Case Study

TTX Company[369]

1 Introduction

TTX Company (TTX) is a rail wagon pooling company that provides North American railways with intermodal, automobile and general use railway wagons. The Company was formed in 1955[370] to invest in what was then a new technology—flat wagons that would carry truck trailers. Owned by a group of North American railways[371], TTX's purpose is to provide its shareholders with an appropriately sized and efficiently managed fleet of wagons, available under neutral wagon distribution rules[372].

TTX Flat wagons. Source: TTX Company.

TTX illustrates that a rail wagon pooling business model can be financially viable, raise capital from the private sector, and benefit its railway shareholders through risk sharing and the efficient operation and maintenance of wagons.

This case study describes TTX's operations and the benefits derived from its existence. It then concludes with lessons to be drawn for other railways considering a pooling model.

2 TTX's Operations

2.1 An Overview

The TTX fleet includes over 220,000 wagons. Most are flat wagons (intermodal, automotive, general merchandise) with the remainder being box wagons and gondolas (see Figure 1). The Company's fleet makes up approximately 15 percent of

[369] This case study is largely based on Lawrence, Martha; Ollivier, Gerald. 2015. *Attracting Capital for Railway Development in China*. World Bank, Washington, DC. © World Bank. https://openknowledge.worldbank.org/handle/10986/23800 License: CC BY 3.0 IGO. URI: http://hdl.handle.net/10986/23800

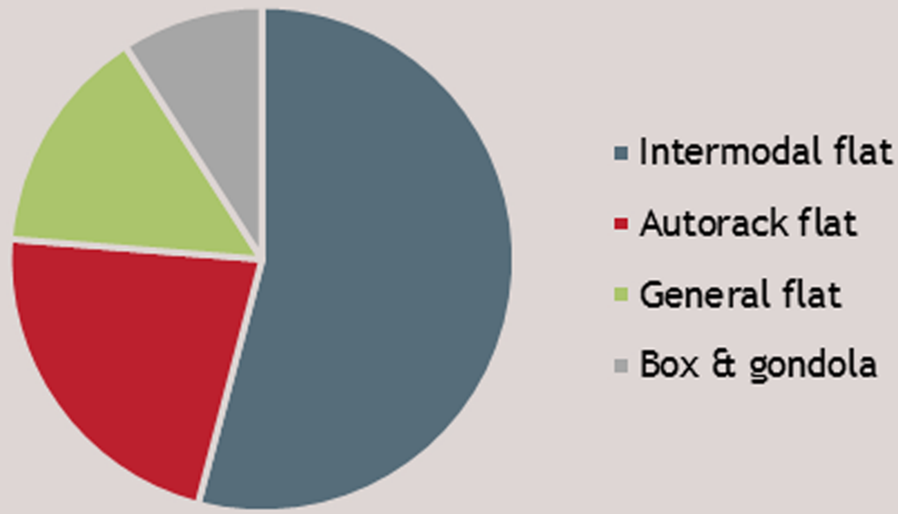
[370] The company was called Trailer Train at its inception in 1955.

[371] TTX is owned by the following railway companies: Burlington Northern Santa Fe, Canadian National, Canadian Pacific, CSX, Ferromex, Kansas City Southern, Norfolk Southern, Pan Am Railways and Union Pacific.

[372] Access to wagons is subject to rules that apply equally to each railway participant.

the total freight wagons in service in North America. TTX owns the majority of the wagons in its fleet (88 percent) and maintains its fleet, using a network of repair shops (4), field maintenance operations (52) and authorized independent repair facilities. TTX rents its wagons to participating railways. These railways pay TTX time- and distance-based charges for the TTX wagons on their lines.

Figure 1 TTX Wagon Fleet



Source: TTX website and Application for Reauthori-zation of the TTX Flatcar Pool.

TTX's leasing model differs from a typical leasing company's in that the wagons belong to a pool and not to the individual railways. Therefore TTX wagons operate freely on the entire rail network, without the sort of wagon return restrictions that tend to apply to typically leased wagons.

2.2 The Mechanics

TTX's interactions with its owner railways are governed by a pooling agreement that must be approved by the economic regulator of the railway industry, the Surface Transportation Board (STB). The most recent approval, granted in 2014, authorized the arrangement for flat wagons for 15 years. Key aspects of the pooling agreement include the following:

- TTX is to gather market information from participating railways, raise financing, purchase and maintain wagons, and manage a pool of wagons for the use of participating railways;

- Rates charged for the use of wagons are maintained at the lowest level "required to meet TTX's ordinary and necessary costs and expenses, including as appropriate, return on investment.[373]" At the end of each year, any funds deemed to be in excess of that requirement are returned to the owners based on their use of TTX equipment during the year.

[373] TTX Company (2014). *TTX Pooling Agreement*, p. 5.

- Access to wagons is subject to rules that apply equally to each railway participant.
- The wagons may be used for loading to any point in the USA railway network and approved locations in Mexico and Canada.
- Participating railways are free to own as many wagons in their own fleets as they choose.

The charges and rules for distribution of wagons in the pool are contained in a subsidiary Car Contract. Under this contract, each participating railway receives an "entitlement" to a share of the wagons, based on its historic use. If a railway has more wagons on its lines than its entitlement, TTX can require it to send the wagons to another railway that has less than its entitlement.

TTX charges to the participating railways are comprised of an hourly charge and a mileage charge for the use of its wagons. For example, as of April 2013, the base rate for TTX single unit wagons was US$ 0.69 per hour, for TTX double-unit wagons was US$ 1.37 per hour, and for TTX five-unit wagons was US$ 2.27 per hour.[374] The prices are established by the TTX board of directors. TTX's goal is not to maximize profits, however, so the prices are set at the levels necessary for TTX to be financially sustainable and be able to raise financing for fleet expansions when needed.

When a railway has more wagons than it needs, it informs TTX. TTX will only charge it for five days of use of the wagon after this notification. If the wagon is needed on another railway, TTX will direct it to be sent to that railway. If it is not needed, it will be stored and no wagon hire will be charged. The railway participants benefitted substantially from this provision during the recession that began in 2008. As shown in Figure 2, TTX's wagon utilization rate, which dropped to 70 percent in 2009, returned to a pre-recession level of 93 percent by 2014.

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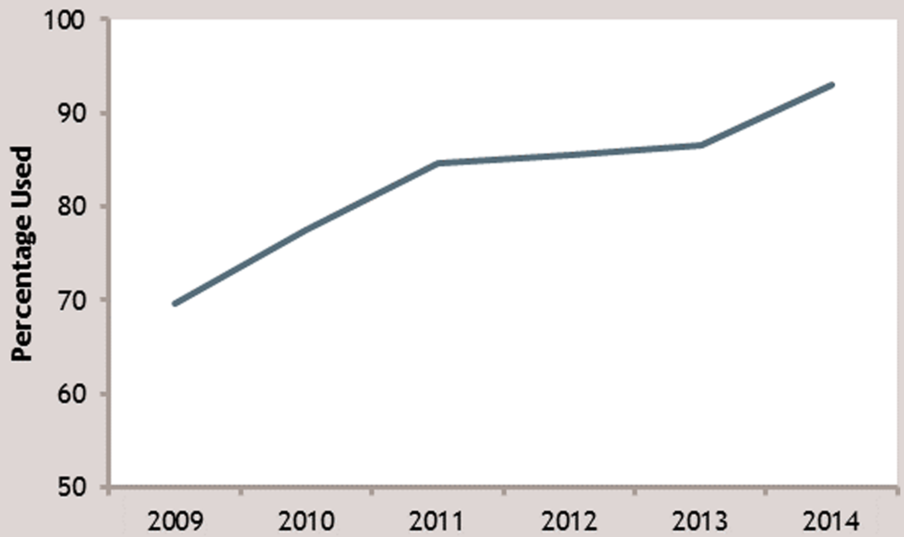
[374] TTX Company (1960). *Car Contract Between Trailer Train Company and the Atchison, Topeka and Santa Fe .Railway Company, supplement No., 227* (2013).

Figure 2 TTX Wagon Utilization



Source: FitchRatings (2014), TTX Company Full Rating Report p. 7 and Fitch Affirms TTX Company at 'A-'; Outlook Stable p. 1.

If some railways want to use more than their entitlement and some want to use less, the Car Contract allows a railway to "give" some of its entitlement to another railway. It also contains provision for fair distribution of surplus wagons to railways needing more wagons, in the absence of an entitlement "gift."

The TTX rules for wagon distribution differ from the general rules administered by the Association of American Railroads (AAR),[375] which apply to all other wagons. The AAR rules allow the wagon owner to designate what should be done with the wagon after it is unloaded on another carrier's lines. The options range from: (i) returning the wagon empty via reverse of the routing by which it came; (ii) allowing the wagon to be reloaded in the direction of its owner railway; to (iii) allowing the wagon to be reloaded for any destination.

If the receiving railway does not have a load that meets the return rules of the owner railway, the wagon will be sent to its owner empty. The receiving railway will pay time-based charges for the wagon belonging to the other railway for as long as it is on the receiving railway's lines. This creates a strong financial incentive to send unneeded wagons "home."

Since TTX wagons can be loaded for any destination (not just the owner railway) and there is less incentive to move empty wagons off line to avoid charges, TTX wagons operate about a third less empty km than other similar type wagons in North America.

2.3 Corporate Governance

TTX is governed by a 10-person Board of Directors. Each of the nine shareholder railways nominates one board member, and the tenth member is the President of TTX. The directors have a mix of backgrounds and skills including marketing, finance and operations.

[375] Association of American Railroads (2015), Circular OT-10.

The Board has an audit committee and other committees that are "typical for a closely held corporation." TTX Company's accounts are audited by a qualified independent auditor, who reports to the Audit Committee of the Board of Directors. According to TTX's Senior Vice President for Law and Administration, "If you want to borrow money, you need good governance and transparency."

2.4 Financials

TTX's main source of revenue is wagon hire charges paid by the participating railways. It derives a small share of revenue from non-member wagon repair services. Expenses are mostly related to owning, maintaining and distributing wagons. Cash flow from operations has been more than sufficient to cover debt service. TTX's aims to keep its fixed charge coverage ratio (operating and other income/interest and amortization of debt repayment) at 1.8 and has mostly managed to do this. (It fell to a low of 1.58 in 2009 during the recession.)

TTX does not normally pay dividends[376]. If its cash is greater than requirements, it benefits its shareholders through rebates or reducing rates.

TTX is financed primarily by unsecured debt and has more than US$ 3 billion of debt on its balance sheet[377]. Between 2009 and 2013, debt (including financial leases and principle portion of operating leases) made up about 63 percent of the TTX capital structure. Most of this debt is *not* secured by a claim on TTX assets. In 2013, only three percent of TTX's debt was secured by assets. Debt maturities are laddered (spread over time). Equity has come mostly from retained earnings.

Between 2009 and 2013, TTX invested US$ 3 billion for items including rehabilitation of wagons, conversion of wagons from 48' to 53' to improve their marketability, and purchase of new wagons.

3 Benefits Derived from TTX

TTX has supported the development of intermodal transport of freight in North America by making flat wagons available to the railway industry. Rail intermodal in the USA grew from 3 million containers and trailers in 1980 to 13.7 million containers and trailers by 2015[378].

TTX provides three main benefits to its participating railways:

- *Capital avoidance*. TTX has invested over US$ 12 billion in rail wagon and maintenance facility assets and spends US$ 700 million per year on wagon maintenance, enabling the participating railways to avoid this investment.

- *Efficient wagon utilization*. The pooling approach improves the efficiency of wagon distribution. For example, TTX has seven percent empty wagon-km,

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[376] It has only paid dividends twice in its history.
[377] FitchRatings (2015). *Fitch Affirms TTX Company at 'A-'; Outlook Stable.*
[378] Association of American Railroads (May 2016). *Rail Intermodal Keeps America Moving*. Retrieved from: https://www.aar.org/BackgroundPapers/Rail%20Intermodal.pdf

which is 31 percent more efficient than non-TTX-owned wagons.[379] By operating more efficiently, fewer wagons are needed to move the traffic, saving investment and maintenance costs. Wagon movement costs are also saved. TTX estimates that this saves the participating railways US$ 250 million per year.

- *Shared Risk*: Since wagons are shared, a surplus of wagons in one region may be used by a railway in another region, sharing the risk of the wagon purchase.

Each railway participant is free to pursue its own fleet acquisition strategy with no obligation to use TTX wagons.

4 Conclusion

The case study illustrates how a group of railways can create a company that buys/leases, maintains and manages railway wagons on a pooling basis in order to benefit its owners. In particular:

- A rail wagon pooling company can finance wagons with private sector funds, if it is set up as a private entity with compensatory prices. For instance, TTX has raised more than US$ 3 billion in private debt financing, reducing the capital burden of its investors; and
- A rail wagon pooling company can lower the cost of owning and using wagons if managed efficiently and neutrally between owners. The TTX pooling arrangement has improved wagon utilization, reducing the size of the fleet needed to serve the traffic. This has created an annual savings for the railways estimated at US$ 250 million.

[379] Rennicke W (2013). *Verified Statement of William J. Rennicke* contained in TTX Company Application of Pooling of Car Service with Respect to Flatcars, Surface Transportation Board Finance Docket No. 27590 (sub-No. 4), p. 9.

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