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Possibilities for Local Public and Cooperative Ownership of Short-Line Railroads

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The short-line railroad has become an important option in the development of alternatives to the abandonment of branch lines by major railroads in the United States. The purpose of this paper is to explore the relative merits of two seldom-used institutional arrangements for the ownership and operation of short lines: local public ownership (by municipalities, counties, or special districts) and incorporation of the short line as a cooperative of shippers. The experience with publicly owned short-line railroads is described. Some have been publicly owned since their inception, whereas several others have been established recently to maintain service on abandoned branch lines. The very limited experience with cooperative railroads is also described, and certain legal and financial aspects of cooperative operation are analyzed. The paper concludes with an analysis of the relative advantages and disadvantages of locally owned short lines in general and public and cooperative short lines in particular. Short lines can generally operate much more cheaply than can major railroads. A shippers' cooperative or other locally owned short line is likely to provide better service and engender greater shipper support, thereby generating more revenue. Local public ownership possesses additional advantages, especially where it can internalize substantial community-wide benefits from rail preservation. A public railroad can also direct railroad policy toward public objectives such as community development.

The short-line railroad has become an important option in the development of alternatives to the abandonment of branch lines by major railroads in the United States. This paper explores the relative merits of two seldom-used institutional arrangements for the ownership and operation of short lines: local public ownership (by municipalities, counties, or special districts) and incorporation of the short line as a cooperative of shippers. Both arrangements show considerable promise and have certain advantages over the more common alternatives--shipper-owner for-profit corporations, private independent ownership, and ownership as a subsidiary of a major railroad.

A short line is defined by the Interstate Commerce Commission (ICC) as a line-haul railroad (not a switching or terminal line) that has gross revenues under \$10 million, i.e., a class III railroad. There are currently more than 285 short lines in the United States, many of which have been established in the wake of abandonments (1). Nineteen short lines were formed between 1976 and 1978 alone to operate lines abandoned when Consolidated Rail Corporation (Conrail) took over the bankrupt eastern railroad network in April 1976.

The number of short lines will probably grow significantly over the next decade. The movement toward deregulation of the railroads can be expected to reduce the cross-subsidization of branch lines that the major railroads are unable to operate profitably. Short lines can be expected to develop to maintain service on these lines in many in-

stances. There is also the prospect of additional bankruptcies of entire railroad companies. With bankruptcy, the abandonment process is greatly facilitated. Service will generally be continued only on those portions of the bankrupt system that another railroad purchases. In the case of light-density branch lines, continuation is unlikely unless an existing short-line railroad company steps in or a new local line is created.

There is also the prospect of growing involvement of the states and the federal government in facilitating and subsidizing the formation of short-line railroads. Federal financial assistance is available under several branch-line subsidy programs. The Rock Island Transition and Employee Assistance Act of 1980 in particular has promoted the development of short lines through its loan program for "noncarrier entities." Several states have also become involved in the acquisition of railroad rights-of-way with the intention of facilitating continued operation of branch lines as short-line railroads.

There is a variety of institutional arrangements for ownership and operation of short lines. The majority of the approximately 285 short lines that existed in 1978 were profit-making corporations. About a third of these were independent, another third were shipper-owned or industry-owned, and a third were owned or controlled by a major railroad (2,1).

There have been several cases of short lines owned and operated by local governments; at least five such railroads existed as of 1980. More common are arrangements in which a municipality or special district owns the right-of-way and/or trackage and then leases the line to a private short-line operator (or, in some cases, to a major railroad). Finally, a short-line railroad could be organized as a cooperative that had local farmers, cooperative elevators, farm-supply companies, and other local businesses as members. We know of only one example of a railway officially organized as a cooperative. This paper is concerned with the merits of these two less-common institutional arrangements for the ownership and operation of short lines: local public ownership and ownership by a shippers' cooperative.

EXPERIENCE WITH PUBLICLY OWNED SHORT LINES

Local governments have become involved with short lines in various capacities over the last 120 years. The most common form of involvement is one

in which a local government owns a railroad right-of-way, which is then leased to a private operator. The oldest of these is the Cincinnati Southern, which runs 336 miles from Cincinnati to Chattanooga. This railroad was built by the city of Cincinnati shortly after the Civil War. Since its beginning, it has been leased to private operating companies, most recently the Southern Railway (3, pp. 30-31). There were also some minor and short-lived instances of city involvement in short lines in Oregon during the early part of this century (4, p. 1a). More recently, municipalities and counties in Wisconsin have become involved in the ownership of rights-of-way abandoned by the major railroads under a state program to finance acquisition (5). The lines (nine at last count) are operated by private short-line railroad companies. Pend Oreille County in Oregon also took this approach. In 1978, the voters approved a bond issue to purchase a 61-mile line abandoned by the Milwaukee Railroad. The county then secured a rehabilitation grant and hired a short-line contractor to operate the railroad.

There have been six municipally operated short lines in the postwar era--four small ones and two larger entities. Of the four, three were acquired on abandonment by a major private railroad. The first case is the Milltown Airline Railroad, a 9-mile line in southern Georgia abandoned in 1928 and then purchased by the city of Lakeland. The city operated the line as the Lakeland Railway but was forced to abandon it in the late 1950s due to declining traffic and continuing deficits (4, p. 1a).

The second case is the Municipality of East Troy Railroad (METR), purchased by the village of East Troy, Wisconsin, in 1939 when the Milwaukee Electric Railway and Light Company sought to abandon the line (4). Only 7 miles long, it extends from East Troy to a connection with a main line of the Soo at Mukwonago. It has been operated as a city department since 1949. It has only two employees and operates on a demand basis primarily for a steel-tube manufacturer and a farm-supply company.

The East Troy railroad is of interest because it runs operating deficits every year but local benefits are sufficient to warrant continuation under subsidy. A study by the Wisconsin Department of Transportation indicated that the benefits to the shippers and the community exceeded the costs of operation (including rehabilitation costs) by more than three to one (5, p. VII-74). The major part of the local benefits consists of savings in transportation costs to local shippers (compared with the cost of alternative modes) and local wage losses avoided. Rail service is essential to the steel-tube manufacturer, who employs 400 persons and presumably would have to relocate at least part of the operation were the line abandoned.

Between 1970 and 1976, annual railroad expenditures for METR averaged about \$42 000. Of this amount, about 19 percent was covered by switching payments from the Soo line, 27 percent by a tariff on the shippers and by other forms of shipper subsidy, and about 15 percent from miscellaneous sources. The remaining 39 percent was covered by a subsidy from the village treasury. However, this subsidy amounted to less than a tenth of the property taxes paid by the three shippers to the village (6).

More recently, the city of Madison, Indiana, became involved in the short-line business. A 25-mile branch line of the former Pennsylvania Railroad was taken over in 1978 by the city of Madison Port Authority (1, p. 43). The line, known as the Madison Railroad, was expected to produce revenues of about \$57 000 in 1980 compared with an

operating subsidy of about \$428 000 and a total subsidy of \$603 000 (80 percent from the federal government). However, the port authority "envisions a dramatic growth in traffic on the line when the river port becomes operational, moving grain from interior points to the river and chemicals from the river to inland destinations" (7, p. 89).

A new short line, the Port Bienville Railroad, was established in 1972 by the Hancock County Port and Harbor Commission in Bay St. Louis, Mississippi. The commission built the 9-mile line to serve an industrial park that it also owns. The railroad is operated by an employee of the seven-member Port and Harbor Commission, appointed by the Hancock County Board and by several cities within the county. The railroad generates gross revenues of \$100 000 to \$250 000/year and, according to the commission, is now almost self-supporting.

The two larger examples of existing short-line railroads owned and operated by local governments are the Belfast and Moosehead Lake Railroad (BML) and the City of Prineville Railway (COP). Both railroads have been owned by municipalities continuously since their inception. [Unless noted otherwise, the following history of the BML and the COP is drawn from Due's 1974 study of three municipal railroads (4), the METR being the third.]

The BML

When the main line of the Maine Central Railroad was constructed to Bangor, it bypassed the city of Belfast. Private interests failed to build the needed 33-mile connection, so the city of Belfast formed the BML in 1867. The line was completed in 1870 and shortly thereafter was leased to the Maine Central, which operated it until 1926. At that time, the BML took over operations and has continued to run the railroad as a short line up to the present.

The BML is a corporation; the city of Belfast owns 95 percent of the common stock, and the town of Brooks owns the remaining 5 percent. The board of directors of the railroad is named by the Belfast city council, which until 1971 generally appointed one council member to the board and filled the remaining positions with officials of the major firms that shipped on the line. In 1971, a new city council expanded the size of the board and filled the new positions with council members in an effort to more effectively assert council interests with regard to railroad policy. In particular, the council wanted the railroad to actively seek to diversify traffic and to promote development of an industrial park. Day-to-day operations have always been left to the manager of the railroad.

The railroad operates one train of 18-20 cars daily. Most of the traffic is inbound and consists of poultry feed. The BML had never run an operating deficit as of 1974. On the other hand, it has never paid a dividend, although the city apparently does not expect it to. It is probably best described as a breakeven or marginally profitable operation that has net deficits in 21 of the 47 years (1926-1974) and cumulative net earnings for that period of \$150 000. In recent years, however, operating deficits have appeared, due in part to some decline in traffic between 1972 and 1977. The net operating deficit amounted to \$294 301 in 1977 and \$414 567 in 1978. These figures may be deceiving, since they reflect one-time rail rehabilitation expenses; the overall net income was -\$29 776 in 1977 and was \$7771 in 1978 (8, p. 634; 9, pp. 41-44). It appears to operate efficiently. The 1960 cost per ton mile of freight carried was \$0.056, which compared favorably with costs for eight private short lines of

comparable length and traffic density (only two had lower costs). The railroad has 36 employees and is not unionized.

The COP

The COP has been operated by the city continuously since its inception. The Union Pacific main line was constructed in 1910 through the new city of Bend, Oregon, but missed Prineville by 18 miles. The city feared that they would lose their position as a dominant regional commercial center to Bend, which was developing around several lumber mills. In 1916, the voters of Prineville approved a bond issue to build the line, which was completed in 1918. Failing to find a private operator, the city ran the line itself as a city department by appointing a railroad manager who was responsible to a three-member council railroad committee.

Although the line showed an operating profit in its first years of operation (interest costs on the bonds still being paid from city taxes), it began losing money in 1924 and struggled for its survival throughout the Depression. It showed an operating deficit for every year but one from 1924 through 1938. Expenses were cut drastically, bills went unpaid, and maintenance was deferred to the point that derailments were an almost daily occurrence. Such cost-cutting measures were not sufficient, however, in the face of drastically declining traffic and revenues. The deficits mounted, and the city defaulted on the bonds in 1930.

It is clear that the Prineville railroad would not have survived the Depression had it been a private railroad. A private firm simply could not sustain mounting losses for 14 years with no assurances of an increase in traffic and revenues. That the railroad continued is testimony to the great importance placed on it by the citizens of Prineville. From the beginning, they had hoped that the railroad would foster development of the lumber industry, the principal potential source of local economic growth in Prineville. They continued to hold on to that hope throughout the 1930s and their tenacity was eventually rewarded. In late 1935, an old mill in the town was reopened and gradually began to expand. Three other mills opened between 1938 and 1940, and at that point railroad traffic expanded sharply. In 1968 the line went from one to two trains daily, with about 20 cars per train. There are now seven major mills dependent on the rail line, and 90 percent of the traffic is directly related to the lumber industry.

The line has shown an operating profit every year since 1939 except 1945. For 1978, the railroad showed a net operating income of \$180 489 and an overall net income of \$59 421 (8, p. 643). Between 1945 and 1973, the city earned about \$2.6 million from railroad operations. An additional \$900 000 in net profits was reinvested in the railroad or put in a reserve fund. In recent years, rail profits supplied one-third of the city general fund receipts, four times as much as is raised from the property tax. The railroad is run efficiently. Operating costs per ton mile were \$0.044 in 1968; among 12 short lines of comparable mileage and traffic density, only three had lower costs. Lower costs cannot be attributed to the lack of a union, since operating personnel have been unionized since 1940 and the shop employees and the office employees since 1967 and 1974, respectively.

ORGANIZATION OF SHORT-LINE RAILROAD AS A COOPERATIVE

Experience with Cooperative Railroads

Transportation cooperatives have existed for many years in agricultural regions of the United States. In most cases, they are organized as a cooperative of cooperatives; that is, the members are agricultural marketing or supply cooperatives. Dairy cooperatives, for example, may join together to form a cooperative that owns and operates milk trucks for the member co-ops. A number of co-op elevators have formed railcar pools, and there is at least one co-op that operates a barge line.

There has been only one case of a cooperative that actually owned and operated a railroad line, the short-lived Central Iowa Transportation Cooperative of Kalona, Iowa. In 1970, a group of shippers from Kalona and neighboring towns got together to fight the proposed abandonment by the Rock Island Railroad of a 63.4-mile branch line running from Hills to Montezuma, Iowa. They eventually incorporated as the Central Iowa Railway Company (CIRC) and purchased the line in March 1973 for \$300 000 with a Small Business Administration loan. The owners issued rosy predictions of financial success, and the first CIRC train rolled down the line in August 1973.

In November 1973, the railroad was reorganized as a cooperative on the recommendation of a consultant. The principal motivations for organizing as a cooperative were, apparently, a belief that the sale of stock would thereby be facilitated and a desire to obtain certain tax advantages available to cooperatives. In March 1974, the Central Iowa Transportation Cooperative (still operating under the name CIRC) issued a prospectus for the sale of stock, hoping to raise at least \$270 000 in order to continue operations. Only \$14 100 in stock was actually purchased or subscribed.

The failure of the stock issue was probably due to several factors. First, the railroad suffered substantial losses during 1973 and moved only 37 loaded cars between August and December. The future financial success of the railroad probably appeared very doubtful to potential investors. Second, shippers on the line did not need to invest heavily in the railroad in order to protect their own investments, since alternative transportation was readily available in most cases. Most farmers in the region were within 12 miles of at least one grain elevator located along one of several other rail lines. Shippers on the rail line had already shifted to truck transport for the most part, as shown by the low level of traffic on the CIRC (only 97 loaded cars in 1974). In June 1977, the railroad filed a petition for abandonment with the ICC, which met with little or no opposition from the shippers and was supported by the Iowa Department of Transportation (IDOT).

There were several factors contributing to the failure of the CIRC. The track was in very poor condition; IDOT estimated a cost of \$5.8 million (more than \$90 000/mile) to bring the line up to Federal Railroad Administration (FRA) class I standards (which would permit operation of trains at speeds up to 10 mph). It was also to the line's disadvantage that there were so few captive shippers. Traffic density was extremely low, less than two carloads per mile per year. According to one study, the ratio of benefits to costs for rehabilitation and operation of the line as of 1974 was only 0.06 (10).

Legal Aspects of Cooperative Operation

The CIRC experience leads to a consideration of two legal issues: the status of a cooperative railroad with respect to taxation and its status with respect to regulation. For purposes of state and local property and sales taxation, a cooperative is treated as any other business (unless state law provides an explicit exemption for cooperatives). The principal tax issue is the treatment of cooperatives under the federal corporate income tax. Before we explore this issue, a brief explanation of the structure of cooperatives is in order.

The principal features of a cooperative that distinguish it from a corporation are that (a) each member is entitled to one vote regardless of his or her investment, (b) any nonvoting preferred stock earns a dividend at a fixed rate, and (c) members are entitled to patronage refunds in proportion to their business with the co-op (members, in effect, receive co-op services at cost).

For all producer co-ops (those marketing crops or livestock for producers or supplying producers with materials and equipment), patronage refunds are taxed at the individual rather than at the cooperative level. Only net income that remains after patronage refunds is treated as profits to the cooperative. Co-op profits are treated exactly the same as are the profits of private corporations unless the co-op falls under Section 521 of the Internal Revenue Code, which provides as follows:

1. The (Section 521) cooperative must be an association of farmers, fruit growers, or the like organized either to market the products of its members or "for the purpose of purchasing supplies and equipment for the use of members or other persons, and turning over such supplies and equipment to them at actual cost plus necessary expenses."

2. If the co-op has capital stock, substantially all the stock (other than preferred nonvoting stock) must be owned by producers who market products or purchase supplies through it, and the dividend rate cannot exceed 8 percent or the legal rate of interest in the state, whichever is higher.

3. Business with nonmembers cannot exceed 50 percent of the total business, and purchases for nonmembers who are not producers cannot exceed 15 percent of total purchases.

4. Nonmembers are to be treated the same as members with regard to prices charged and patronage refunds given.

A cooperative meeting the requirements of Section 521 qualifies for favorable tax treatment as specified in Subchapter T of the Internal Revenue Code (11). Subchapter T permits additional deductions in determining taxable income. These deductions are for amounts paid out as dividends on capital stock and for amounts of nonpatronage income (e.g., income from rents, capital gains, or from business with the U.S. government) paid or allocated to patrons. Thus dividends on stock for a 521 cooperative are taxed only once--at the individual level--whereas dividends of corporations and non-521 co-ops are taxed at the corporate level as well.

The relation of cooperative railroads to ICC regulation was also raised by the CIRC. The CIRC stock prospectus stated: "As are all common carriers by railroad, the CIRC is subject to regulation primarily by the Interstate Commerce Commission...." However, it is not obvious that a railroad cooperative would necessarily need to be organized as a common carrier. Trucking cooperatives generally operate as private carriers since they provide transportation services only to co-op mem-

bers and not to the general public. As private carriers, they are not regulated by the ICC with respect to rates, routes served, or mergers. Exemption from ICC regulation could provide advantages to a small short-line railroad in terms of the freedom from extensive paperwork and involvement in tariff determination with other railroads. On the other hand, a railroad cannot obtain a division of the through rate from a major connecting railroad unless it is a common carrier. Instead, it would have to negotiate a per-car fee. It is generally felt that a share of the through rate is more advantageous to the short line (12, p. 237). Thus the short line might well be better off under ICC regulation even if it could legally operate as a private carrier. However, this issue could become moot under deregulation if surcharges eliminate the advantages of rate divisions to short lines.

A final issue concerns the effects of the commodities clause of the Hepburn Act of 1906, under which a cooperative short line operating as a common carrier would technically not be allowed to carry cooperatively owned freight. This limitation could perhaps be avoided by organizing the short line as a cooperative of cooperatives and leaving freight ownership in the hands of the constituent co-ops. An alternative would be to organize the co-op as a private carrier.

RELATIVE MERITS OF PUBLIC AND COOPERATIVE OWNERSHIP OF SHORT-LINE RAILROADS

Advantages of Short Lines and Local Ownership

Regardless of the form of ownership, a short-line railroad is likely to be able to operate more cheaply than a class I or class II railroad. Short lines are typically nonunion and are not subject to the restrictive work rules, crew-size requirements, and high pay scales of the railroad brotherhoods. Unless switching operations are complicated, trains can probably be operated with a two-man crew; for small lines, the operating personnel may also perform diesel maintenance and other tasks (even some right-of-way maintenance) when their services are not required to operate the train (13,14). Wages may be closer to the prevailing wage in rural areas than to the going national rate for unionized railroad employees. Part-time employment may be feasible, and clerical tasks might be performed by staff of the city or of the shippers.

A locally owned short line has additional advantages over a private short line controlled by non-local interests. The local short line is likely to be more accessible to local shippers and more willing to provide service tailored to their needs (13, p. 12). A major study performed for FRA concluded: "The successes of short lines appear to be due to committed local management and the flexibility of small, local enterprises" (14, p. 11).

In some cases, particularly under municipal or cooperative ownership, the locally owned short line may be satisfied with a lower rate of return than would a nonlocal privately owned line. The nonlocal firm can more readily withdraw its capital from one operation and put it elsewhere, whereas the local firm is more committed to the community and will be more likely to put up with longer periods of slack business and low returns.

The nonlocal firm may well possess railroad management expertise of much greater depth and breadth than is locally available. The importance of this factor can be exaggerated, however. Regardless of who owns the line, it will be necessary to hire a manager with substantial railroad experience. A local firm should be able to retain such a

manager just as easily as a nonlocal firm for a railroad of a given size. As for specialized expertise needed periodically (especially during the organization phase) and beyond the abilities of the manager, the nonlocal firm can be expected to supply such expertise from its central offices. The local firm could easily contract for such services from a qualified consulting firm as needed. In the case of co-op or municipal ownership, it may be possible to capitalize on the management expertise of the existing co-ops or municipal administrations as well as existing legal and financial departments.

However, a large independent railway would have a clear advantage over a small line of any description in the area of established relations with the ICC and the rate bureaus as well as in situations where sheer economic power may produce results otherwise unobtainable.

Public and Shipper-Owned Short Lines

Among locally owned short lines, the shipper-owned alternatives have some advantages over independent operation. The users of the railroad have a very direct stake in its operation and are bound to see that service is good. Furthermore, the shippers are more likely to use the railroad in situations in which a competing mode is comparable in price and service than if the railroad were independently owned (13, p. 12). This is because the shippers themselves will have to share in railroad losses.

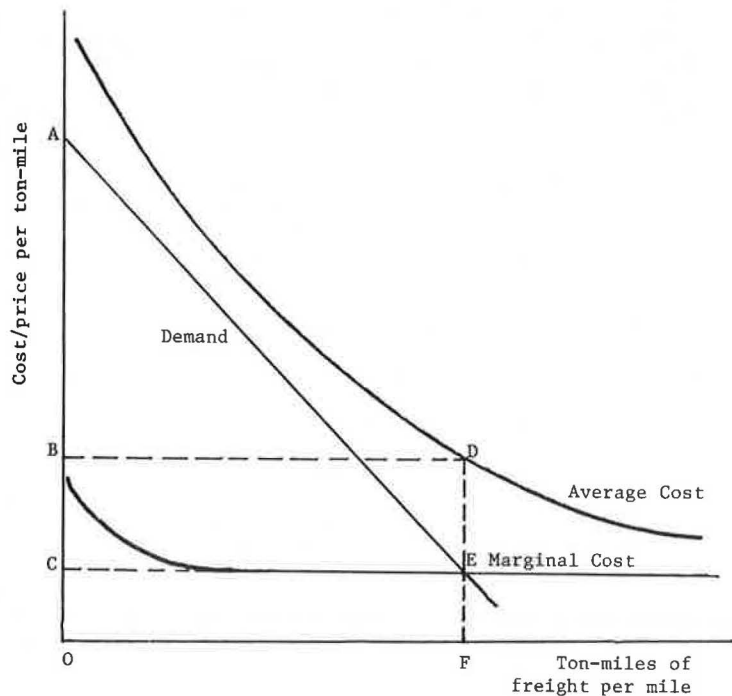
The shipper-owned short line may be able to qualify as a private carrier rather than as a common carrier subject to ICC regulation. In order to operate as a private carrier, the railroad would have to serve only its owners. Although some short lines owned and operated by and for one company (a mine or a manufacturer) may be private carriers, it appears that most shipper-owned railroads (especially those in which a group of shippers is involved) are common carriers. As discussed above, deregulation may eliminate the major attraction of common carrier status (advantageous rate divisions) and make private carrier status a more-attractive option.

Another argument for a shipper-owned or publicly owned short line is based on the economics of railroads. Analysts agree that economies of scale in railroad operations are substantial; the very high fixed costs involved in the acquisition and rehabilitation of the right-of-way and track and in purchasing capital equipment such as locomotives result in sharply declining average costs per ton mile as traffic density (ton miles of freight per mile) increases (15,16). The result is that a short line may not be profitable even though it is economically justified. That is, the true cost of carrying freight by rail may be lower than the cost by truck, but the railroad may not be able to price its service below that of truck transport and still cover average costs.

This problem is illustrated in Figure 1. Let us assume that marginal costs and average costs of rail operations decline with traffic density as shown. The demand curve for rail transport is dependent on the price and availability of substitutes (truck transport, plant relocation) and the market for the shipper's product (and hence the profitability). Rail traffic increases as rail freight rates decline, which reflects a diversion of traffic from other modes and perhaps some increase in total freight movements. As illustrated here, the demand curve for rail could fail to intersect the average cost curve; in such a situation there would be no price that could be charged that would cover average costs.

Let us further assume that freight rates are equal to marginal costs on the branch line (OC), which are about equal to average costs for main-line high-density operations, so that the rates do cover costs for the portion of the trip over main lines of class I railroads. For the short line, rates equal to OC produce losses per ton mile equal to BC, the difference between revenues and average costs per ton mile. However, operation of the line may still be economically justified. Shippers' total willingness to pay for rail service is equal to the area under the demand curve (OAEF). This area may well exceed the total costs of operation OBDF (cost per ton mile times ton miles carried). In other words,

Figure 1. Relation among costs, traffic levels, and demand for hypothetical short-line railroad.



the consumers' surplus of shippers, triangle CAE, may exceed the losses of the railroad CBDE. This simply means that the annual losses to shippers from rail abandonment would exceed the annual operating losses of the railroad.

In the case illustrated, shipper subsidy of the line is justified. However, this cannot be accomplished by an increase in freight rates since demand is everywhere below average cost. Instead, shippers must be taxed or must agree to share in the losses in proportion to each shipper's consumer's surplus, which is defined as the maximum amount (above rail freight rates) that the shipper would be willing to pay to preserve the availability of rail service. Those who would lose more through abandonment should cover more of the losses. Such a formula for allocating losses would probably produce quite different results from one based on each shipper's share of total ton miles hauled. A large user might be one who could readily switch to truck, for example, whereas a small user might have to shut down in the absence of rail service. The latter might derive a much greater total benefit from continuation of rail service and so should be assessed a larger share of operating losses.

With the advent of contracts for service, uniform tariffs are no longer required under ICC regulation and a short line could negotiate an agreement with each shipper that would approximate the allocation of costs described above. In the absence of such contracts, a shipper-owned railroad could accomplish the same thing through an agreement among its members as to the sharing of losses.

Shipper Cooperatives

A shipper-owned short line could be organized as a corporation for profit or as a cooperative. If a cooperative railroad operating as a common carrier charged all shippers a common rate, resulting revenues might or might not cover costs. Operating profits or losses would be distributed among members in proportion to business with the co-op. This principle might create a disincentive to use the railroad if losses are anticipated, since the larger a given member's share of co-op business, the larger his or her share of annual losses. For a cooperative, the appropriate solution would be an agreement among the members to make additional contributions through the subscription of capital funds. There is no requirement that such contributions be proportional to business with the co-op, so that the railroad losses could be distributed in accordance with each shipper's consumer's surplus.

The U.S. Department of Agriculture (USDA) has recommended the formation of a Rural Transportation Administration (RTA) modeled along the lines of the Rural Electrification Administration. Such a scheme was outlined in a report by the Cooperative League of the U.S.A. (17). The RTA would make loans available to rural transportation cooperatives on attractive terms and would provide technical assistance to aid in the formation and management of the co-ops. If such a proposal were enacted by Congress, then there would clearly be an advantage to the cooperative form of organization, particularly through the availability of long-term financing. The first steps toward the creation of an RTA were taken in November 1980 when USDA announced that it was accepting applications from states for assistance in setting up demonstration rural transportation cooperatives.

In the absence of a major federal impetus to the formation of co-ops, a cooperative short line does not appear to have a clear a priori advantage over a private corporation composed of shippers. Both

would be controlled by shippers, which should enhance service and induce greater use of the railroad. The private shipper-owned short line might be a more-attractive investment if a large positive net income is anticipated, since the rate of return is not limited. Investment in nonvoting preferred stock of a cooperative may be unattractive when the dividend is limited to 8 percent at a time when inflation is more than 12 percent. On the other hand, the Section 521 cooperative income tax advantage might more than offset this, and state law may permit a rate of return higher than the 8 percent specified by federal law. The cooperative might be able to engender greater community support and is probably the logical form of organization when the major shippers are themselves cooperatives.

Local Public Ownership

Ownership and operation of short-line railroads by local government units has certain unique advantages. First, there are general public benefits associated with rail transport. These result from the fact that truck traffic is less than it would be if the rail line were abandoned. Consequently, the negative impacts of trucking are reduced (air pollution, noise, highway safety, road maintenance costs, and energy consumption). Many rural roads and bridges are in poor condition and substantial investments will in some cases be necessary to bring them up to the standards for heavy truck traffic.

Second, rail abandonment could result in the loss of local jobs. Although the loss of railroad jobs is likely to be offset by increased employment in trucking, some local businesses might be forced to shut down or relocate if their products or inputs cannot be transported by other means. In such cases, the loss of a major local employer may inflict real social and economic costs on the community. Local unemployment rates may rise for a time and/or employees may suffer the economic and psychological costs of relocating and finding new jobs. Other local businesses in the retail and service sector might no longer be viable. Furthermore, the community may feel that rail service is essential in order to facilitate (or permit) future industrial development. The experience of the city of Prineville illustrates the value of preserving rail service in order to keep open future development possibilities.

For these reasons, the benefits from continuation of rail service are not confined to shippers but may be enjoyed by the community or region as a whole. When these public benefits are substantial, taxpayers may be willing to share in the costs of maintaining rail service, especially if the line has the potential of becoming self-supporting in the future.

Public ownership of a short-line railroad allows the public, through its representatives, to determine the level and quality of service that best serves the interests of the community. Both the BML and the COP have become involved in promotion of local industrial parks. This came about through the exercise of public control and in the face of some resistance from shippers in the case of the BML. The Port Bienville Railroad was established explicitly to promote the economic development objectives of the county. It is unlikely that a private railroad would be willing to promote a public objective unless the project were profitable to the railroad. In general, public subsidy of private business without some public control over the uses of that subsidy will meet taxpayer resistance.

Established local government entities will have an advantage over ad hoc groups that rely on newly

assembled and often incomplete administrative structures. Associated with established administration is often established credit. A good track record of responsible finance combined with a capable financial staff should substantially reduce both the cost and the difficulty involved in obtaining financing for short-line rehabilitation and operation.

A public railroad possesses some unique financial advantages. First, it would be exempt from state and federal income taxes. Second, capital expenditures could be financed through tax-exempt municipal bonds. A city could use its authority to issue industrial revenue bonds to finance facilities leased to a private railroad; if the line were publicly owned, such facilities could be financed through general obligation bonds. The income from both is exempt from federal personal income taxes, but the interest rate on revenue bonds is higher since they are secured only by the revenues of the railroad enterprise. (It should be pointed out that these financial advantages are benefits from the standpoint of the locality but, from a broader perspective, represent subsidies from the taxpayers of the state or nation.)

Combined Public and Private Operation

Public control need not be exercised through direct control over railroad operations. The public authority might, for example, own the major share of the line's fixed capital--right-of-way, track, and facilities--but lease the line for operation to a shippers' group or an independent short-line company. In such a case, public control can be exercised through the terms of the lease. A closely controlled leased operation, in fact, might differ little from a line operated as a city department in which the manager controls day-to-day operations but does not make policy. The major difference is that a private operator presumably will agree to the terms of a lease only if it leaves the operator with a profit, whereas operating profits of a public authority are retained by the public.

Hirschey (16) has suggested that public ownership and maintenance of railroad rights-of-way may be the most desirable way of providing a public subsidy. Given that declining average costs and the existence of public benefits justify a subsidy of some sort, it would make sense for the public to assume the major share of fixed costs (which are responsible for the decreasing average cost problem) rather than to subsidize operating losses. It is difficult to devise a system for financing operating deficits without creating perverse incentives (the less efficient the operation, the higher the deficit and the higher the public subsidy). If the public simply assumed the fixed costs, the railroad would still have an incentive to operate efficiently so as to produce an operating profit.

Under municipal ownership and operation, a city department could operate the short line on the premise that it would cover variable costs and make some contribution to fixed costs (amortization of city debt incurred to purchase and/or rehabilitate the line). Alternatively, a lease with a shipper-owned or independent operating company could require payment (toward fixed costs) equal to some percentage of net operating income or could require payment to the city of all profits in excess of some fixed rate of return on the private firm's investment. The latter alternative amounts to a municipal franchise with a regulated rate of return.

CONCLUSIONS

Local public ownership and operation of a short-line

railroad or public ownership of the right-of-way with a closely controlled lease to a shipper-owned or independent operating firm possesses all the advantages of a local privately owned or shipper-owned short line plus some benefits unique to public control. It could attain the lower costs typical of most short lines, would be responsive to shipper needs, and would induce shipper loyalty since shippers would have an economic stake in the railroad's success. A public authority might well wish to ensure shipper satisfaction by establishing a shippers' advisory board (as was done in Prineville) or through appointment of shippers to the board of directors (as was done in Belfast) or to a city commission overseeing the rail authority.

The public body could be a municipality, a county, a special district (if state law permits transportation districts), or a joint venture of several local governments (counties and cities), as is common in Wisconsin. The use of a district larger than a single municipality would permit the public body to internalize the general public benefits from rail operations; the district should include all those who benefit significantly from the rail line. A larger district also broadens the tax base and spreads the risk.

The local short line is likely to increase in popularity in the coming years as the major railroads continue abandonment of branch-line operations. Short-line cooperatives as well as other forms of shipper-owned railroads have considerable potential where alternatives to rail transport are unavailable or costly. Local public ownership possesses additional advantages, especially where communitywide benefits from rail preservation are substantial. A national program to promote rural transportation cooperatives might well be designed to facilitate local government involvement as well, perhaps through joint ventures between municipalities and cooperatives or through public ownership of rights-of-way leased to a rail co-op for operation. Such arrangements would be ideally suited to the distribution of rail operating losses or profits among the major beneficiaries of rail service--the shippers and the public.

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Mode Alternatives for Serving Rail Freight Users

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The recent northeast rail crisis focused public attention and action on continuing branch-line service threatened with abandonment. During the early 1970s, thousands of miles of rail were abandoned as railroads sought ways to cut operating and maintenance costs. Shippers were forced to ship by truck, relocate, or go out of business. All decisions were made in the private sector. The rail crisis and the Regional Rail Reorganization Act of 1973 brought public planning and public funding into the issue of branch-line abandonment. Public agencies and shippers could work together to preserve service through contractual agreements. A federally funded branch-line assistance program has provided \$360 million to responsible public agencies for the purpose of funding branch-line subsidies and capital improvements. New York State has used this program in a comprehensive manner to preserve 43 industries and more than 3600 jobs through selective capital and operating investments. The factors that constitute a successful rail assistance program are described. Mode-choice alternatives that confront a rail freight user are discussed. A case study that involves a branch line in western New York is illustrated. The history of the branch line is described. The alternatives that face shippers and the state are explored along with the political environment that accompanied the decision-making process.

The purpose of this paper is to explore the phenomenon of recent changes in rail freight service in the Northeast and to examine how affected shippers and communities, by working through a state transportation department, have coped with the recent rail crisis in freight transportation. Much of the information and data result from my assignments with the New York State Department of Transportation's rail program, which was created to respond to New York's rail crisis.

Recent federal initiatives in rail deregulation, market dominance, and main-line rationalization have indeed made service discontinuance a nationwide issue. This paper should be of assistance to those

public officials and private interests concerned with the trade-off of retaining rail service and maintaining a healthy transportation and economic environment.

BACKGROUND

Changes in transport technology, government regulations, labor patterns, and market conditions have contributed to the decline of rail service in the Northeast, which in turn has led to the abandonment of thousands of miles of railroad main lines and branch lines. From 1955 to 1974, the share of intercity freight carried by rail declined from 55 to 38 percent. In addition, there was a decrease of 20 000 main-line track miles during that period. The railroads chose plant rationalization as a principal means of reducing operating costs through the elimination of light-density traffic corridors. At the same time, the railroads selectively reduced service and deferred maintenance in order to reduce costs.

In 1970, the rail crisis in the Northeast peaked when the recently formed Penn Central colossus, a 20 000-mile railroad system that encompassed 16 states, went into bankruptcy. Soon other carriers in the Northeast followed into insolvency. In total, these railroads served 55 percent of the nation's industries over their 31 700-mile system. Worse, it was soon apparent that the bankrupt railroads could not successfully reorganize under the traditional methods of railroad restructuring as interpreted in Section 77 of the Federal Bankruptcy