



Rail Research UK: Whole System Cost Modelling Workshop
Train Operating Company Costs
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Coverage

- Some illustrations of how TOC costs are estimated and what the problems are
- Not a comprehensive description of what they are, or how we model them
- Planning led, not accountancy led

Purpose of TOC Cost Estimates

- Scheme Appraisal
- Strategic Appraisal
- Franchise Specification
- Bid Preparation
- Bid Evaluation

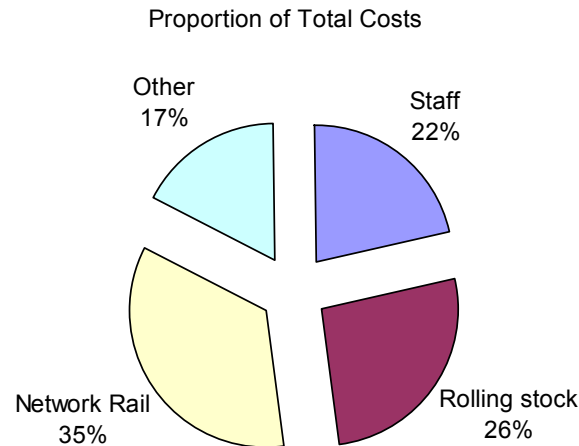
Key Components

■ Key components of TOC operating costs:

- Staff
- Rolling stock
- Network Rail
- Other eg. BT Police, commissions
- Performance payments/receipts

■ Indicative cost split (illustrative commuter TOC)

Excludes performance related
payments / receipts



■ Split varies greatly between TOCs

Practical Approach

- Divide costs into:
 - Those that vary with the volume of service provided
 - Those that vary with the size of network served
 - Those that are broadly fixed, or are 'one-off'
- Enables detailed TOC cost data to be analysed in detail and allocated to one (or more) of the above
- Can 'normalise' costs to a particular year using the appropriate adjustments
- BUT some costs need to be split between fixed and variable
- AND it can be difficult to decide which cost drivers influence individual costs

Range of Costs (Simplified)

- Variable with volume of service:
 - rolling stock leases, rolling stock maintenance, EC4T, diesel fuel, VTAC, on-train staff
- Variable with size of network
 - station maintenance, station and depot long term charges, FTAC, station staff
- Other - mostly part variable, part fixed
 - HQ staff, maintenance staff, redundancy costs, commission, performance payments, professional fees, HQ building leases etc, administration, advertising, marketing, staff overheads

Problems and Issues

- Difficulty of allocation to variable/fixed categories
- “Other” costs may be up to 30% of total
- Inconsistent categorisation of costs by TOCs - each may have own accounting procedures
- Maintenance costs often not split into staff, materials etc
- Different leasing structures
- Escapability
- Step changes
- Apparently constant cost rates may vary with quantity
- Fixed costs aren't
- Small increments vs. wholesale restructuring
- Multiple drivers
- “A Wholly Artificial Construct” (Mr Justice Sullivan)

Cost Drivers (Quantities, Quanta, Unit Rates, Metrics, Physicals, Financials...)

I Physicals (Quantities):

- Number of staff (on-train, station, other)
- Train miles/hours (by stock type, train formation)
- Unit miles/hours (by stock type, train formation)
- Fleet size (by stock type)

I Financials (Unit Rates)

- Staff salaries (on-train, station, other) + NI, pension, overheads
- Redundancy costs
- Rolling stock lease costs (capital, non-capital)
- Rolling stock maintenance costs
- FTAC, VTAC, EC4T, Diesel
- Long term station/depot charges (TOC, SFO)

I Non-linear

- Capacity charges
- Performance payments

Multiple Drivers

I Primary Drivers

- Basic metrics and cost rates
- Sufficient for a snapshot of costs, but any time series appraisal will need...

I Secondary Drivers

- How the primary drivers vary over time with changes within the train operating environment, such as efficiency changes, staff turnover etc

I Tertiary Drivers

- How the primary drivers vary over time with external changes, such as inflation and real cost escalation

A Simple Example? – Driver Costs

I Approach

- unit cost per train hour
- based on estimates of effective driving hours
- projected forward by train hours
- adjusted by AEI

I Issues:

- What is a train hour?
- How to estimate effective driving hours
- Traincrew utilisation
- Shifts, T&C, traincrew depot locations
- Perennial difficulty: relating current detailed data to something that can be estimated into the future

A More Difficult Example - Rolling Stock Leasing

I Approach

- In theory quite simple: number of units × unit cost of leasing
- Separate costs for capital and non-capital elements

I Issues

- Some stock is on wet lease, other on dry lease
- Dry lease means no non-capital lease charge, but higher costs show up under maintenance
- But TOCs may have both types of lease, even within the same stock type, and the mix may change over time
- Different components may not show up in a TOC's financial information
- Flat structure of leasing charges is not consistent with assessments of declining asset value
- And not least: different TOCs may pay different lease charges for apparently identical rolling stock

Towards Better Cost Estimates

- Ideally: a consistent way for TOCs to estimate and record cost data
 - Particularly maintenance costs and rolling stock leases
 - TOCs are generally very helpful but cannot supply data they do not have, and cannot be expected to re-analyse data
- A better understanding of the links between real cost drivers and outturn costs as they appear in TOCs' accounts
- An agreed set of cost drivers and rates (NMF goes a long way towards this but is limited by its 'high level' approach in some cases)
- Other initiatives to decouple cost measures from characteristics that are TOC-specific (as opposed to Franchise-specific)

- However, there is no substitute for talking to TOCs, analysing and cross-checking the data and querying anything that doesn't look right!



Thank you