

Deep Discount Transit Passes in the Long-Term Sustainability of Transit Agencies

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From Research to Practice

What is a Deep Discount **Group Pass** Program?

Deep discount transit pass programs provide a *group* of people with *unlimited ride* transit passes in exchange for some *contractual payment* for or on behalf of pass users by an employer or other organizing body.

Types & Examples:

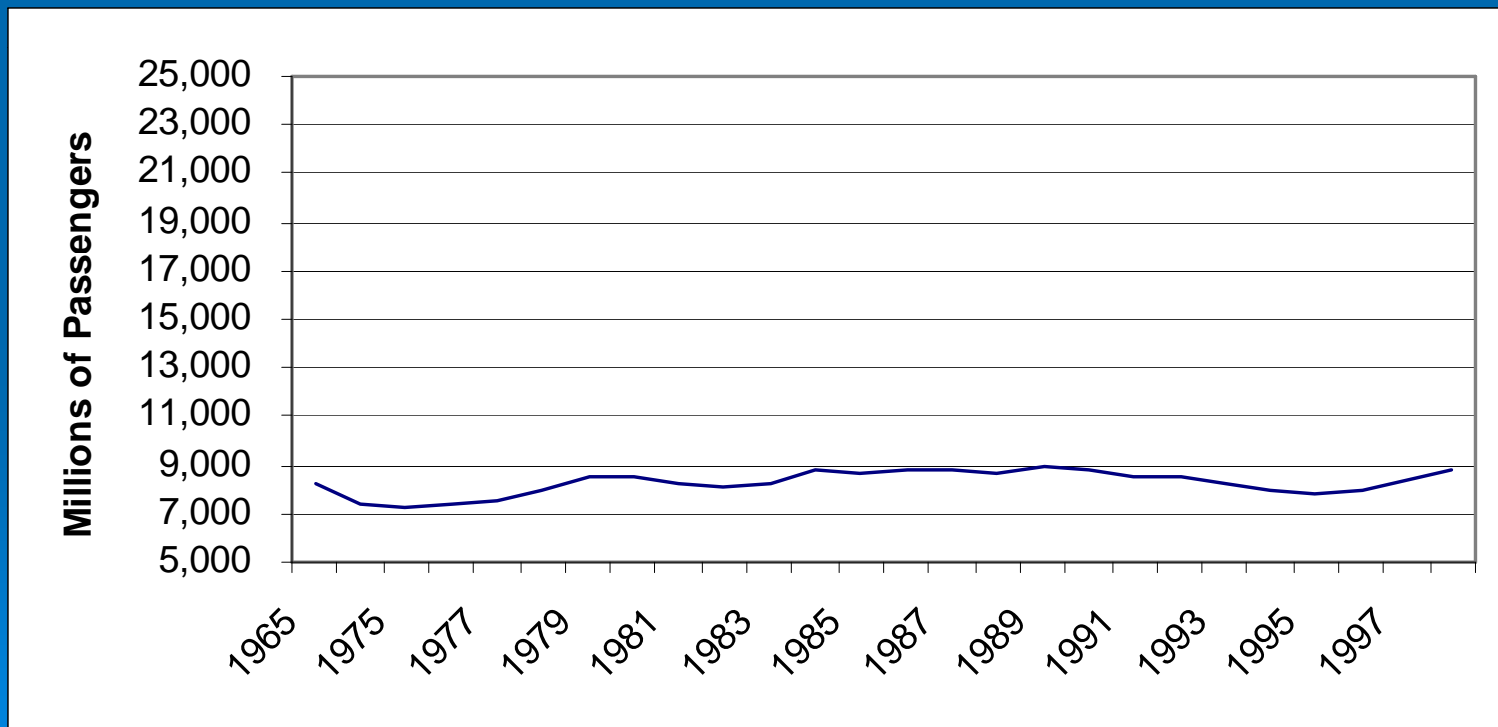
- **Campus-based** ~ U.C. Berkeley, UCLA, etc.
- **Employment-based ECO Pass** ~ City of Berkeley, etc.
- **Neighborhood-based** ~ Denver, Santa Clara, etc.
- **Teen-student-based** ~ Denver, etc.

Outline

- Public Transit and Sustainability
- Motivation for Study
- How Program Can Increase Revenue
- Analogy to Insurance Program
- Case Study Findings
- Conclusions

Public Transit & Sustainability

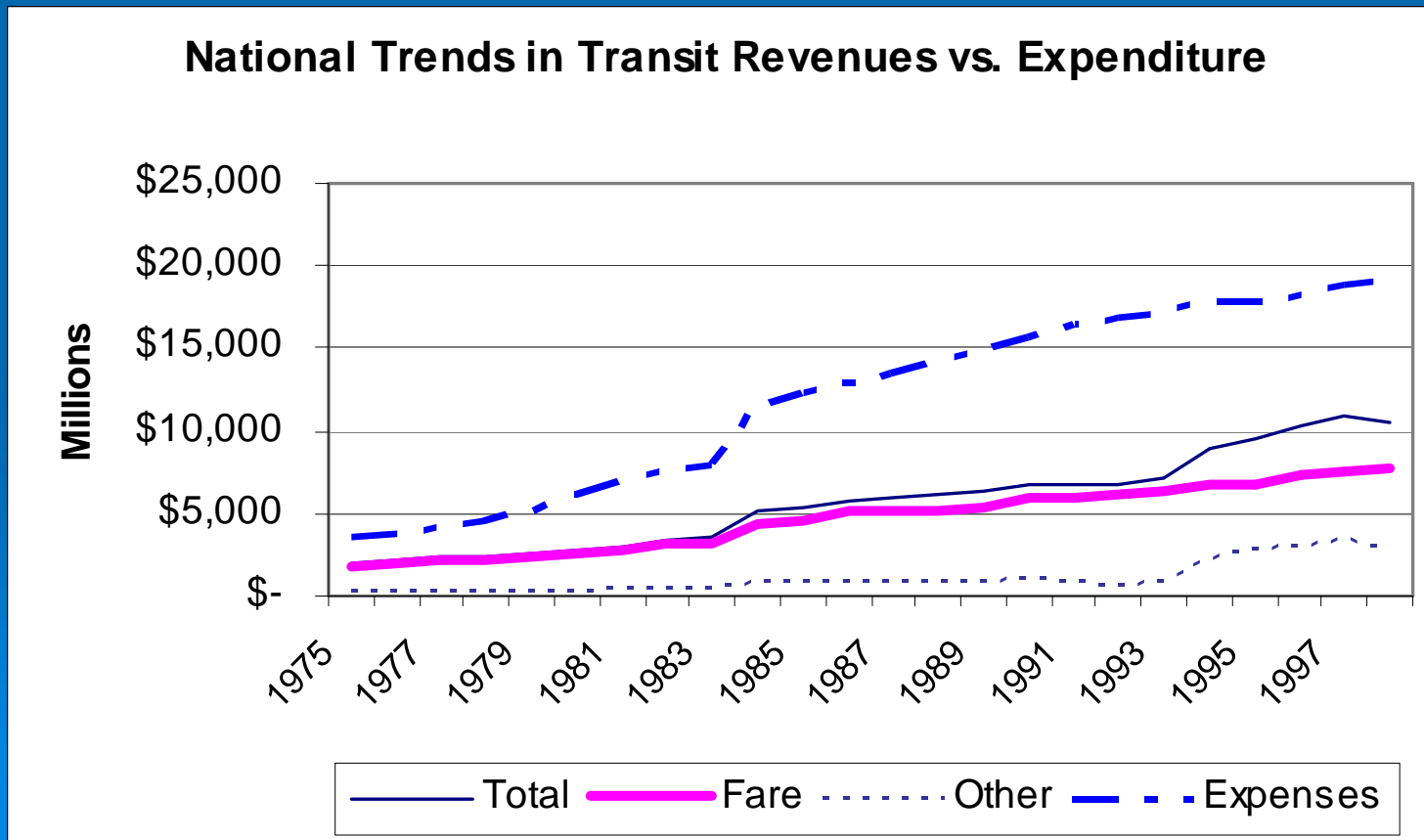
- National trends in **Transit Ridership**
 - **Do not reveal major gains or changes**



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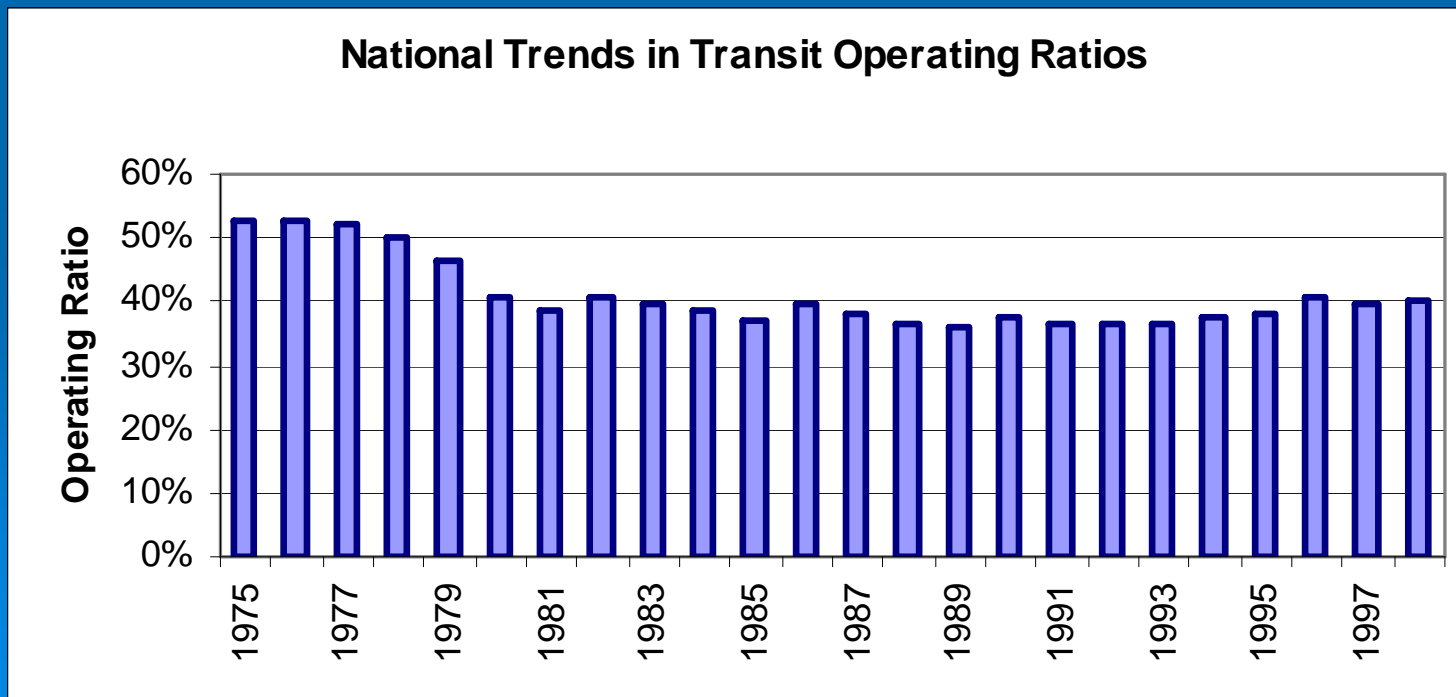
Public Transit & Sustainability

- National trends in **Operating Expenses & Revenues**
 - **Reveal widening gap between revenue and expenditure – an unsustainable trend**



Public Transit & Sustainability

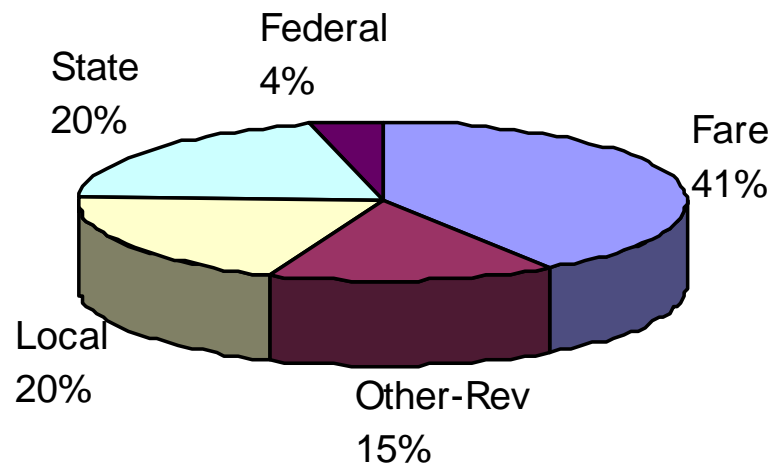
- National trends in **Operating Ratios**
 - **Reveal consistently low ability (40%) to meet expenditures from farebox receipts –**
 - **Requires shortfall to come from other sources = mostly subsidy**



Public Transit & Sustainability

- National data on **Funding Sources**
 - The dominant sources remain governmental (federal, state, local = 44% subsidy)
 - Can these government sources provide additional funding if increases are needed?

Shares of Funding Sources (US 1998)



Problem & Issues

- **Answer is NO!**
- From Transportation Finance session:
 1. Gas tax receipts depict declining purchasing power (Brian Taylor)
 2. Major shortfalls projected in funding to maintain existing transportation system in CA (Cindy McKim)
 3. Thus search for “new” financing sources (Asha Weinstein)
- Therefore need to look for, adopt, adapt, or deploy avenues that can increase revenue is not unique to Public Transit

Motivations for Study

- Higher transit ridership has benefits:
 - allows higher levels of economic development in downtowns
 - results in less congestion and air pollution that would otherwise occur, etc.
- Fare reductions can boost ridership but can also reduce revenue, require increased subsidies
- General fare increases do not seem to work
- Increased public subsidies for operating costs are hard to get
- It is necessary therefore to find innovative ways to finance transit operations without raising fares or tapping the public purse (more)
- A well-crafted deep discount pass program may be one of those innovative ways of financing transit operations

Q: How could a deep discount transit pass program increase revenues?

- A: A deep discount transit pass program can increase revenues if the price is set so that the total collected for providing a pass for everyone is greater than the revenues that would have been received from individual fares, plus administrative costs.
- **HOWEVER:** agencies did not think of it this way
 - emphasis was only on rider benefit
 - agencies often feared excessive costs
 - many agencies actually fought discount pass programs

Basic Concept: The Deep Discount Pass as an Insurance Policy for All Travelers

- An insurance company insuring properties against theft is concerned that the total premiums it collects will (at least) cover the total cost of replacing any property that is stolen.
- ❑ An insurance company is an intermediary, which organizes the pools and incurs transaction costs.
- As the pool size increases, the risk cost and often the transaction costs become smaller and the premium approaches the fair level.
- The transit agency is concerned that the total group revenue covers the “total cost” of providing the service irrespective of who rides.
- Transit agency is a facilitator, which promotes the pool through deep discount programs and incurs transaction costs.
- As number of participants increases, the unit service and transaction costs become smaller and the price per participant (or per pass) reduces.

Setting the Price: A Simple Example

Downtown workers	5000	
Transit mode share	4%	
Choice riders	200	
Monthly pass price	\$50	
Monthly revenue		\$10,000
Monthly DDGP	Discount	Revenue Increase
\$2	96%	\$0
\$4	92%	\$10,000
\$6	88%	\$20,000
\$10	80%	\$40,000

Case Study Findings: Revenue

- 90% discount to City of Berkeley
 - AC Transit earned \$2.00 to \$2.50 per boarding in 2002 = three times system-wide unit revenue of \$0.67 (2000)
 - City still saved money compared to cost of buying (full price) passes for transit users at full price demand levels
 - Net annual revenue > \$50,880 i.e. > +175%
- 93% discount to U.C. Berkeley students
 - Net monthly revenue > \$40,500 i.e. +50%
 - Net annual revenue > \$405,000
- 40% to 90% discounts by Denver RTD
 - All deep discount programs yield more revenue per boarding than system-wide averages every year
 - ECO Pass programs yielded almost two times as much as the system-wide average in the year 2002

Case Study Findings: Level of Use

- Use of the deep discount pass among program participants tended to **increase** over time
- One-third to two-thirds of pass holders actually use the pass for travel
 - 28% of City of Berkeley employees
 - 40% of Silicon Valley employees
 - 44% of Denver Airport employees
 - 58% of downtown Denver employees
 - 67% of U.C. Berkeley students
- Only part of the increased use is during the peak periods

Findings: Mode Choice (All Trips)

- Auto-drive-alone mode consistently loses shares to transit
- Transit mode consistently gains by 5 to 15 percentage points
- First year of campus programs registered
 - U.C. Berkeley by 160%
 - Consistent with findings of other campus programs -- 70% to 200% increases in student transit ridership;

Findings: Time of Travel

- **Students** – earlier and later travel in addition to peak period use
 - many midday and evening trips in addition to peak period trips
- **Workers** –work trips and other trip purposes
 - 2/3rds of trips were to and from work in the peak periods
 - 25% of trips were midday, work-related trips or midday, non-work travel
 - Remaining 9% of trips were mostly evening (after working hours)
 - Average weekday use nearly three times weekend use

Conclusions

- Transit fare reductions implemented through deep discount group passes can boost ridership and can also maintain, or even increase, revenue
- Ridership increases during the peak, but even more so in the off-peak
- While peak period increases could be problematic for some operators, for many the additional riders can be accommodated

Conclusions

- Transit agency should set price to assure it has at least as much revenue as it would get without the deep discount program
- Transit agency must also account for costs of pass program administration and for any increased costs due to higher ridership levels
- Price of pass can vary for different groups:
 - with larger groups, unit service and transaction costs become smaller and the cost per pass is reduced, so discount can be bigger

Conclusions

- **More revenue . . . *Can lead to***
 - **less reliance on subsidy +**
 - **higher ability to finance operating costs**
 - **greater chance at sustaining operations**

➤ **Thanks**