

School Zone Safety and Beyond

: Korea's Experience and Questions for the Future

Pedestrian Protection Policies
in Times of Demographic Transition

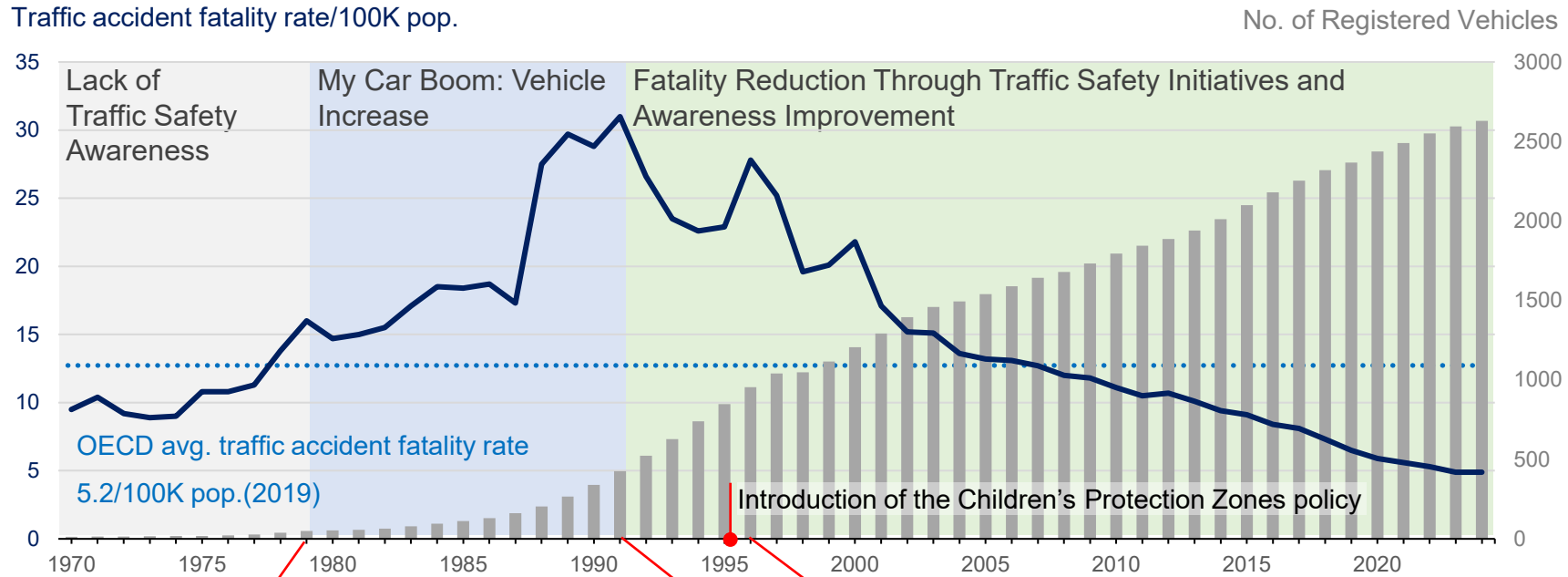


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Korea's Pedestrian Safety Crisis & Policy Response

From one of the highest mortality rates to a model of reduction



Children's Protection Zones - The Cornerstone Policy

Policy Definition

- **Within 300 meters of entrances from** elementary schools, kindergartens, and related facilities **to protect children under 13 years old**
- **Speed Limit:** 30 km/h, 24 hours (under discussion)
- **Application:** Guardrails, speed bumps, anti-slip facilities, crosswalks, pedestrian traffic signals, etc.
- **Enforcement:** Police patrols, cameras, citizen report

16,940 zones nationwide (2023)

- Elementary schools: ~100% designation rate
- Kindergartens: 84.4%
- Special schools: 66.3%
- **Cram schools : <1%**



Applying anti-slip facilities (before & after)



Time-Based Analysis in Seoul

Seoul Overall Performance (2016-2024):

- Pedestrian traffic accident decline: 1.2%/year
- Continuation of the 70% reduction trend

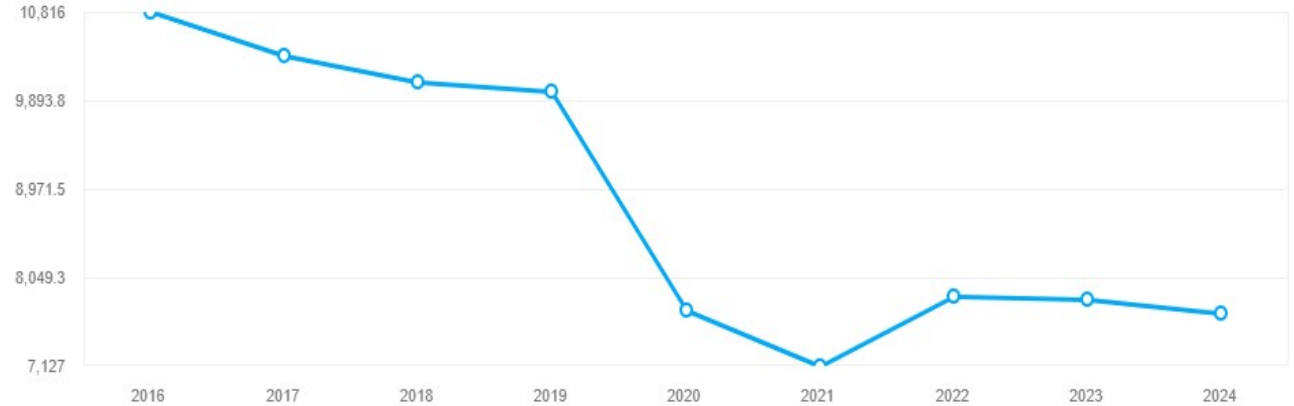
Pedestrian Accidents by time (2024)

- 65.4% occurred after 12 PM
- 0:00 - 8:00 AM: high fatality rate relative to daytime

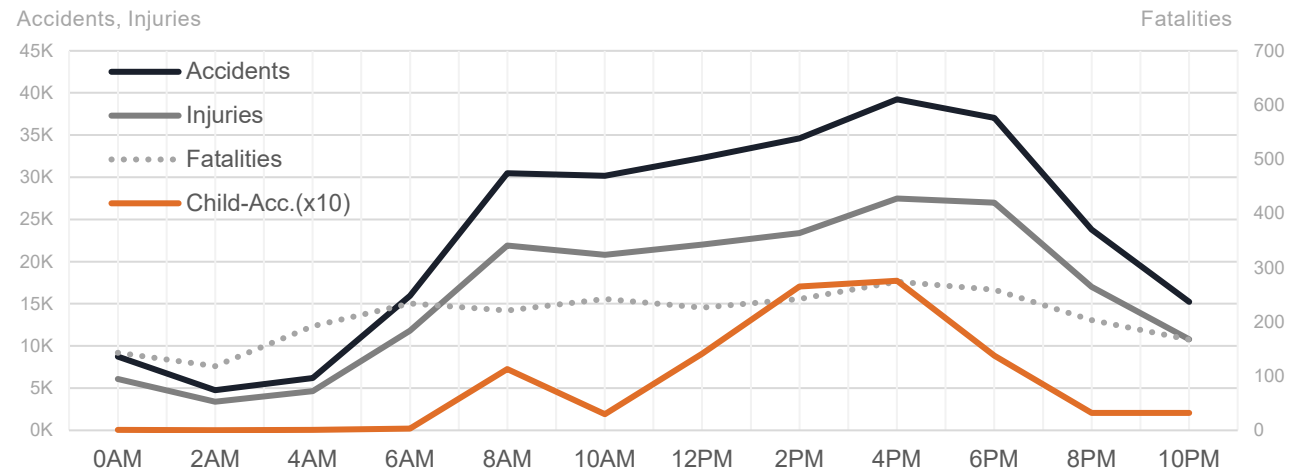
Time-Based Distribution of Child(7~12yr) Pedestrian Accidents (2024):

- **85.7% occurred between 8 AM and 10 AM**
- Nighttime: Less than 1 incidents (~0.5%)

Trend in Pedestrian Traffic Accident Cases in Seoul



Accident Frequency by Time of Day in Seoul (2024)



Policy Evolution: Time-Based Speed Limit Programs

Pilot Programs for Various speed limit ease policy by time and region from Oct 2022

- **Region**
8 pilot schools in Seoul, Incheon, Gyeonggi, Daejeon, Gwangju
- **Restricted hours**
 - Peak hours : 30 km/h (maintained)
 - Non-peak hours : 50 km/h
- **Result**
Zero accidents in 3 months
- **Public Opinion and Legislation (2025)**
 - ca. 75% of parents, teachers, and general drivers support time-based speed limits
 - Based on this, legislation is being pursued to flexibly restrict speeds during times with low child traffic (late nights, weekends, etc.)



The Blind Spot: Cram School Districts

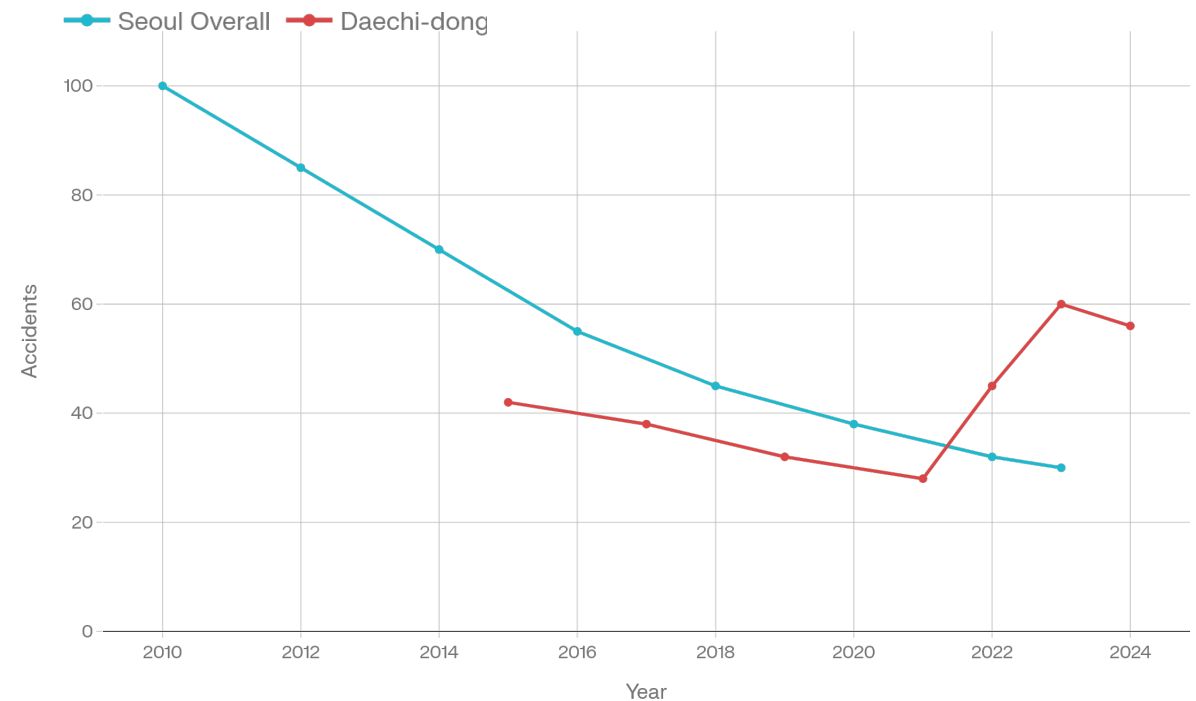
The Daechi-dong Case in Seoul

The Daechi-dong Anomaly:

- Seoul overall: 1.2% annual decline (2022-2024)
- Daechi-dong: **11.6% annual increase**
- Seoul's only district with rising accidents
- Students **aged 13-20**: 26.1% of victims (highest)



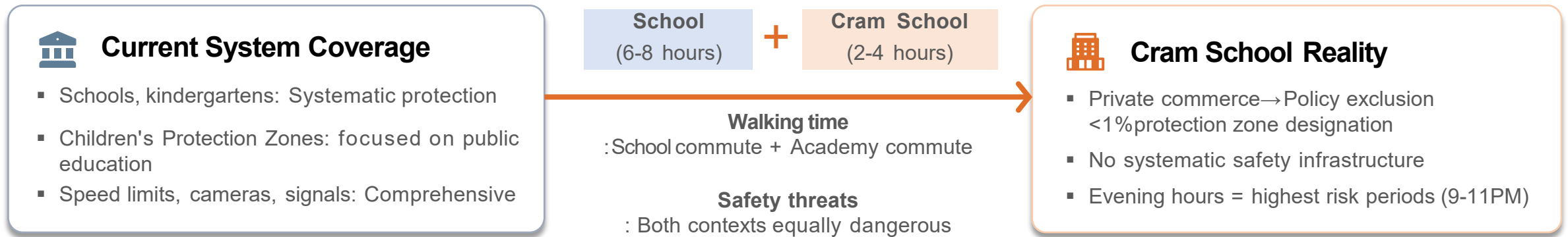
Seul Pedestrian Accidents Decline, Daechi-dong Rises (2010-2024)



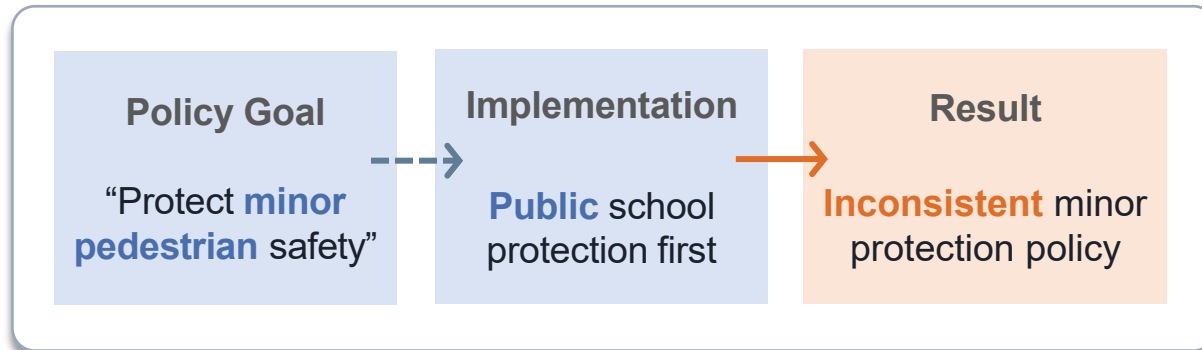
Administrative Dilemma

Elementary Schools vs. Cram Schools: The Policy Gap

Student's Daily Reality



The Contradiction



Key Questions

- **Legal basis** for private facility regulation?
- **Geographic management** of dispersed locations?
- **Financial responsibility** for infrastructure?
- **Differentiation criteria** among thousands of cram schools?

Demographic Crisis:

Schools Declining, Cram schools Expanding

Korea's Population Crisis

- Total fertility rate: 0.72(2023) ← world's lowest
- School-age population decline: 9.9M(1980) → 5.07M(2025)
- Projected: 8 million fewer students by 2029

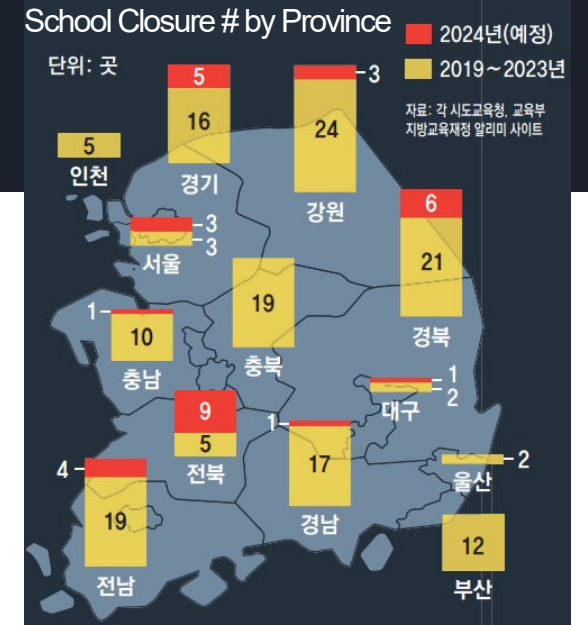
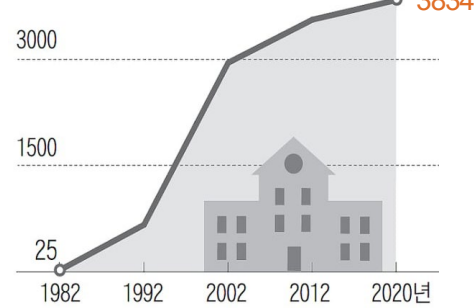
School Closures Since 1980

- Total: 4,008 schools closed
- Elementary schools: 3,674 (majority)
- Recent acceleration: 15 closures (2019-2024)
- Projected: 107 additional closures (2025-2029)

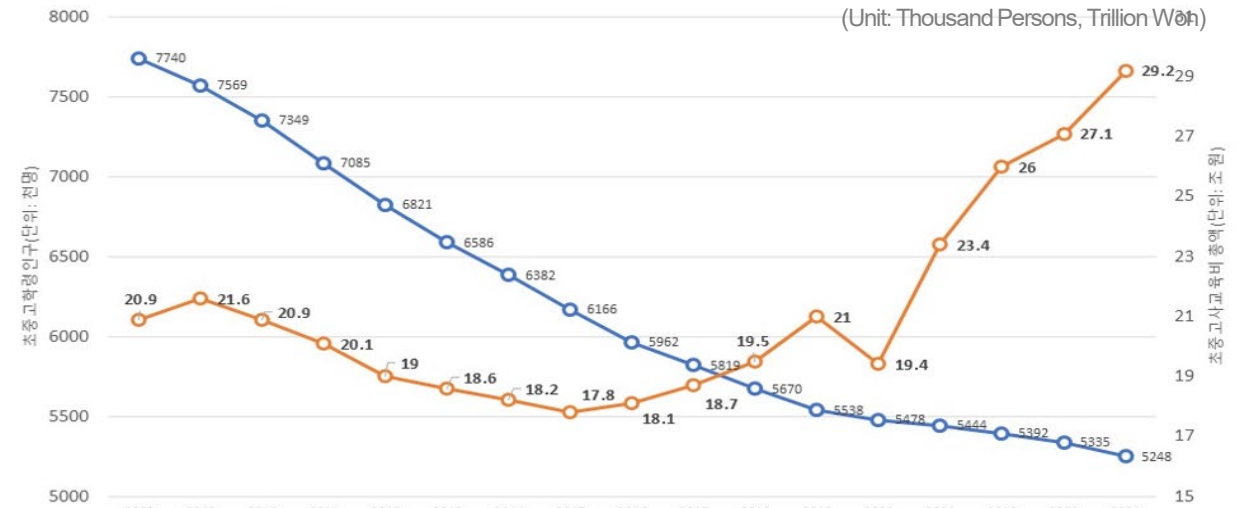
The Paradox

- Schools declining dramatically
- Cram schools expanding continuously
- Daechi-dong: 1,422 academies (growing)
- Seoul average: 191.7 academies per 10,000 residents

Increasing # of Closed Schools Nationwide



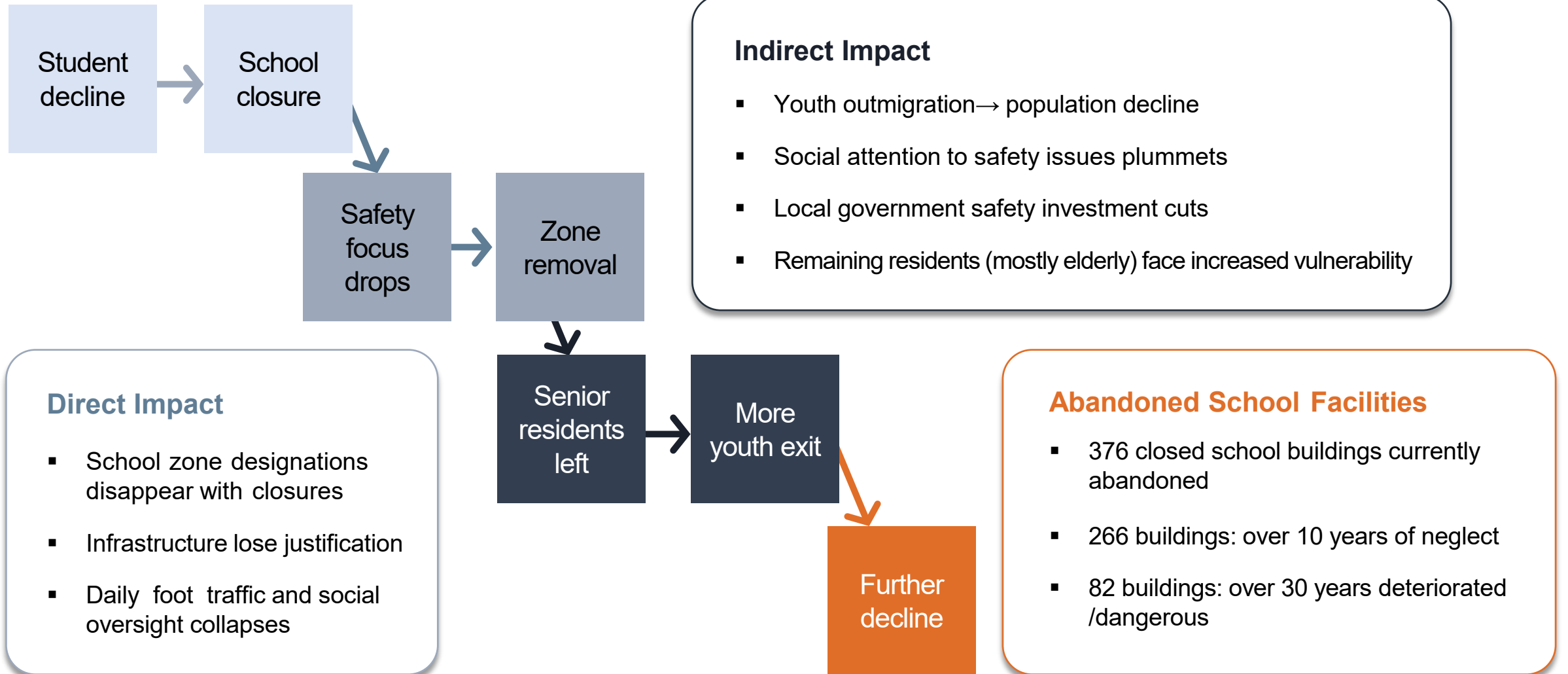
Declining Total Scale of School-Age Population while Private Education Expenditures Increase for Primary, Secondary, and High School Students



Source: <https://www.chosun.com/national/education/2021/04/06/UTZZQMZYDNE3NKVZNSDUIP4O3A/>, <https://www.donga.com/news/Society/article/all/20231225/122762864/1>, <https://noworry.kr/policyarchive/?bmode=view&idx=157734707>

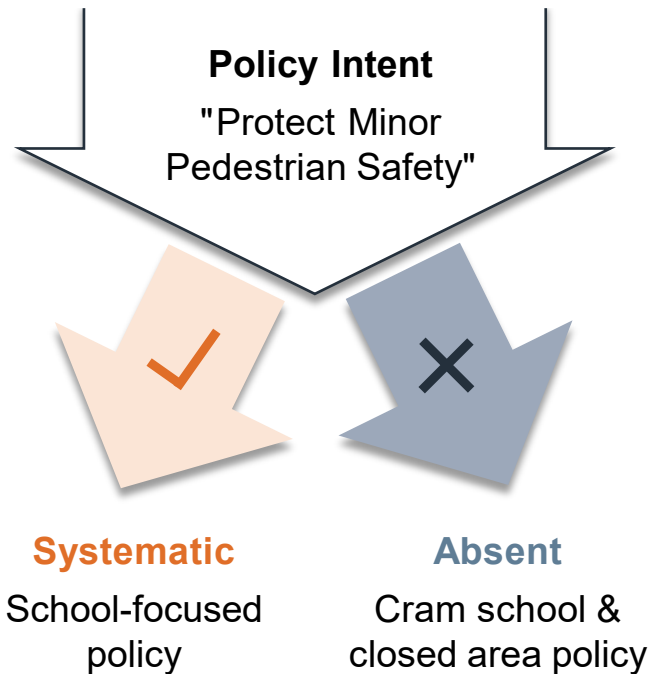
Impact of School Closures

on Pedestrian Safety



Policy Incoherence:

When Protecting "Minors" Becomes Ambiguous



Three Crises in Collision

School zone enforcement strengthens
vs.
Time-based relaxation debates

Cram school accidents spike
vs.
Safety policies absent

School closures accelerate
vs.
Safety infrastructure dismantled

Who / Where / When do we protect?

- WHO**
- Children in schools only?
 - All minors in educational settings?
 - All pedestrians?

- WHERE**
- Public schools only?
 - All educational facilities?
 - High-pedestrian-volume zones?

- WHEN**
- 24 hours vs. data-based time differentiation?
 - School hours vs. academy evening hours?

Forward-Looking Questions

Pedestrian Safety in the Age of School Closures

Immediate Implementation

- What happens to school zones after closures?
- School consolidation and longer commute distances?
- Academy district safety escalation response?

Fundamental Policy

- Redefine pedestrian safety policy targets?
- How to maintain safety equity in depopulating regions?
- School site reuse and pedestrian environment redesign?

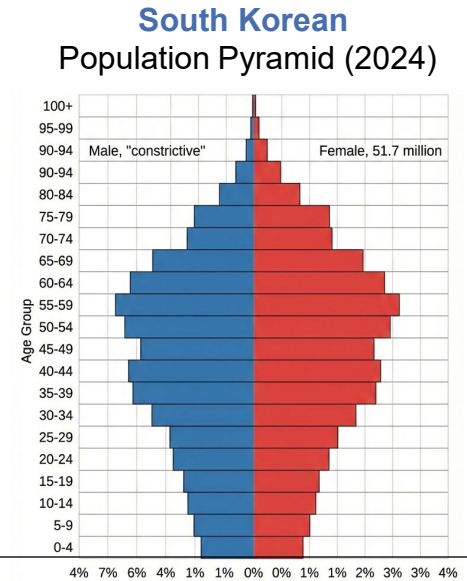
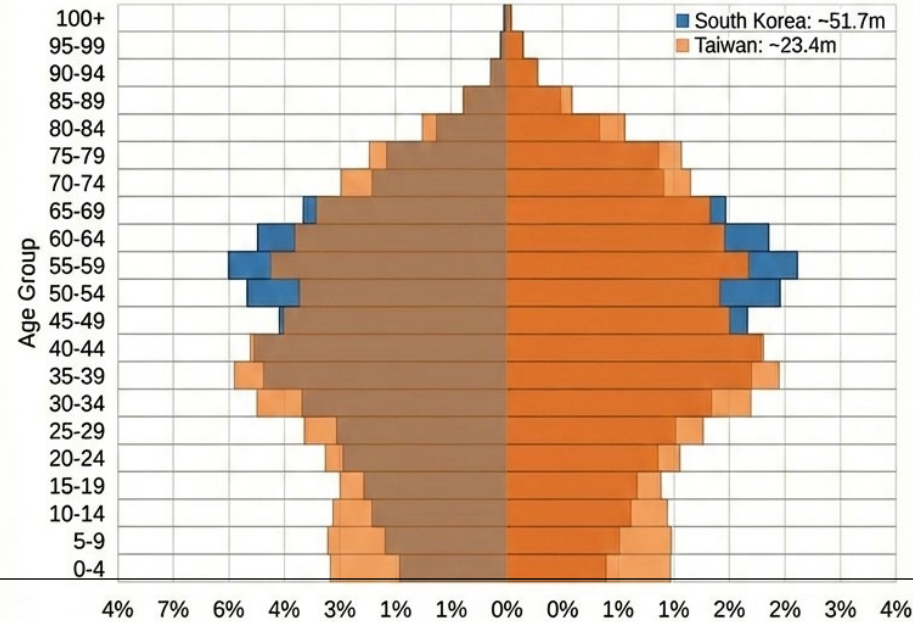
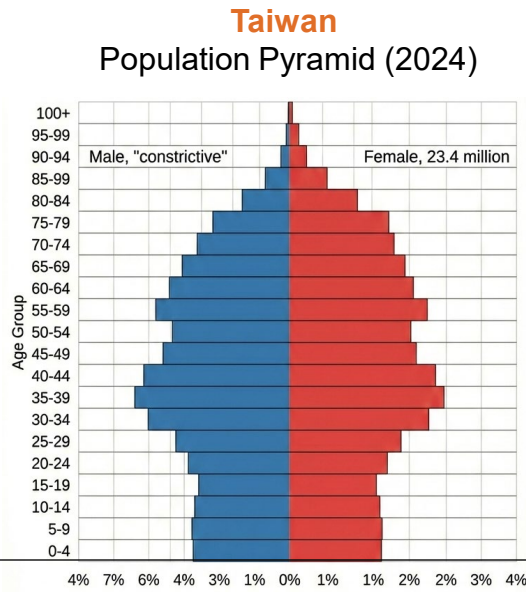
Core Question

Whose safety are we actually protecting?

Sharing Korea's Journey

Reflections and Questions for the Future

Comparison of **Taiwan** & **South Korean**
Population Pyramid (2024)



Demographic Decline

School Closures

Elderly-Majority
Pedestrians

Policy Coherence
Needed



Thank you

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