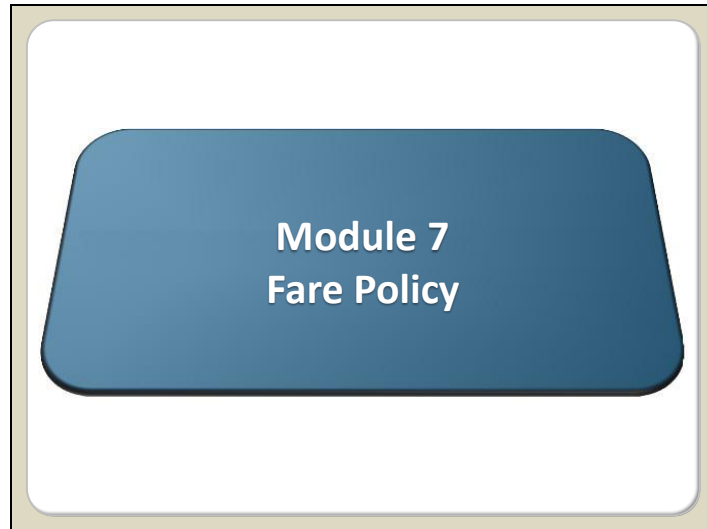


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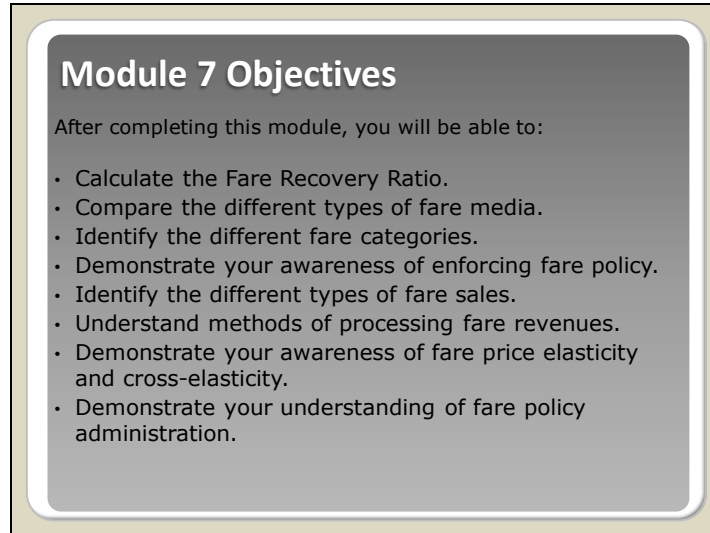


Welcome to the Fare Policy module.

We will explore the importance of Fare Policy to public transportation.

Module 7

Fare Policy



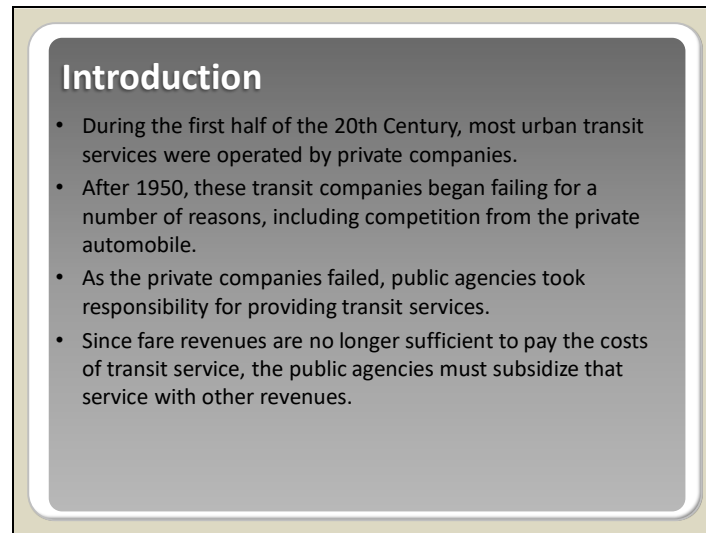
Learning Objectives

This module provides you with a basic understanding of fares and fare collection for urban transit agencies. After completing this module, you will be able to:

- Calculate the Fare Recovery Ratio.
- Compare the different types of fare media.
- Identify the different fare categories.
- Demonstrate your awareness of enforcing fare policy.
- Identify the different types of fare sales.
- Understand methods of processing fare revenues.
- Demonstrate your awareness of fare price elasticity and cross-elasticity.
- Demonstrate your understanding of fare policy administration.

Module 7

Fare Policy



Introduction

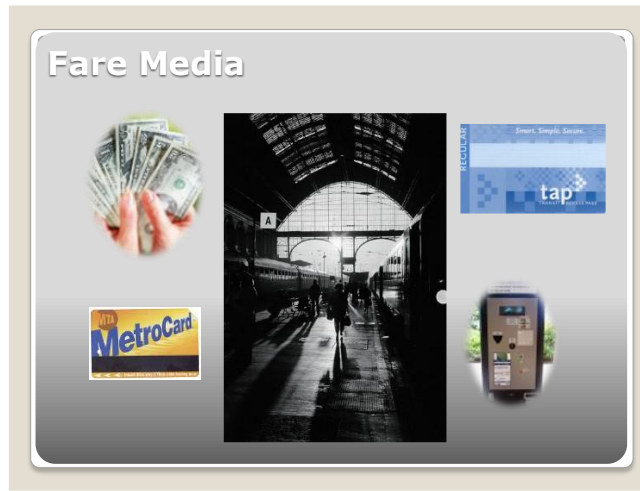
During the first half of the 20th Century, most urban transit services were operated by private companies that depended on fare revenues to pay for all operating expenses and capital infrastructure. After 1950, these transit companies began failing for a number of reasons, including competition from the private automobile. As the private companies failed, public agencies took responsibility for providing transit services.

Currently, transit service in all major U.S. cities is publicly owned; since fare revenues are no longer sufficient to pay the costs of transit service, the public agencies must subsidize that service with other revenues.

The ratio of fare revenues to operating expenses is called the cost recovery ratio, or the fare recovery ratio. Note that the fare recovery ratio does not include capital costs. In most transit agencies across the U.S., the fare recovery ratio ranges from 15% to 30%. Generally, fare recovery ratios for rail service are higher than for bus.

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Fare Policy



Fare Media

In the days of the private transit companies, fare structures were fairly simple. As passengers boarded the buses or trolleys, they deposited either cash or tokens into the farebox. A few transit operators sold passes or multi-ride tickets that could be punched by the driver or conductor to decrement the number of remaining rides on the ticket. Most transit drivers or conductors carried coin dispensers on their belt in order to make change. Today, most transit agencies accept a variety of fare media:

- Cash
- Tokens
- Transfers
- Tickets
- Passes
- Electronic Fare Media
- Mobile Media

As agencies mature and technology advances, the types of fare media the agency accepts also change, to better serve their market. This is also true when the agency upgrades existing fare equipment, as in the 1980's when there was a major shift towards electronic registering fareboxes.

Let's take a closer look at the different types of fare media.

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Fare Policy



Cash

Cash payments are normally used by those who are new to the system, ride infrequently, visitors and by low-income persons who may not be able to purchase a pass. Most transit agencies require exact change. As the cost of processing cash fares increases, transit agencies are trying to move riders to prepaid fare media.

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Credit & Debit Cards, Apple & Google Pay

Recently, many transit agencies have installed payment systems that allow riders to pay electronically – with credit & debit cards, Apple & Google Pay, and the like – on a pay-as-you-go basis. Pay-as-you-go charges the rider each time they board a bus or train. That said, some systems recognize the payment card or account, and cap the fare at a specific maximum for a time period such as a day or month. For example, if a day pass costs \$10, the system will charge that card or account a maximum of \$10 for the day – regardless of the number of boardings. This fare capping feature is intended to provide the same pricing to those riders that cannot afford to prepay (discussed below).

There are several factors that make this type of payment worth adopting:

- No cost to agency for issuing cards.
- Most already have cards.
- Processing costs are minimal – but the agency should have someone with expertise monitor these costs.

Note that accepting this type of payment requires the agency meet credit card payment standards. Payment card industry (PCI) compliance helps ensure the security of each one of your business's credit card transactions.

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Fare Policy

Prepaid Fare Media

Transfers

Tokens

Tickets

Passes

Electronic Fare Media

Let's take a look at prepaid fare media. It is important to note that agencies have moved towards prepaid fare media for a number of reasons. These are:

- Ease of boarding,
- Reduction of shrinkage
- Receipt of money up front as passes are purchased, and
- Reduction in the cost of processing farebox revenues

Prepaid fare media are generally discounted by the agency and are marketed as a way for riders to lower their cost per trip. The discount is made up for by lowering the cost of processing revenues and receiving the money up front.

There are many different types of prepaid fare media.

Transfers – Many transit agencies issue transfer slips upon request to boarding passengers when they deposit a valid fare. The transfer may then be used as a prepaid valid fare when boarding another transit vehicle to complete the rider's trip. Usually transfers have a time limit within which they are valid, and are generally limited directionally.

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Tokens – Tokens are special coins minted for a transit agency. They are usually sold in rolls or bags and can be used by transit passengers in the same manner as cash. Most transit agencies have discontinued the use of tokens, as they are also costly to process.

Tickets – Tickets are pre-paid fares that can be used as valid fare when boarding a transit vehicle. Tickets can be for a single or multiple rides. Since tickets are one of the easiest fare media to counterfeit, fraud has always been an issue, consequently as the use of electronic fareboxes has risen, the use of tickets has decreased.

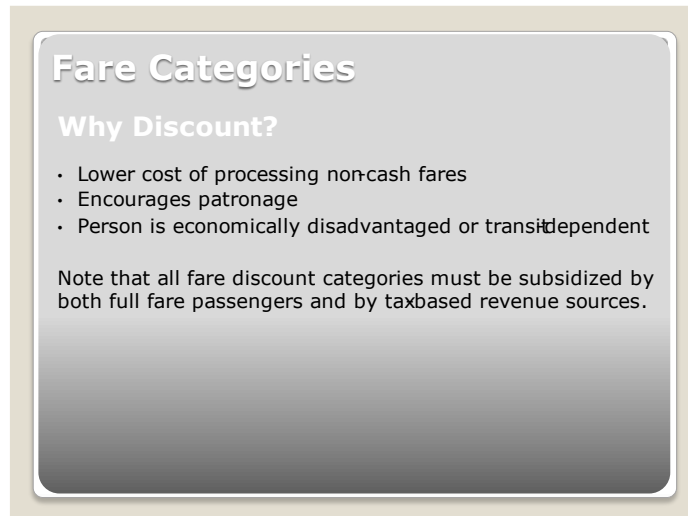
Passes – Passes are another form of pre-paid fares. They offer an unlimited number of rides on the transit system during a particular period of time or a specified duration. Typical periods for passes are daily, weekly, monthly and even annually. Day passes, which are good for 24 hours or until the end of the service day, have taken the place of transfers on many systems, as there tends to be a lot of fraud with transfers. Even annual passes are available. Most agencies have switched to electronic fare media, as they are more secure and harder to counterfeit.

Electronic Fare Media – Most transit agencies now offer some form of electronic fare media. The most common are passes or tickets with magnetically encoded strips. The passengers swipe the ticket through an electromechanical reader, or have the reader scan a barcode, when boarding buses or passing through fare turnstiles at rail stations. The readers verify that the ticket is a valid fare.

Another type of e-fare that is being used at more and more agencies is a smart card. The card has an electronic chip in it that provides greater security and gives the agency more flexibility in setting fares. The passengers touch the card to the reader when boarding buses or passing through fare turnstiles at rail stations. The readers verify that the card is a valid fare.

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Fare Policy



Fare Categories

You've learned about the fare media, now we will move on to the different fare categories.

Most transit systems offer a variety of fare media at differential pricing. One reason is to encourage the use of fare media that will lower the cost of processing fares. Another is to subsidize certain categories of passengers. Some categories of passengers may be identified for special fare prices in order to encourage their patronage (marketing). Other categories may be identified because they are economically disadvantaged or transit-dependent (i.e. do not have access to an automobile). You are probably aware that your transit property is a public agency, and as such assumes a degree of social responsibility in providing transit service.

However, it should be noted that all fare discount categories must be subsidized by both full fare passengers and by tax-based revenue sources. In other words, someone must pay for the difference in the low-cost fares. The more discounted fares that your transit agency provides, the more subsidies will be required to offset the lost fare revenue.

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Fare Policy

There are many different fare categories that your agency may use. They are:

- Full-priced (basic) fares,
- Reduced fares, which includes senior citizens, persons with disabilities, and Medicare cardholders,
- Youth or students,
- Group fares,
- Zone fares,
- Time-based fares (which are also known as “off-peak”), and
- Promotional fares.

Full-Priced (Basic) Fares

This is the basic rate charged to anyone who does not qualify for one of the discount fare categories.

Reduced Fares

The Federal Transit Administration (FTA) requires that all transit agencies receiving federal funding offer fares at one-half price during the off-peak periods (midday, evenings and weekends) for seniors, persons with disabilities and Medicare card holders. Many transit agencies volunteer to extend the half-priced fares to all hours and may even price reduced fares at less than one-half. The entire policy for half-price fares can be viewed on the FTA website www.transit.dot.gov in the Half Fare Triennial Review guidance document.

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Normally there are three types of reduced fare riders:

- Seniors
- Persons with Disabilities
- Medicare Cardholders

Seniors

Agencies are required by the FTA to define a senior as, at a minimum, all persons over 65 years old.

Persons with Disabilities

The FTA defines a person with disabilities as persons “who by reason of illness, injury, age, congenital malfunction, or other incapacity or temporary or permanent disability (including any individual who is a wheelchair user or has semi-ambulatory capabilities), cannot use effectively, without special facilities, planning, or design, mass transportation service or a mass transportation facility.”

For those riders using Paratransit service, the Americans with Disabilities Act of 1990 (ADA) permits fares to be no more than twice the base cash fare on the fixed route system.

Medicare Card Holders

Any individual who has a valid Medicare card. The FTA requirement also states: “Though most Medicare cardholders are elderly (age 65 or older), it is important to recognize that Medicare cards can be issued to non-elderly persons with a disability. A Medicare card can be issued to anyone under 65 years of age who has received Social Security or Railroad Retirement Board disability benefits for 24 months or is a kidney dialysis or kidney transplant patient.”

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Youth or Students

Although not required by federal regulation, most transit agencies offer discounted fare prices to students under age 18. Often, pre-school children may ride free if accompanied by an adult.

Group Fares

Many transit agencies also offer special fare rates to certain groups. Examples of such groups could include employers or colleges that can guarantee participation from 100% of their members. For example, an employer could be offered deeply discounted transit passes for all employees if he could guarantee that all of his employees would purchase a pass, regardless of how much they use it. The incentive here is that by getting transit passes into the hands of people who might not otherwise use transit, they may be encouraged to try it.

Zone Fares

The premise behind zone fares is simple: the farther you travel on the transit system, the more you should pay. Zone fares are common on major metro rail (subway) systems, but are difficult to administer and enforce on bus systems. Consequently, most bus and light rail transit systems have a flat fare. Some transit systems offer significant fare discounts for travel within special zones (e.g. central city).

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Fare Policy

Time-Based Fares

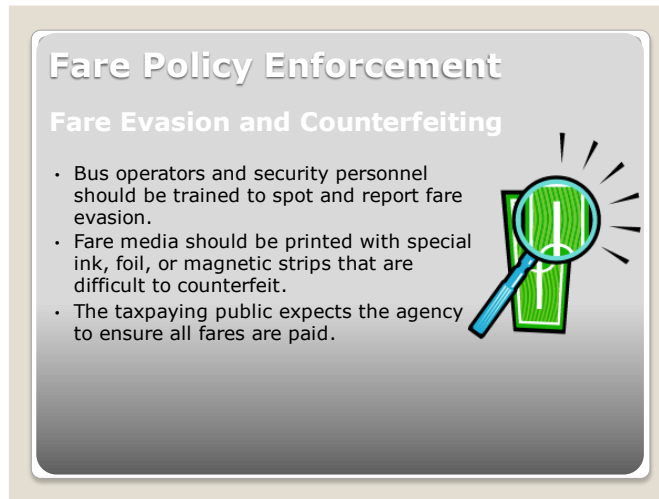
The premise behind time-based pricing is that those who use the service when demand is greatest should pay more. This form of differential pricing is common among utility and transportation agencies. In the transit industry, the marginal cost of adding an increment of peak period service is usually higher than that of adding an increment of off-peak service. However, this cost differential has diminished with the use of part-time operators. Peak differential fare pricing is still employed at some transit agencies; however, it must be carefully administrated to minimize confusion among passengers and those who administer and enforce the fare program.

Promotional Fares

Transit agencies will sometimes offer discounted or even free fares on a temporary basis to promote transit service. These promotions are a good way to encourage people to try new transit service.

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Fare Policy



Fare Policy Enforcement

Now that you have learned about the different fare categories, we will talk about how to enforce our fare policies.

Fare evasion and counterfeiting of fare media are always potential problems. Bus operators and security personnel should be trained to spot and prevent fare evasion or report actual fare evasion. Where feasible, fare media should be printed with special ink, foil strips, or magnetic strips that are difficult to counterfeit.

Fare enforcement is an important part of any agency's fare policy. Ensuring that all fares are paid properly is something that the taxpaying public expects an agency to do; it is also something that most riders feel is important – nothing is more irritating to a rider than to pay their fare and then see someone else ride without paying the proper fare.

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Fare Policy

With respect to fare payment and enforcement policies, there are two types of transit systems: barrier and barrier-free systems. Let's learn about these types next.

Barrier System

The Barrier system requires riders to pay prior to boarding a vehicle. This covers bus systems and many rail or subway systems.

On bus systems, it is generally up to bus operators to ensure that passengers present or deposit a valid fare. Electronic fareboxes can normally be configured to assist the operator by providing validation that different types of fare media are valid. Most fareboxes beep when a pass is tapped or swiped to indicate the pass is valid.

Usually, the operators are trained to avoid confrontation with irate or obstinate passengers. It is good to have backup security services "on call" either by transit security forces or through agreements with local law-enforcement agencies. Many transit systems are now equipping their vehicles with security cameras.

Many subway systems have controlled access via turnstiles. Station agents or security cameras or both are available at the stations to monitor riders properly using the fare system.

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Barrier-free System

Barrier-free systems are just that – riders may board a vehicle without going through a fare gate, paying a fare or showing a pass. Generally, these systems have off-board fare collection (i.e. ticket vending machines – TVMs) and riders are required to have proof that they have paid their fare prior to boarding the vehicle.

Light rail, commuter rail, and some Bus Rapid Transit (BRT) systems present unique challenges for fare enforcement. Boarding is off the street (there are no controlled boarding areas) and, except for some commuter rail systems, the operator does not collect fares. Consequently, most of these systems use a "proof-of-payment" system that requires all riders to carry proof that they have paid their fare. This proof-of-payment could be an appropriately time- or location-stamped single ride ticket, a monthly pass, or some other form of pass.

Since riders board and alight freely, the proof-of-payment system requires fare inspectors to randomly board the trains and inspect riders for valid proof-of-payment. Any riders who do not have valid proof-of-payment may be issued a citation with a fine, which is usually very steep, depending on local laws. Inspection must be frequent enough so that the long-term probability of the cost of being cited and fined for non-payment is greater than the cost of paying the fare for each ride.

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Fare Policy

Fare Sales – Methods and Potential Pitfalls

Fares may be sold to the public in a number of ways. As with any retail sales activity, a primary objective of the fare purchase transaction should be maximum convenience for the consumer. Remember, though, there are administrative requirements and costs for any type of fare sales.

There are two types of sales: agency and third-party outlets.

Agency Sales

Common venue	The most common fare sales venue is on-board buses. Cash fares are paid at the farebox and many agencies also sell day passes at the farebox. Rail systems and many BRT systems provide TVM's at the stations. The TVM's generally will accept cash or credit/debit cards.
How is it sold?	Prepaid fares may be sold directly by the transit agency at customer service centers or transit stores. Issues with these facilities include staffing, security and processing of sales receipts. Many agencies prefer to use third party sales outlets for sales of prepaid fare media to their riders.
Internet Sales	Many agencies are now selling fare media through the internet. Generally credit cards are the main source of payment; however other outlets such as Paypal are used as well. Just as with any credit card sales, these revenues must be reconciled daily to ensure that the proper amount of revenue is being deposited to the agency's bank account.

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Third-Party Outlet Sales

Description	Prepaid fares may be sold for the transit agency by third party retail merchants as a convenience to their customers. To entice more private companies, many agencies pay a commission to the third-party outlets based on the volume of sales.
Accounting	Depending on the type of pass sold at the third-party outlets, prepaid fares may require more complicated accounting. If an agency uses passes that are tied to specific dates (i.e. monthly pass for a specific month), the accounts at the fare sales outlets must be reconciled, usually on a monthly basis. The transit agency must collect unsold fare merchandise and receive payment for sold fare merchandise. Many agencies use “rolling” passes that are good for a specific time period that starts upon first use. With these types of passes, the outlets can simply be invoiced for the number of passes they buy, as the passes will not expire. Depending on the accounting system, prepaid fare revenues may be booked on a cash basis as payments are received, or on deferred accrual basis as payments are earned (i.e. as the prepaid fares are used on the transit system).

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Fare Policy

Third-Party Outlet Sales (continued)

Working with employers and schools	Many transit agencies also work with employers and schools to sell fare merchandise to people where they work or attend school. Most commercial and employer sales outlets are unwilling to integrate transit fare sales into their own accounting systems. Consequently, the transit agency is given the cash, personal checks and credit card transaction slips from each of the individual customer sales. These payments must be deposited, and the transit agency usually has responsibility for following up on bad checks or credit card transactions with problems.
Auditing	All fare transaction records are subject to audit, and it is important to build in sufficient controls to minimize the potential for illicit loss of revenues at each step in the collection process.

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Processing Fare Revenues

Even though most agencies are attempting to move their riders away from cash fares, they must all still deal with processing cash from fareboxes and TVMs.

How to process fare revenue

[Step 1]: Cash fares require special handling. The money must be securely transferred from the vehicles or TVMs into the revenue center.

Data from bus fareboxes is typically downloaded at the vault facility or wirelessly transmitted to a central computer system.

With TVMs, cash must be retrieved from the machine. This can be accomplished by agency staff or contracted out to a security company.

[Step 2]: The cash from the fareboxes is then normally emptied into secure vaults for processing.

The money from TVMs can either be brought to the counting facility or the contractor may also count the money and deposit it.

[Step 3]: The money is now sorted, counted, and bundled or bagged for transport to a bank. The coins are usually sorted and counted by machine, but paper currency requires some manual handling, even if currency sorters are used.

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How to process fare revenue (continued)

[Step 4]: Once delivery of the money is made to the bank, the transit agency must obtain a receipt to record the deposit.

[Step 5]: The fare receipts should be reconciled daily to the revenue receipt records from the fareboxes. For TVMs, each machine must be reconciled when it is counted to ensure that it is accurately recording sales and that the correct amount is being deposited.

Agencies should have one individual in charge of processing revenues and another individual overseeing and auditing the reconciliation of the revenue and fare data. The person doing the auditing should have access to all the pertinent data and should review all the data daily to ensure that policies are being followed and revenues are in line with expectations.

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Fare Policy

Security of the Counting Facility

Security should be one of the top priorities in developing fare policy. While this is an issue all agencies face, for smaller agencies with smaller staffs, dealing with security issues can be difficult; however, this is one area that should take precedence at every agency. There are a number of measures agencies should ensure are being carried out properly. Click the glowing arrows to examine each one.

Access to the counting room – This should be strictly controlled – both who gets in and how it is accessed. Any time there is money out, only count room staff should be allowed in, no custodial staff, no repair people, no other agency staff. Key control is vital in ensuring that only the properly authorized personnel have access; keys should be tightly controlled, and no keys should ever be taken home by employees.

Video surveillance – All count rooms should be monitored by cameras. It is essential that the cameras be maintained properly and also that they be reviewed frequently to ensure that there are no “holes” in the surveillance area.

Uniforms – Many agencies require that their count room staff wear long sleeved jumpsuits with no pockets while in the count room.

Strong security measures ensure protection of agency’s assets, but they also ensure that those employees who follow them will be protected if an incident occurs. It is imperative that any breach of security be dealt with swiftly, so that any employee who is testing the system towards the idea of breaching security will decide that it is too risky.

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Fare Policy

Fare Price Elasticity

$$\epsilon_s = \frac{\text{Percent change in ridership}}{\text{Percent change in price}} = \frac{\frac{\Delta R}{R}}{\frac{\Delta P}{P}}$$

- Transit fare elasticity normally falls into the range of -.2 to -.4.
- Common elasticity used is -.33



Fare price elasticity

Fare price elasticity measures the change in transit ridership as a function of change in fare prices. Let's take a look at a simple elasticity example (See the glossary if you would like to view the definition). If a 10% increase in fare prices results in a 5% reduction in ridership, the fare elasticity is -0.5. The negative sign (-) indicates that the fare and ridership move in opposite directions. Transit fares are almost always inelastic. That means that fare increase results in a loss of ridership but a net gain in fare revenues. The loss of fare revenues from the passengers who decide not to ride (as a result of the fare increase) is more than offset by the increase in fare revenues from the remaining passengers.

There have been many studies of fare elasticity over the past decades. Generally, transit fare elasticity falls into a range of -0.2 to -0.4. A -0.2 elasticity is said to be "lower" or "smaller" (i.e. riders are less responsive to fare changes) than a -0.4 elasticity. A common rule of thumb used in the transit industry (sometimes called the Simpson-Curtin Formula) is an elasticity of -0.33.

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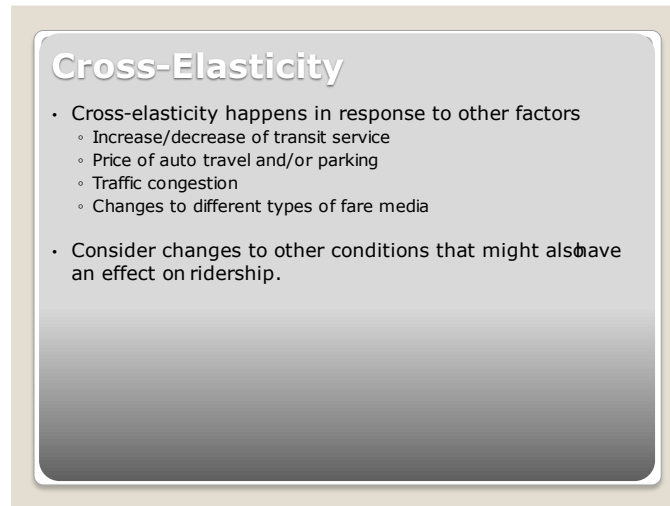
Factors in Fare Price Elasticity

There are several factors that might warrant some differences in fare elasticity:

- Small cities tend to have larger fare elasticity than large cities.
- Bus travel is more elastic than commuter and rapid-rail (subway) travel.
- The elasticity for off-peak travel is higher (up to two times more) than that of peak travel elasticity.
- Short distance trips are more elastic than long-distance trips.
- Fare elasticity rises with income and falls with age of transit riders.
- Work trips are less elastic than non-work trips. Shopping and school trips can be two to three times more elastic than work trips.

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Fare Policy



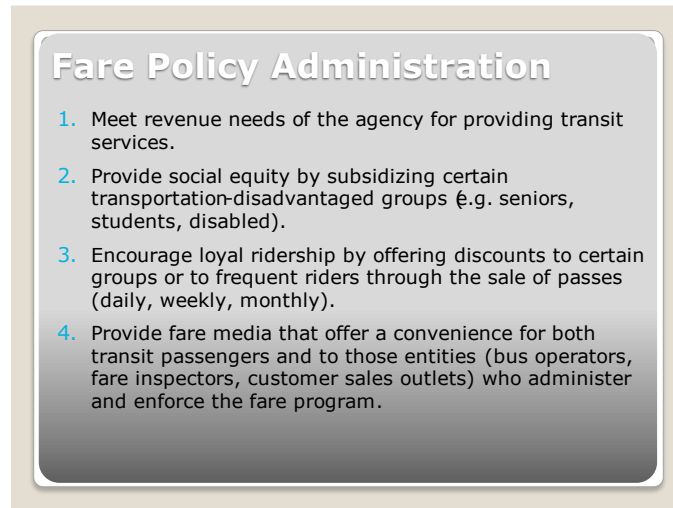
Cross-Elasticity

We just finished talking about price elasticity. Another type of elasticity, cross-elasticity, measures the impact on ridership of factors other than price, such as an increase or decrease in the amount of transit service, price of automobile travel, price of parking, traffic congestion, changes to different types of fare media, or many other factors.

It is important to remember that when contemplating fare price changes, you need to consider changes to other conditions that might also have an effect on ridership.

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Fare Policy Administration

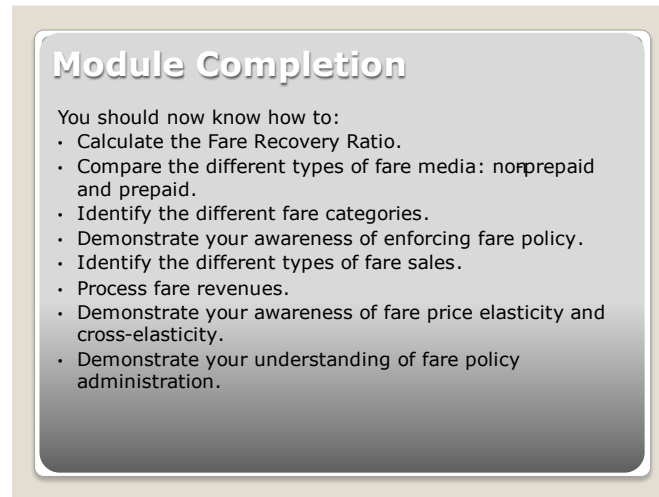
Now let's take a look at fare policy administration. Public transit agencies use fare policy to achieve a number of objectives. First, agencies must meet the revenue needs of the agency for providing transit services. Another objective is to provide social equity by subsidizing certain transportation-disadvantaged groups (e.g. seniors, students, disabled). Agencies also need to encourage "loyal" ridership by offering discounts to certain groups or to frequent riders through the sale of passes, either daily, weekly, or monthly. Finally, agencies need to provide fare media that offer a convenience for both transit passengers and to those entities (bus operators, fare inspectors, customer sales outlets) who administer and enforce the fare program.

From time to time, the Board of Directors may wish to change fare prices or to introduce new fare media. This change might include an "across the board" increase to offset increasing costs of service, or it might be a price change on one or more categories or fare media types to achieve a special objective.

Increasing fares is not a very happy prospect, and making the decision to do so usually requires a considerable amount of deliberation by the Board and requests to staff for extensive analysis.

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Fare Policy



Congratulations! You have completed the Fare Policies module. You should now know how to:

Calculate the Fare Recovery Ratio.

Compare the different types of fare media: non-prepaid and prepaid

Identify the different fare categories.

Demonstrate your awareness of enforcing fare policy.

Identify the different types of fare sales.

Process fare revenues.

Demonstrate your awareness of fare price elasticity and cross-elasticity.

Demonstrate your understanding of fare policy administration.

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Fare Policy

Fare Policy Glossary

ADA Paratransit Service

Non-fixed-route paratransit service utilizing vans and small buses to provide pre-arranged trips to and from specific locations within the service area to certified participants in the program. Federal regulations restrict fares to no more than double the base fare of fixed route service.

Americans with Disabilities Act (ADA)

This Act gives civil rights protections to individuals with disabilities that are like those provided to individuals based on race, sex, national origin, and religion. It guarantees equal opportunity for individuals with disabilities in employment, public accommodations, transportation, State and local government services, and telecommunications. See “Half Fare” below.

Automatic fare collection (AFC)

A system of devices and technology that automates ticketing and fare collection for a public transit system.

Average Fare

Represents the average fare paid per passenger boarding on each mode of service during the period. $\text{Calculation} = (\text{Modal Passenger Revenue} - \text{Commissions \& Discounts}) / (\text{Modal Passenger Boardings})$

Base fare

The minimum cost paid for transit service during base periods, excluding express service charges, transfer charges, or reduced fares.

Certified Riders

Passengers who have been deemed eligible for Paratransit services because their disability inhibits them from functionally accessing fixed route services. Eligibility is determined in accordance with the criteria outlined in the Americans with Disabilities Act of 1990.

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Demand response

Demand response, or demand-response transit, is a broad category of public transit in which shuttles or other shared vehicles will alter their routes during each journey based on rider locations and drop offs. Rides can be summoned through an app or phone call.

Elasticity

Fare price elasticity measures the change in transit ridership as a function of change in fare prices.

Electronic Fare Media

This includes agency propriety stored value cards – with prepaid value, as well as credit & debit cards, Apple & Google Pay, and the like that allow riders to pay electronically – with– on a pay-as-you-go basis.

Farebox Recovery Ratio

The proportion of operating cost that is generated by passenger fares.

Calculation = [Modal Farebox Revenue / Modal Operating Expense]

Farebox Revenue

All revenue from the sale of passenger tickets, passes, or other instruments of fare payment.

Fares

The amount charged to passengers for use of various services.

FTA (Federal Transit Administration)

The FTA is the federal agency that helps cities and communities provide mobility to their citizens. Through its grant programs, FTA provides financial and planning assistance to help plan, build, and operate bus, rail, and paratransit systems.

Fixed-Route Service

Service that operates according to fixed schedules and routes (includes bus, light rail, commuter rail, and streetcar service)

.

Half Fare

Federal Transit Administration (FTA) regulations require “For fixed route service supported with Section 5307 assistance, fares charged elderly persons, persons with

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disabilities or an individual presenting a Medicare card during off peak hours will not be more than half the peak hour fare.

Media

Fare media represent the type of payment used by the rider and includes the following.

- Token: a coin-like object, usually metal, that is normally good for one trip (or the base fare in some agencies). They are usually purchased in rolls of 10 or 20, or more, but may also be sold individually.
- Punch Card: a single piece of paper, cardboard, or some other material without a magnetic strip good for more than one trip on which a hole is punched or a date or trip is marked off, but which is not surrendered, as each trip is taken.
- Non-magnetic Pass: a single piece of paper, cardboard, or some other material without a magnetic strip good for an unlimited number of trips during a specified time period that is not surrendered or altered as each trip is taken.
- Magnetic Stored-value Card: a single piece of paper, cardboard, or some other material with a magnetic strip good for a limited number of trips that is altered by machine removal of some or all of the stored value as each trip is taken.
- Magnetic Stored-time Pass: a single piece of paper, cardboard, or some other material with a magnetic strip good for an unlimited number of trips during a specified time period that is not surrendered or altered as each trip is taken.
- Smart Cards: a single piece of material without a magnetic strip but with a small computer chip good for one or more trips that is usually not surrendered but altered by machine removal of some or all of the stored value as each trip is taken.
- Single-ride: a single piece of paper, cardboard, or some other material without a magnetic strip good for a single trip that may be wholly or partially surrendered as the trip is taken. A multi-ride tear-off ticket can be disassembled and converted to a number of single-ride tickets that are sold separately.
- Multi-ride tear-off: one perforated or several pieces of paper, cardboard, or some other material without a magnetic strip good for more than one trip on which a portion is detached and surrendered as each trip is taken.
- Open Payment System: A fare system that allows payment at the faregate or farebox using a contactless debit or credit card, mobile phone NFC or other tap technology.

Agencies may employ more than one fare medium on each mode,

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Modes

Transit modes are the means by which the transit agency moves its riders from origin to destination and includes bus, rail, and paratransit systems. Typically bus is further differentiated by fixed-route, on-call, vanpool, and express; and rail by streetcar, light rail, subway / urban rail, and commuter rail. Some agencies also have ferry boat service.

On-demand transit

A method of passenger transportation that allows for vehicles to alter their routes during each journey based on particular transport demand without using a fixed route or timetable. Vehicles typically pick-up and drop-off passengers in locations according to passengers' needs and can include taxis, buses, or other vehicles.

Off-Peak

Non-rush hour time periods.

Paratransit Service

Any transit service required by the 1990 Americans with Disabilities Act (ADA), generally characterized by pre-arranged curb-to-curb service provided by accessible vehicles.

PCI

PCI compliance standards require merchants to consistently adhere to the PCI Standards Council's guidelines known as the Payment Card Industry Data Security Standard (PCI DSS) established by the five largest credit card firms. These guidelines include 78 base requirements, more than 400 test procedures and 12 key requirements. (Note, these requirements change over time. Employ an industry expert to ensure that your agency is up to date.)

1. Install and Maintain Firewall to Protect Cardholder Data: Properly configured firewalls are highly effective at keeping private information secure, which is why the first requirement is that merchants maintain a secure firewall configuration.
2. Proper Password Protection: Most routers, modems, point-of-sale (POS) systems and other third-party products come with a factory default username and password that are simple to guess or published on the internet. In order to meet the second requirement, businesses must not only change the password settings, but also maintain a list of all devices and software that require a password and change those passwords frequently.
3. Protect Cardholder Data: This two-fold protection of cardholder data is the most important requirement on the list. Merchants must encrypt cardholder data with

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certain algorithms, then perform regular scans to ensure no unencrypted data exists.

4. **Encrypt Transmitted Data:** Similar to requirement three, merchants must secure cardholder data when it is transmitted over public networks.
5. **Use and Maintain Antivirus Software:** Antivirus software is required for all devices, including workstations, laptops and mobile devices, that interact with primary account numbers (PANs). The antivirus software must be updated on a regular basis to detect known malware.
6. **Properly Updated Software:** Firewalls, antivirus software, databases, POS terminals and more require constant updates to patch security vulnerabilities. Merchants must limit the potential for exploits by updating systems and applications in a timely manner.
7. **Restrict Data Access:** The ability to access cardholder information should be on an exclusively “need to know” basis. Staff members, executives and third parties who do not need access to this data should not have it.
8. **Unique IDs for Access:** Each authorized user to computer access must have their own unique user ID and password. This ensures accountability for individuals who are granted access to sensitive data and reduces response time in the event of a data breach.
9. **Restrict Physical Access:** Cardholder data must be kept in a physically secure location such as a secured room with a locked cabinet. Access to sensitive data should be limited.
10. **Create and Maintain Access Logs:** Log entries are required for all activity involving cardholder data and primary account numbers (PANs). All systems must have a correct audit policy set where logs are continuously reviewed to look for suspicious activities.
11. **Regularly Test Security Systems:** All systems and processes must be tested on a frequent basis to ensure that security is maintained and to help identify potential weakness along any point of the security system. Even the best security systems are subject to malfunction, human error or aging vulnerabilities. Continuous testing can find these limitations.
12. **Document Policies:** All systems, software and authorized employee logs involving the PCI DSS requirements must be documented.

Peak Period

Morning or evening rush hour.

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Reader

A device (also known as a validator) on the bus, train, or platform that reads or validates an electronic ticket or card.

Reduced Fares

Most agencies offer discounted fares to categories of individuals, typically beyond federal requirements:

- Senior citizens, persons with disabilities, and Medicare cardholders,
- Youth or students
- Low-income
- Military veterans

Also, agencies may discount:

- Group fares
- Zone fares (within a certain area),
- Time-based fares (which are also known as “off-peak”), and
- Promotional fares.

Subscription Service

Paratransit passengers traveling at least three times per week to the same location at the same time can be placed on “subscription service.” This service is “automatically” scheduled for the passenger, and it is not necessary for the passenger to call and schedule the service.

Vanpool Fares

Each individual vanpool (an arrangement whereby commuters travel together in a van) normally has a unique fare based on the distance traveled, size of vehicle, and number of people in the vanpool. Consequently, the fare for a vanpool rider can go up and down over time. In some cases, the driver of the vanpool sets the fares based on his or her expenses in operating the vanpool. Normally, only monthly passes, multi-trip tickets, or punch cards are used. Personal checks and cash are the usual forms of payment.

Zone fares

A system of fares where a transit system’s service area is divided into zones with different specified rates or fares.