Economic Integration and Political Dispute Across the Taiwan Strait

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Introduction

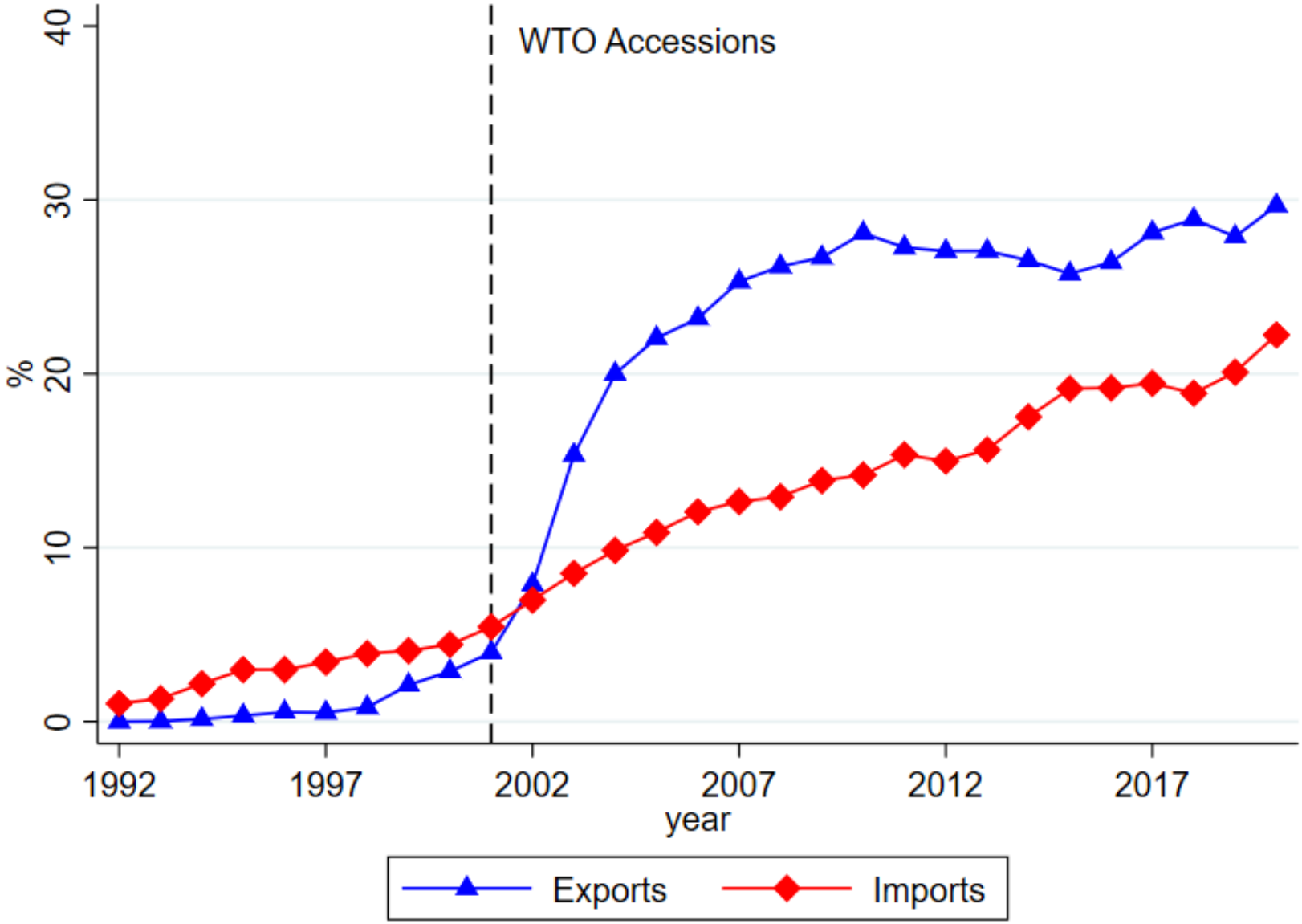
Cross-Strait Relations at a Glance

Historical origin of Mainland China-Taiwan divide:

- Chinese Civil War (1927-1949): CCP took over the mainland and KMT retreated to Taiwan
- Three decades (1949-1979) of complete cut-off, followed by Taiwan's democratization in the 1980s
- Taiwan's seat loss in UN 1971 and the "One China" Policy
- Taiwan's sovereignty debate remains a persistent source of tension in U.S.-China relations

Currently a stalemate with two possible solutions: unification or *de jure* independence Trend

Taiwan Trade Shares with Mainland China



Data Source: Taiwan Ministry of Finance

Cross-Strait Trade Disputes

Taiwanese urged to eat 'freedom pineapples' after China import ban

Government rejects Chinese claim that harmful pests had been detected in recent shipments

Helen Davidson *in Taipei*

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Tue 2 Mar 2021 09.55 GMT

Source: The Guardian

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Source: The Guardian

The New York Times

First Pineapples, Now Fish: To Pressure Taiwan, China Flexes Economic Muscle

Taiwan's lucrative grouper industry is bracing for heavy losses after China's recent ban on imports of the fish from the island.

This Paper

How is economic integration associated with the support for political independence?

Mainland China

- Current narrative: seek after peaceful reunification, yet does not rule out the possibility of unification by force
- Is economic integration effective in promoting political unification, or does it actually trigger a backlash?

Taiwan

- What are the overall and distributional impacts of cross-strait trade?
- How are these impacts mirrored in changes in political preferences among Taiwanese?

This Paper

We follow the "China Shock" literature (Autor et al., 2013; 2020) and examine how regional exposure to cross-strait trade affects political preferences among Taiwanese voters

Preliminary findings:

- Stronger predicted export exposure to China fosters regional pro-independence tendency, as measured both by survey and election outcomes
- No effects for Chinese-Taiwanese identity shift

Related Literature

Political Consequences of Globalization

- The political impacts of China import competition channeled via labor market consequences of trade (Colantone & Stanig, 2019; Dorn et al., 2020; Dippel et al., 2021)
- International trade and conflict resolution (Heilmann, 2016; Korovkin and Makarin, 2023; Magistretti and Tabellini, 2022; Kleinman el al., 2022)

Identity Politics and Nation Building

- Theory advancement (Grossman and Helpman, 2021; Bonomi et al., 2021)
- Taiwanese context: the role of FDI (Chiang et al., 2022) and curriculum reform (Chen et al., 2020) in shaping national identity

Outline of Talk

Data and Empirical Strategy

Data Sources

Trade trade volumes by HS commodity (2000-2016)

- UN Comtrade/Taiwan Bureau of Foreign Trade
- Matching from commodities (HS) to 3-digit (94) Taiwanese industries (SIC)

Employment shares regional start-of-period industrial specialization

- Taiwan Industry and Service Census (1991, 2001)

Political outcomes by township

- Pro-independence party (DPP) vote shares in 2000-2016 presidential elections
- Taiwan National Security Survey (TNSS): 2002-2019
  - Exclusive Taiwanese identity
  - Stance on reunification or independence with mainland

Empirical Design: Baseline

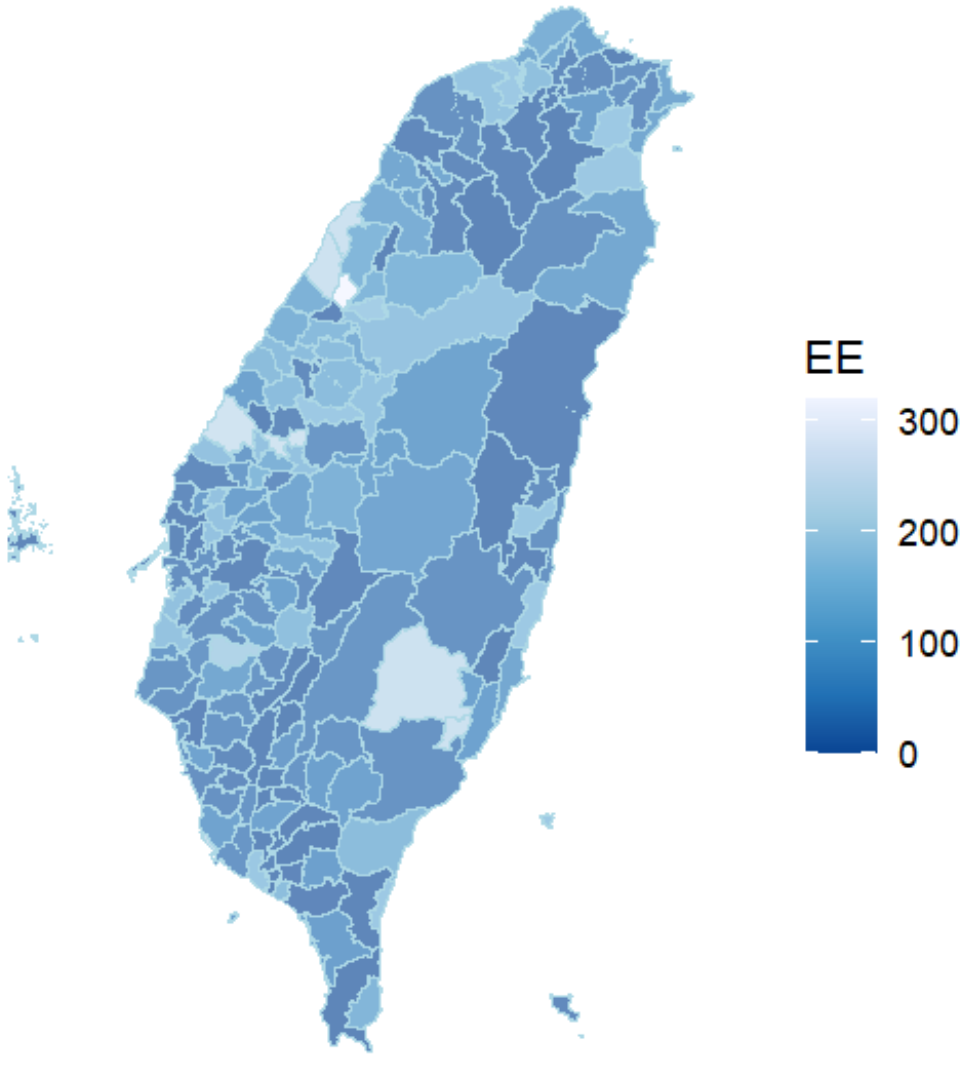
$$\Delta Y_{dj\tau} = \alpha + \beta \Delta EE^{tc}_{j\tau} + \gamma \mathbf{X}_{dj\tau} + \epsilon_{dj\tau} \tag{1}$$

- $\Delta Y_{dj\tau}$ is change in an outcome for time period τ that corresponds to *township* d in *commuting zone* j CZ.
- Industry-level export exposure: $\Delta EE^{tc}_{k\tau} = \Delta X^{tc}_{k\tau} / Y_{k0}$, computed as the growth of Taiwan exports to China divided by industrial initial product sales.
- CZ-level export exposure: $\Delta EE^{tc}_{j\tau}$, which is a weighted-sum of industry level export exposures

$$\Delta EE^{tc}_{j\tau} = \sum_k \frac{L_{jkt}}{L_{jt}} \Delta EE^{tc}_{k\tau} \tag{2}$$

where L_{jkt}/L_{jt} is the employment share of industry k in CZ j, measured at the start-of-period.

Treatment Intensity Across CZs ($\Delta EE2016 - 2000$)



Empirical Design: Shift-Share IV

Main endogeneity concern for equation (1): domestic industry-specific shocks affect both trade volumes to China and voting outcomes

- Shift-share instrument using exports-to-China from other high-income countries[4] during the same period:

$$\Delta EE^{oc}_{j\tau} = \sum_{k} \frac{L_{jkt-10}}{L_{jt-10}} \Delta EE^{oc}_{k\tau} \tag{3}$$

- Lagged employment L_{jkt-10}/L_{jt-10} to account for potential bias if contemporary employment is affected by anticipated trade shocks.

[4] Japan, South Korea, Singapore, Australia, New Zealand, USA, Canada.

Preliminary Results

Pro-Independence Vote Shares

Dependent variable: Δ *DPP vote share (in % pts)*

	Long difference: 2000-2016			
	(1)	(2)	(3)	(4)
Δ *Export Exposure*	0.015***	0.017***	0.009**	0.010**
	(0.002)	(0.003)	(0.004)	(0.004)
Δ *Import Exposure*			0.014*	0.016
			(0.007)	(0.01)
Estimation method	OLS	2SLS	OLS	2SLS
F-stat first stage		27.52		35.91
Start-of-period controls	Yes	Yes	Yes	Yes

Note: Number of observations = 368 townships. Included in the controls are start of the period demographic and industrial characteristics. Observations are weighted by townships' total votes in the 2000 presidential election, and standard errors are clustered by CZ. *,**,*** signify significance at the 10%, 5% and 1% level.

Interquartile change of export exposure: $122 \times 0.010 = 1.22$

Pro-Independence Attitudes

Standardized TNSS Survey Answers

	Long Difference: 2002-2016	
	(1)	(2)
Panel A. Δ Taiwanese Identity (0-1)		
Δ Export Exposure	0.023	0.032
	(0.032)	(0.038)
Panel B. Δ Support for Independence (Scale 1-5)		
Δ Export Exposure	0.0035***	0.0037**
	(0.0013)	(0.0017)
Estimation method	OLS	2SLS
F-Stat first stage		26.48
Start-of-period controls	Yes	Yes

Note: Number of observations = 368 townships. Included in the controls are start of the period demographic and industrial characteristics. Mean changes in Taiwanese identity and support for independence is 15.7 and 2.86 between 2002-2016, respectively. Standard errors (in parentheses) are clustered at the level of CZ. *,**,*** signify significance at the 10%, 5% and 1% level.

Concluding Remarks

Concluding Remarks

- Cross-strait trade integration seems to have triggered pro-independence sentiments among Taiwanese
- Next Step: mechanisms behind the "backlash"?
  - Labor market outcomes from Taiwan Manpower Utilization Survey (TMUS)
    - Employment and wages
    - Skilled wage premium and inequality
  - Political channels from Taiwan Social Change Survey (TSCS)
    - Misaligned beliefs on economic impacts of China trade shock
    - Deterrence effects of economic interdependence

Thank you!

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Appx.: Shift in Taiwanese Identity

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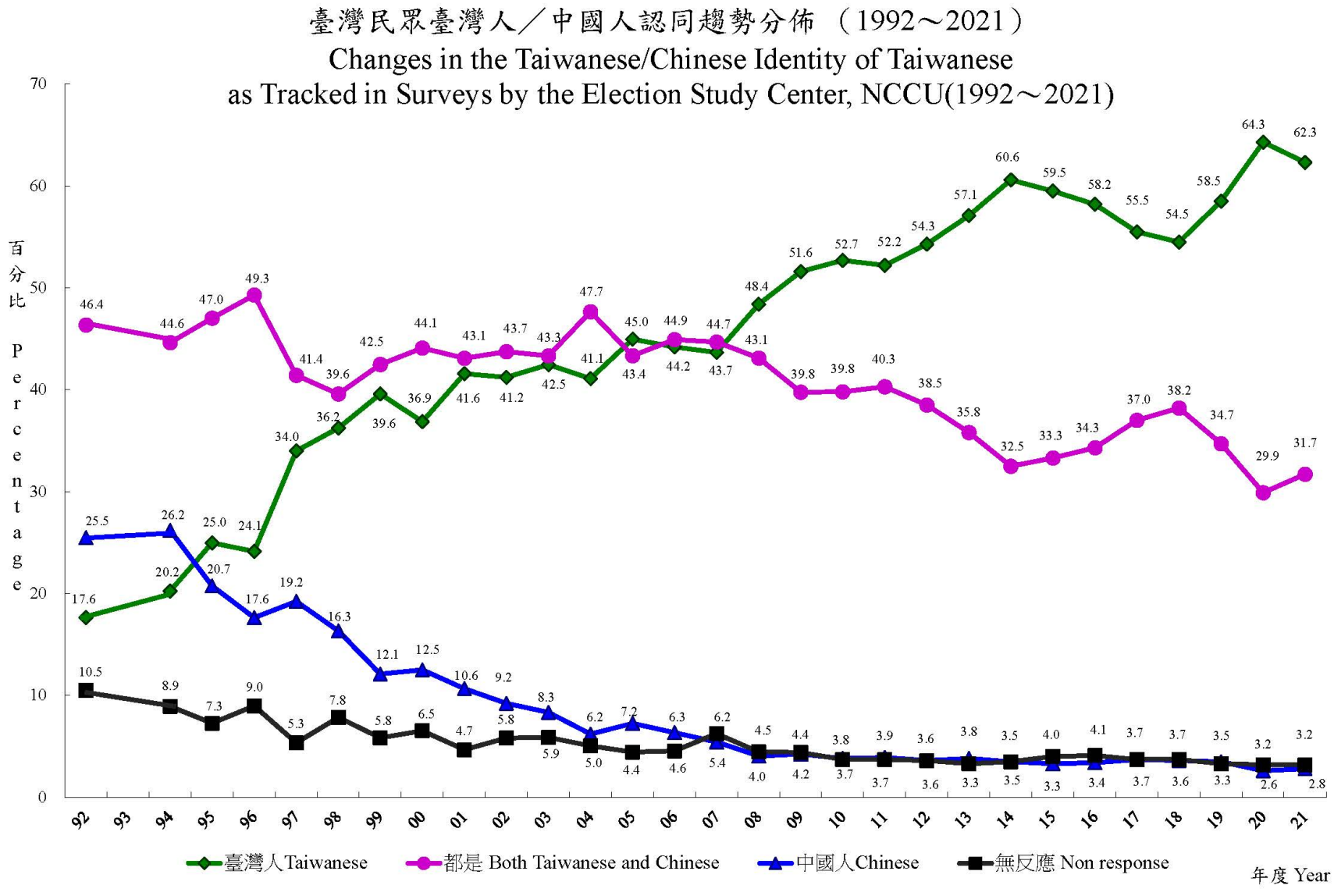
Source: Election Study Center, National Chengchi University



Appx.: Shift in Unification-Independence Stance

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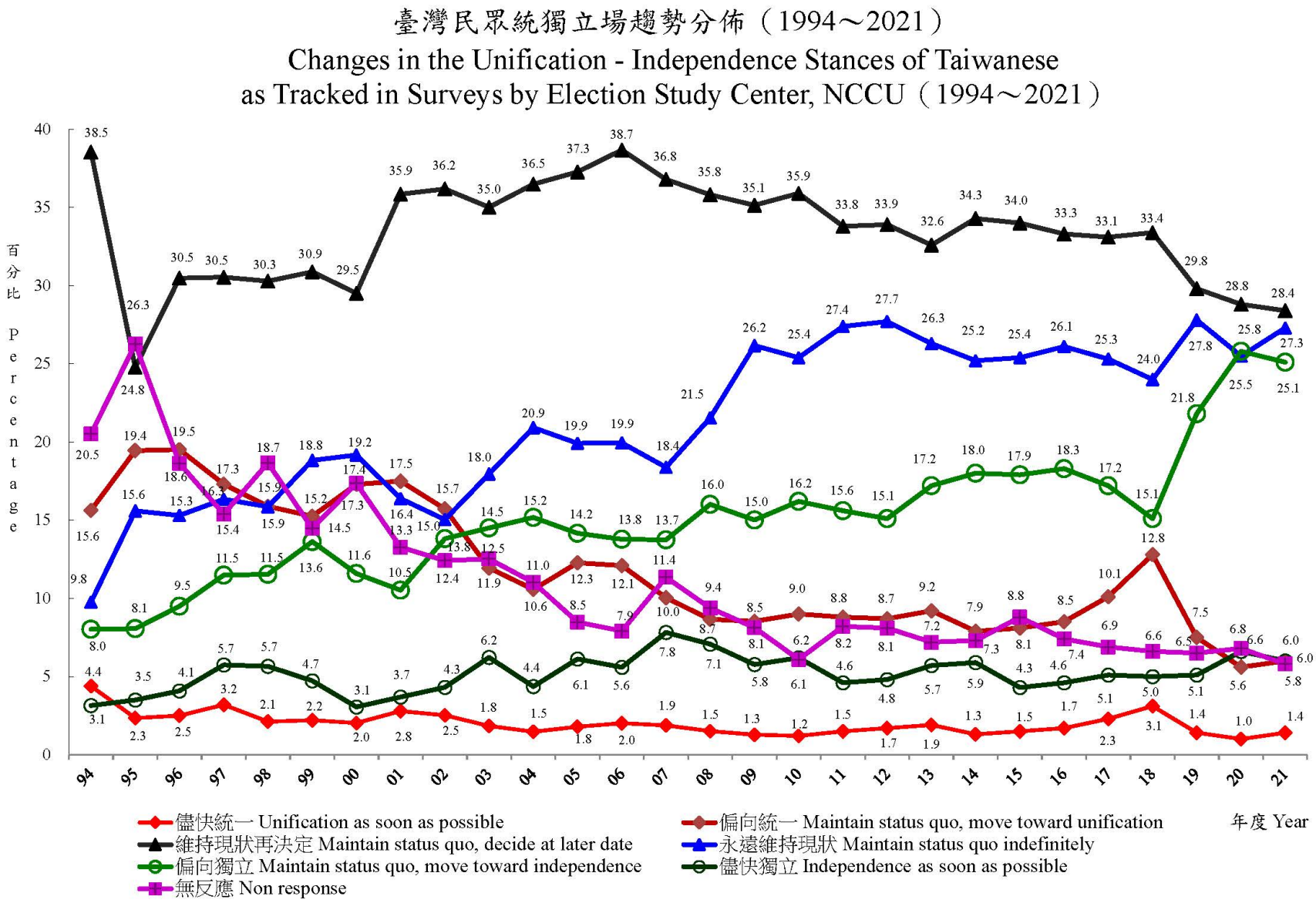
Source: Election Study Center, National Chengchi University



Appx.: Taiwan Presidential Elections

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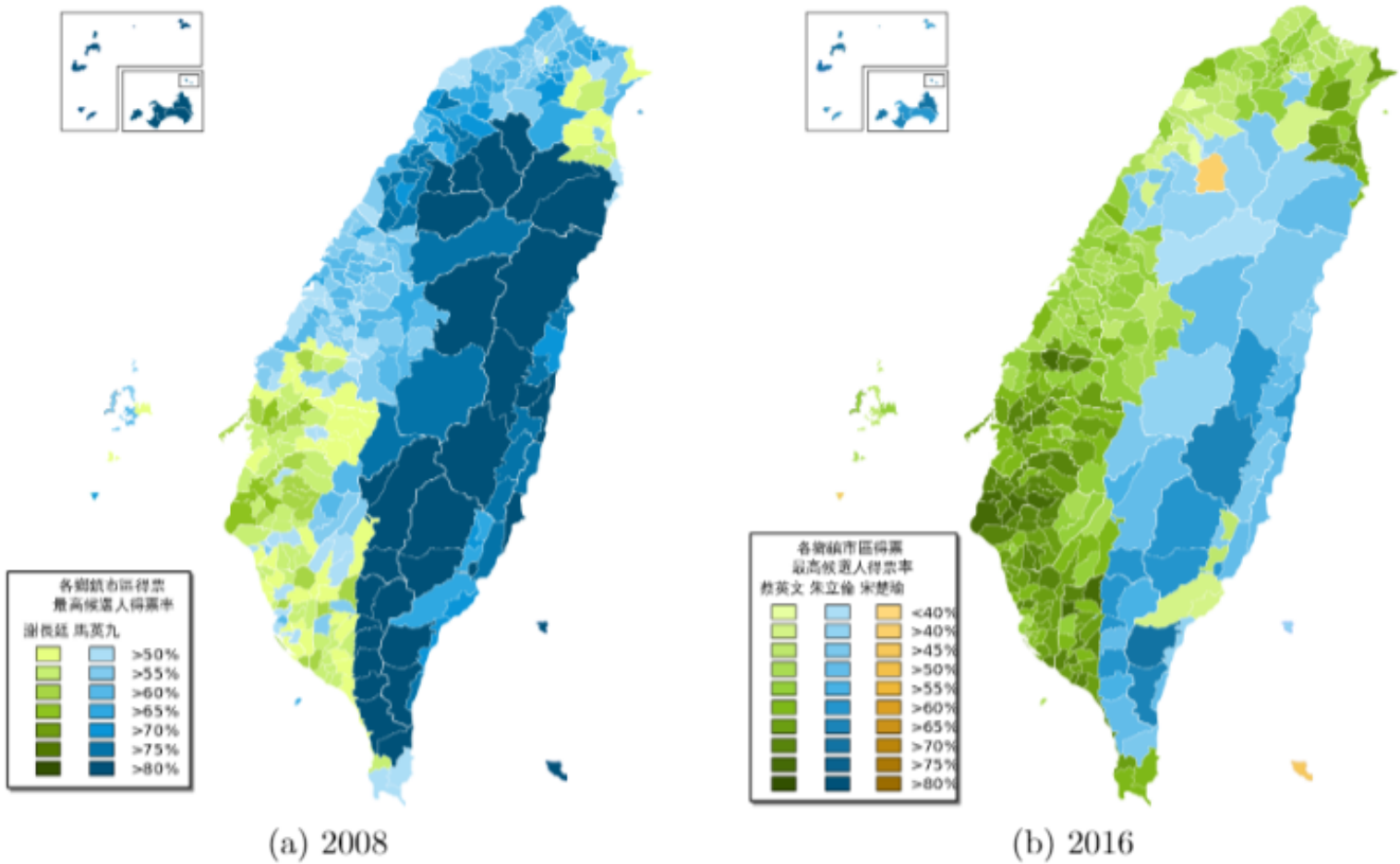
Source: Wikipedia



(a) 2008 (b) 2016

Blue (pro-reunification KMT) vs. Green (pro-independence DPP)

Appx.: Delineating Local Labor Markets in Taiwan

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- *Commuting Data*: Commuting flows in 2000 population census
- *Algorithm*: Standard methods following Tolbert and Sizer (1996) and Autor (2009) for US Commuting Zones (CZs)

Detail

- *Output*: 186 commuting zones out of 368 townships

Appx.: Commuting Zone Cluster Algorithm

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The application on US Commuting Zones: see Autor (2009)

- Commuting matrix:

$$\begin{array}{c} \\ 1 \\ 2 \\ 3 \\ \dots \end{array} \begin{array}{c} \begin{array}{cccc} 1 & 2 & 3 & \dots \end{array} \\ \begin{pmatrix} 1010 & 81 & 23 & \dots \\ 64 & 650 & 43 & \dots \\ 13 & 53 & 352 & \dots \\ \dots & \dots & \dots & \dots \end{pmatrix} \end{array}$$

- Measure of commuting ties between townships i and j:

$$T_{ij} = \frac{c_{ij} + c_{ji}}{\min(r_i, r_j)}$$

where c_{ij} refers to number of all workers residing in location i but work in location j, r_i is the number of all workers residing in location i.

- *Rule of thumb*: CZs are defined such that the average value of T_{ij} for the county pairs in a given CZ is above 0.02.