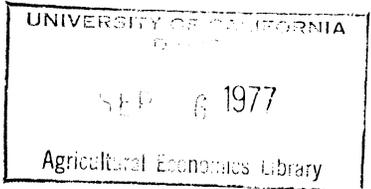


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ALTERNATIVES TO RAILROAD LINE ABANDONMENT

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Introduction

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Both the Regional Rail Reorganization Act of 1973 and the Railroad Revitalization and Regulatory Reform Act of 1976 make provisions for states to coordinate continuation of rail service on abandoned lines. Service continuation grants and track rehabilitation loans are available to encourage local line retention.

Three types of alternatives are available to states, communities and individuals desiring to maintain service on abandoned railroad lines:

- 1) development of short-line railroads may be a feasible alternative where a reliable stream of traffic volume is concentrated on lines relatively short in length,
- 2) low interest loans or outright grants for rehabilitation of roadbed and track may be feasible where improved rail service promises to generate sufficient traffic to transform the deficit operation into a profitable enterprise, and
- 3) provision of a continuing subsidy may be feasible where continued future deficits are less than the costs to shippers and others of line closure.

Assuming resources are scarce for both governmental agencies and private individuals, feasibility of any alternative requires that the benefits of rail line preservation equal or exceed costs of saving a line. Benefits to rail line preservation can be measured largely as alternative transport costs avoided by shippers, with continued service [5].

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Alternative transport cost is the cost increment associated with switching from the railroad mode to alternative means of transport. This measure takes into account effects upon shippers, receivers, consumers and rental value of producers' fixed facilities. This chapter will focus upon various institutional relationships and costs associated with the three abandonment alternatives identified above.

Short-line Railroading

The short-line railroad alternative is one requiring substantial capital, planning and management. A short-line railroad is a separate transportation company owning and coordinating freight service over a limited expanse of track, connecting with one or more larger railroad systems. Their primary business is pick-up and delivery of rail cars with connections on the larger railroad systems. Short-line railroads can also serve local traffic, that is, traffic with no other railroad connections.

Short-line railroads have two advantages which make them potentially profitable when larger railroad companies consider these line enterprises unprofitable. First, local railroad management offers more flexibility in meeting customer needs. This can result in better customer relations and higher service quality which generate traffic volume and revenue. Secondly, operating cost savings may be possible with closer attention to line maintenance and lower labor expenditures. Thus, short-line railroads offer potentials for greater net railway operating revenue from both revenue increases and cost reductions.

One disadvantage lies in the small scale of operations. Large railroads haul many types of commodities and serve many locations. When traffic is low for one commodity or region, the railroad is buoyed by revenues

generated from serving other commodities or regions. Short-line railroads, especially those converted from lightly traveled lines, tend to haul a limited array of commodities and serve very small regions. Short-line railroads are not as well insulated from the risk of traffic variations as are the larger railroads.

Four Functional Responsibilities

Conversion of an abandoned railroad line into a short-line railroad requires that an individual or group buy the right-of-way, track and bridges and continue freight operations on the line. Four responsibilities must be distributed in one of many ownership-contract-lease options. Responsibilities include ownership, right-of-way rehabilitation, right-of-way maintenance and freight service operation.

Four types of potential owners are available. First, bodies of government can buy rights-of-way and create agencies to oversee these properties. Secondly, special regional transportation authorities or districts can be designated with powers to levy special taxes to retire debts. Such governmental authorities have the advantage of developing jurisdiction across local governmental boundaries to cover the entire region directly affected by continued service on a line. Third, groups of private individuals can undertake a joint venture to purchase a line to guarantee continued service. One such organization might be a group of shippers whose shipping costs would increase without rail service. Indirect beneficiaries of rail service might also be attracted to such a group, such as builders, farmer groups and labor groups. Finally, a single, private individual can buy an abandoned line as a business venture. An individual or group seeking to provide transportation service likely will seek contractual commitments for traffic with shippers to guard

against the risk of traffic variation.

Responsibilities for rehabilitation, maintenance and operation can be distributed in numerous combinations between the owner and other parties [6]. One approach is for the owner to assume all responsibilities. This approach requires expert management, operating and maintenance equipment and a labor force. Other approaches call for contracting either track rehabilitation or maintenance or both to specialized railroad engineering firms and leasing the line to a larger carrier for a specified level of freight service.

The decision to lease operating rights to a larger railroad carrier or operate service by the owner involves two major considerations. One relates to revenues. If a line is owner operated, rate divisions are negotiated with connecting carriers. This agreement determines the percentage of the total rail rate charged which the short-line railroad will receive. Connecting railroads can also place connection charges (sometimes \$35 per car) on cars being moved onto or off of short-line track. These types of charges should be governed in the initial contract with connecting carriers to guarantee the future of reasonable connections with the railroad system. The alternative is to lease operating rights to a connecting carrier for either an annual or per car payment to the short-line owner. Choice among these alternatives will depend upon expected traffic volumes.

The second concern relates to buying transportation equipment and hiring a train crew. An owner operated line requires engines and cars and personnel to run them. Equipment must be maintained. Labor must be managed and paid benefits. A significant management component is required of the owner.

In regions where numerous railroad lines are being abandoned, specialized service companies could spring up to perform specific functions. For example, in a state or multi-state region private individuals or a cooperative of short-line owners might establish a railroad engineering firm specializing in track and roadbed rehabilitation and maintenance. In a substate region where numerous lines lie in close proximity, a single company or cooperative of short-line railroads might establish an operating company to negotiate appropriate trackage rights agreements and provide rail service over numerous short-lines.

Four Cost Centers

Short-line railroading entails four major cost items not directly related to traffic volume: purchase of facilities, rehabilitation of facilities, annual facility maintenance and management staffing.

Purchase Price of Facilities

The purchase price of an abandoned line is usually equal to the line's salvage value to the railroad. There is some precedent in ConRail acquisitions for calculation of salvage value at scrap prices. Evaluation of salvage value at scrap prices will provide a reasonable but low estimate of the purchase price. The salvage value of a railroad line has three major elements: steel scrap value, land value and cost of the salvage operation.

Steel scrap value is calculated as the weight of available steel times current scrap steel prices. Steel rail is classed in terms of pounds of steel per yard of rail. Sixty-five pound rail will yield 65 pounds per yard when salvaged. There are 3,520 yards of rail per track mile. Prices for rails cut into pieces two feet long are quoted on

numerous markets. These prices can be found in the weekly publication Iron Age. Other track material (OTM) includes spikes, tie plates and bolts. A rough calculation of available steel is made by multiplying 33.5 pounds per tie times 2,800 ties per mile, or 47 tons per mile. Scrap price for other track material is quoted as No. 1 Railroad Heavy Steel.

As an example, assume a line has 65 pound rail, scrap rail steel price is \$100 per ton and No. 1 railroad heavy steel is \$75 per ton. Gross steel scrap value per mile of the line is \$14,965.

Rail	3,520 yds/mile x 65 lbs/yd x \$100/ton ÷ 2,000 lbs/ton =	\$11,440
OTM	47 tons/mile x \$75/ton	= \$ <u>3,525</u>
Gross Steel Scrap Value Per Mile		\$14,965

Land salvage value can be estimated roughly, in similar fashion. The typical railroad right-of-way is 200 feet wide along a track. A path 200 feet wide and a mile long covers 24.25 acres per mile of roadway. If surrounding rural land sells for, say, \$250 per acre, right-of-way land is worth \$6,062 per mile of roadway. Some adjustment is necessary for land leveling. The type of control railroads have on right-of-way land is one complicating factor. If the railroad owns the land, the land is the railroad's to sell. However, if the land is to be parceled to adjacent owners upon dissolution of the line, short-line buyers would have to buy right-of-way land from numerous individual owners, unless special legislative provisions are made to keep rights-of-way intact during transfer to future railroad owners. In any event, the value of the land will be unaffected; only the recipient of land proceeds will change, along with some additional transactions costs.

Gross salvage value can be reduced by the cost which would be incurred

by the railroad to physically remove the scrap for sale. An estimate of removal costs on Michigan lines, in 1970, is \$5,500 per mile [4, p. 20]. Adjusting this figure upward at a rate equivalent to non-agricultural wages to 1976, we obtain an estimated removal cost of \$8,525 per mile [2, p. 15].

Adding steel scrap and land values per mile and subtracting track removal cost per mile yields an estimate of line purchase price per mile of right-of-way. For the example of a line with 65 pound rail, rail steel scrap price of \$100 per ton, No. 1 railroad heavy steel price of \$75 per ton and adjacent land prices of \$250 per acre, purchase price per mile would be \$12,502.

Steel scrap per Mile	\$14,965
Land per Mile	<u>6,062</u>
Gross Salvage Value per Mile	\$21,027
Removal Cost per Mile	<u>8,525</u>
Purchase Price per Mile	\$12,502

Rehabilitation Cost of Facilities

Rehabilitation cost will vary depending upon the condition of roadbed, track and bridges. Cost of track renovation includes five chief components: cross ties, ballast, rail and other track material, labor and bridge repair. On 21 lines abandoned in Michigan between 1968 and 1972, railroad estimates of rehabilitation costs on these lines ranged from \$12,000 per mile to \$78,000 per mile, with an average of \$24,000 per mile [4, p. 24]. Rehabilitation costs ranged from \$6,700 per mile (with no rail replacement) to \$70,866 per mile on five lines upgraded in the Iowa Rail Assistance Program in late 1974 [1, pp. 71-74]. The average rehabilitation cost on these five

lines was \$34,749 per mile. A consultant report suggests that rehabilitation of a Hollis and Eastern Railroad line in western Oklahoma, in 1975, would cost \$33,000 per mile. This figure is based on fairly complete roadbed work and 20 percent rail replacement [3, pp. 14-15].

The broad range of rehabilitation costs indicates that rail lines are abandoned in various conditions. When lines are simply redundant, well maintained track can be abandoned when freight operations are consolidated on a parallel route. When lines are abandoned due to historically declining traffic, the line may have extensive deferred maintenance.

Annual Facility Maintenance Cost

Estimates of annual maintenance costs for railroad rights-of-way do not vary broadly. For twenty abandoned lines in Michigan, average railroad estimates of annual maintenance cost was \$2,373 per mile [4, p. 22]. Estimated annual maintenance costs for 71 branch lines studied in Iowa ranged from \$1,311 per mile to \$3,614 per mile [1, p. 74]. Anticipated maintenance costs for a 20-mile segment of the Hollis and Eastern Railroad in western Oklahoma were \$1,900 per mile per year after track was renovated [3, pp. 16-17].

Short-line railroading is a capital intensive enterprise. Where lack of traffic is the primary cause of line abandonment, this alternative is extremely risky for either individuals or governmental bodies.

Rehabilitation Assistance

A second alternative to abandonment is provision of low interest loans or grants to railroads to rehabilitate roadbed, track and bridges. This alternative leaves all responsibilities of owning, rehabilitating, maintaining and operating a line with the railroad. Only financial assistance is provided. This alternative is feasible under limited circumstances. In

some instances, revenue generated on a line just covers costs of operation and maintenance. Unexpected disasters, such as wash-outs and earthquakes make renovation of facilities necessary before service can resume. In other instances, financially ailing companies, short of cash, defer maintenance on all tracks to meet current liabilities. Downgraded facilities yield poorer service resulting in diversions of traffic to other modes. In these two types of cases, revenues may be sufficient to cover operating and maintenance expenses under normal circumstances. When facilities are restored, viable railroad enterprises may be restored.

Costs of rehabilitation are the same as those discussed in the previous section. Institutional arrangements vary. Where low interest loans are provided by local citizens, the benefits of rail preservation must exceed interest foregone had resources been placed in other enterprises. If outright rehabilitation grants are given to railroads, community savings associated with continued rail service must exceed the magnitude of the grant. With any such grant should be attached a contract binding the railroad to maintain the track at the specified level of renovation and to operate service at a specified frequency, for a period of time.

Rail Service Continuation Subsidies

The third alternative to line abandonment is a continual subsidy payment to a railroad, equal in magnitude to the deficit existing on the line. This alternative also leaves complete responsibilities for owning, rehabilitating, maintaining and operating the line with the railroad. The subsidy alternative can be effective only when the subsidy payment is greater than or equal to the railroad's deficit and less than the cost incurred by local shippers and communities when adjusting to loss of rail service.

Numerous types of subsidies have been proposed. One form is the direct cash transfer of an annual payment or an initial lump payment. Another form of subsidy is tax forgiveness; this approach reduces expenses. Another cost reducing mechanism is for local communities to organize shipments to require less frequent service. This form of subsidy increases inventory costs of shippers and reduces operating costs of serving the line. To enhance revenue, subsidies may be provided in the form of negotiated rate increases or rate surcharges. Another revenue generating subsidy form is diversion of traffic currently hauled by other modes, to the railroad. This is a subsidy because use of the other modes reveals the lower cost or greater convenience of the other mode. Diversion to the railroad results in a loss of one or both attributes.

Subsidy payments are made in return for certain guarantees of service by the recipient railroad. The railroad guarantees to provide a level of service frequency to serve the types of traffic generated on the line. The community guarantees the railroad against financial losses in service to the line, whether traffic increases or decreases on the line.

Conclusions

Three types of alternatives to line closure have been discussed. The effectiveness of each alternative is dependent upon the conditions initially causing line failure. Railroading is a very expensive business. Governments and individuals contemplating involvement in line preservation activities should be aware of the associated capital commitments.

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