?

  - **決定治理的有效性**：
    How do the interactions of governments at all levels (international/ central/ local) influence the effectiveness of urban governance?

農地轉用與細碎化:
Cropland conversion and fragmentation

- 台灣有許多世界級的產業,其工廠均座落在最需要避免環境汙染的農地上

  - **廠商**:基於成本考量,違法在農地擴建工廠

  - **地方政府**:工廠擴建可以提供地方就業機會、增加稅收,讓政府定期向違章工廠收罰款...

  - **中央政府**:
    促進國家經濟發展+ 保護國家糧食安全

    - 縣市間的發展競爭-誰可發展工業? 誰須為糧食安全維持為農地?

    - 如何避免地方政府為地方稅收或選票而姑息不法?

天下雜誌,2016年11月

台北市都市更新賽局模型
Urban renewal game model in Taipei City

- 分析地主與開發者在協商都市更新利益分配過程間的策略互動

- 研究發現
  - 「地主特質」與「**實施者(即開發者)在協商過程採取的策略**」均會影響更新的推動時程

- 政策意涵
  - 是否調降「法定同意門檻」以加速推動都市更新?

Lin, Yu-Chih, and Feng-Tyan Lin. (2014). "A strategic analysis of urban renewal in Taipei City using game theory." *Environment and Planning B: Planning and Design (SSCI), 41*(3), 472-492.
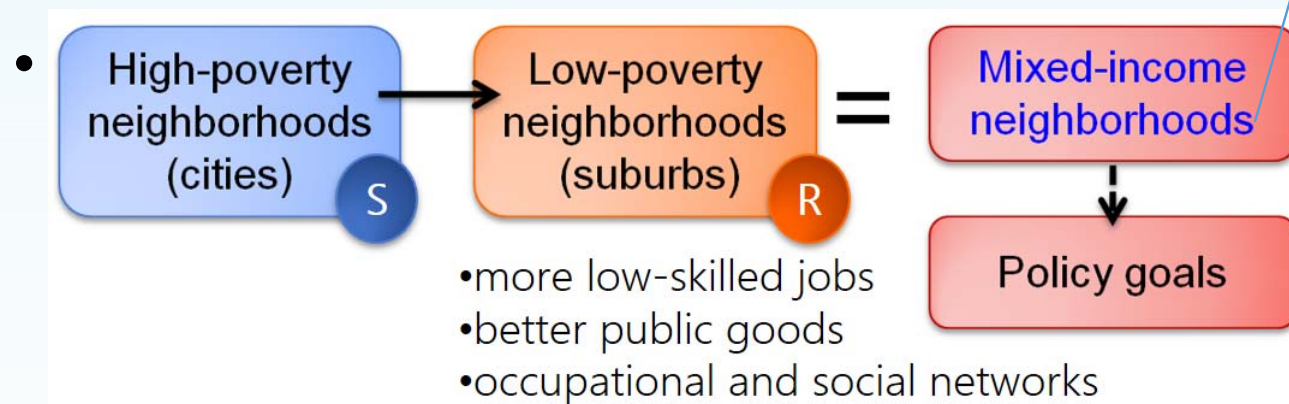
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美國住屋遷移計畫 (1/2)
Housing mobility programs in the U.S.

- Policy goals: solve **poverty concentration** & **poverty**

- Causes of <u>persistent poverty 持續性貧窮</u>
  - Spatial mismatch+ Skills mismatch
  - Social isolation
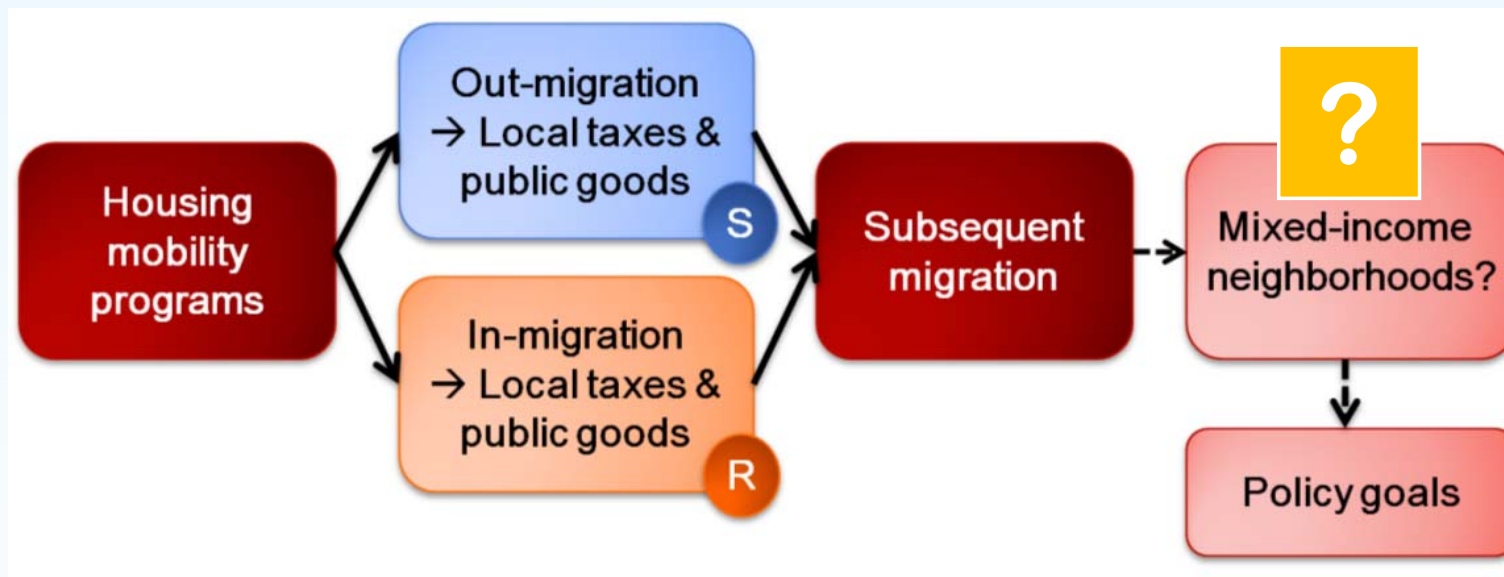 - Inferior public goods (fiscal decentralization)

-

Do <u>**neighborhood effects**</u> **exist?**
1. employment, 2. earnings,
3. welfare participation,
4. living environment,
5. accessibility to work,
6. social network,
7. criminal behavior,
8. educational performance of kids, 9. physical health, 10. mental health, 11. access to different kinds of public facilities ……and more other <u>**individual outcomes.**</u>

美國住屋遷移計畫 (2/2)
Housing mobility programs in the U.S.

- Everyone has <u>tax obligations</u> and <u>rights to public goods</u>.
- Based on Tiebout' vote-with-feet model…

地方競爭→ 地方合作
From local competition to local cooperation

- 競爭 Competition

  ＋ 合作 Cooperation

  ＝ 競合　Coopetition

圖片來源：https://www.hawaiibusiness.com/5-steps-to-turn-conflict-into-cooperation/

研究方法 Research Methods

- 經濟學
  - 研究**理性個人如何做決策**的社會科學。

- 都市經濟學
  - 結合經濟學和地理學，研究**理性個人決定在哪裡做什麼事**的社會科學。

- 政治經濟學 (特別是公共選擇理論)
  - 結合經濟學和政治學，研究**選民、各政府官員間行為互動**的社會科學。

- 統計學
  - **收集、整理、歸納和分析資料**的科學。

- 專家系統 *(AI software)*
  - *CLIPS (C Language Integrated Production System)*

專家系統 Expert system

事實庫- **Facts**

```
(pa "artist1"  "artwork1-1")
(pa "artist1"  "artwork1-2")
(pa "artist1"  "artwork1-3")
(pa "artist1"  "artwork1-4")
(pa "artist1"  "artwork1-5")
……
(pa "artist2"  "artwork2-1")
(pa "artist2"  "artwork2-2")
(pa "artist2"  "artwork2-3") (pa
"artist2"  "artwork2-4") (pa
"artist2"  "artwork2-5")
……
(pa "artist3"  "artwork3-1")
……
```

```
(pp "person1"  "person2"  "relation1")
(pp "person7"  "person4"  "relation4")
(pp "person4"  "person2"  "relation6")
(pp "person5"  "person8"  "relation9")
(pp "person6"  "person36"  "relation5")
(pp "person9"  "person5"  "relation3")
.....
```

```
(insp "artist1"  "inspiration2"  "artwork1-3")
(insp "artist5"  "inspiration6"  "artwork5-6")
(insp "artist3  "inspiration6"  "artwork3-5")
(insp "artist3"  "inspiration5"  "artwork3-6")
(insp "artist7"  "inspiration9"  "artwork7-1")
……
```

```
(input1 "artist1")
(input2 "artist3")
```

推理庫-**Rules**

Rule 1
- IF
  condition 1,2,…
  THEN
  action 1, 2..

Rule 2
- IF
  condition 1,2,…
  THEN
  action 1, 2..

Rule 3
- Rule 4
  - Rule 5
    - IF
      condition 1,2,…
      THEN
      action 1, 2..
      condition 1,2,…
      THEN
      action 1, 2..

THANK YOU FOR YOUR ATTENTION!