Train Tycoon

Designers: Justin Anderson and Marc Voyer

English Rules V1.07

Contents

Part I

Overview

1   Introduction

In Train Tycoon, You are a stock investor and railroad manager. Your ability at both will define your success as you develop and profit from an industrializing area amidst a dynamic and competitive environment. The game has some similarities to 18xx and other economy games. It is playable by 2-6 players.

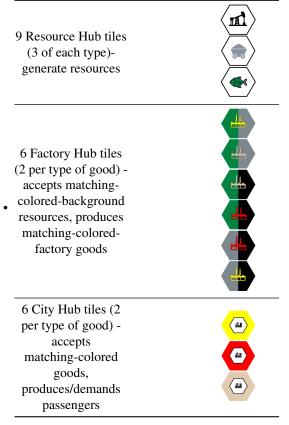The player with the largest net worth at the end of the game (after 5 turns) wins!

2   Components

- 1 set of game rules (this document)

- 1 or more map boards

- 1 cash & income board

- 107 track tiles (Yellow #8=40, Yellow #9=35, Green #16=8, Green #17=8, Green #19=8, Green #20=8)

- 6 factory hub tiles, 6 city hub tiles, 9 resource hub tiles

- 6 player reference charts

- For each of 12 public companies:

  - Public company charter

  - 10 share certificates

  - 1 president indicator

  - 5 markers for Shares, Prices, Company Order, Cash, and Income boards

  - 10 company train markers (For 18xx'ers, company markers are used as trains in this game)

- 1 turn marker

- 1 priority marker

- 105 markers: 15 markers for each type of resource (3 types), good (3 types), and passengers.

- 90 chips: 5 purple (each is $500 cash), 20 green (each is $100 cash), 20 yellow (each is $25 cash), 25 grey (each is $5 cash) and 20 red (each is a loan of -$100)

- 60 decision cubes (12 each of green, yellow, blue, red, black)

- 24 multiplier chips of various colors (x2, x3, x4) , which are also used as transfer hubs when flipped to their backside

3   Resources/Goods/Passengers/Boards

- Resources: Oil (Black), Minerals (Gray), Fish (Green or Lavender)

- Goods: Cheese (Yellow), Furniture (Natural), Tools (Blue or Red)

- Waiting Passengers (Red cylinders in a City, on the outside non-white area), Delivered Passengers (Red cylinders in a City, on the inside white area)

- There are no limits to Resources/Goods/Passengers available, use 2x/3x/4x multiplier chips under the resource if needed.

9 Resource Hub tiles (3 of each type)- generate resources	
• 6 Factory Hub tiles (2 per type of good) - accepts matching-colored-background resources, produces matching-colored-factory goods	
6 City Hub tiles (2 per type of good) - accepts matching-colored goods, produces/demands passengers	

- Cash & Income Board. Company income and company cash (in 'treasury') is tracked here as it impacts max debt, target price and company operating order

- Main map. Resource seed locations are marked with an X. Track may not be placed on mountain hexes (impassible)

- Decision cubes - used for various decision making in the turns

4 Definitions

- Company = a company consists of shares, a president indicator, line-identifying tokens and tokens for the cash & income board.

- PO = player order. PO resolves in clockwise order starting with the player holding the priority marker

- CO = company order. CO resolves from lowest to highest income breaking ties with whichever company acted last

- Line = series of track tiles connecting two hubs

- Resource Hub = tile that contains resources (demanded by factories that have a matching background color)

- Factory Hub = tile that produces goods (demanded by the factory color matching the city outer ring color)

- City Hub = tile that produces passengers (demanded by all other cities)

- Transfer Hub = tile that is an end-point for a line but which isn't a resource, factory or city hub

- HQ = headquarters, usually referring to a starting tile for a company from which it will build its first line

- Rights = a company has rights to a hub (Resource, Factory, City, Transfer) if it owns a line connected to the hub

- Train – trains indicate which company owns a line

- Net Cash – total cash minus total loans

- Max Debt – max debt that a company can take when operating or when offering a high/mid/low M&A bid

- Target price – [net cash + company income] / # of shares issued (Leftmost column on Cash & Income board)

- Auto-repay = whenever a player has at least 1 loan (-$100) and cash >= $100, automatically pay off a loan. When a company moves up from $95 to $0 cash, either remove a loan (-$100) or (if no loans) add a $100 cash chip. When a company moves down from $0 cash to $95 cash, either remove a $100 cash chip or (if no $100 cash chips) add a -$100 loan

Part II

Rules

5 Setup

- Randomly distribute the 6 city hub tiles to the 6 on-map indicated locations

- Map contains 24 resource seed hexes marked with an "X". Seed hexes are randomly assigned a blank hex (Use the backside of track tiles for blank hexes, 15 such locations) or a resource hub (9 such locations = 3 per resource type x 3 resource types). Place 3 resources at each resource hub of the corresponding type.

- Randomly distribute players around the table then randomly assign priority. Experienced players may agree upon whatever bidding process they prefer for selecting PO (see section §15).

- For each company, arrange its shares in a pile along with its trains. These shares are considered 'in the company treasury'.

- Designate an area for 'the Bank', it will hold bank cash, and possibly shares due to bankruptcies. The Bank is unlimited in size, use multiplier chips or other money if necessary.

- Each player starts with the following assets depending on the number of players: (select from starting companies in PO). Note any "their starting company" means that the player is given the president indicator. The company names have no meaning in the setup process, players can choose any companies.

  - 2P = $100 cash, 3 shares in their starting company, 3 shares in their other starting company, 1 share in the opponent's starting Company, 1 share in the opponent's other starting company (4 companies start with $100 each). Each player chooses 1 city HQ company and 1 factory HQ company (which are their starting companies).
  - 3P = $100 cash, 2 shares in their starting company, 1 share in each of the other two starting companies (3 companies start with $100 each). Each player chooses 1 factory HQ company (which is their starting company)
  - 4P = $50 cash, 2 shares in their starting company, 1 share in each of two other starting companies – companies whose president is in nearest player-order (referred to as "PO") from the player (4 companies start

with $100 each). Each player chooses 1 factory HQ company (which is their starting company)

- 5P = $20 cash, 2 shares in their starting company, 1 share in each of two other starting companies – companies whose president is in nearest PO from the player (5 companies start with $100 each). Each player chooses 1 factory HQ company (which is their starting company)

- 6P = $0 cash, 2 shares in their starting company, 1 share in each of two other starting companies – companies whose president is in nearest PO from the player (6 companies start with $100 each). Each player chooses 1 factory HQ company (which is their starting company)

- Each starting company places its 5 markers as follows:

  - 1 onto the price board at $25
  - 1 onto the issued shares board at 4
  - 1 onto the cash board at $0 with a green chip underneath (representing $100)
  - 1 onto the company order board (initial CO maps to the starting companies in PO. Exception: 2 player game the 2 city HQs CO is reversed and placed after the 2 factory HQs)
  - 1 onto the income board at $0

- Place the Turn marker on the $20 grey turn space on the Cash & Income board.

- The 6 factory hub HQ companies start with a (pre-assigned) factory (which must be placed on their first operating turn and must be their starting hub). The other 6 companies must start from any of the 6 on-map city hubs

- Each company has a limit of 10 trains. If a company needs a train but it's already at the limit, it can take any on-map train as a source of supply (rendering that line abandoned the moment the train is taken)

6 Game Overview

- Train tycoon consists of 5 game turns. The turn is tracked on the Cash & Income board, with the $20 grey space being turn 1, and finishing on the $100 space for turn 5.

- Each turn, players can conduct actions described in these sections:

  - Trading (Turns 2 – 5)
  - Treasury (Turns 2 – 5)
  - M&A (Turns 2 – 5)
  - IPO (Turns 2 – 4)
  - Operate (Turns 1 – 5)

- Actions are conducted in the order of sections listed above from top to bottom. For each section, the current turn must be within the range of turns indicated otherwise it is skipped.

  - Example: In turn 5, players will conduct actions first from from Trading, then Treasury, then M&A, then Operate. IPO is skipped.

7 Trading

- Using a decision cube which all players reveal simultaneously, each company president sets the price of the companies they are president of. Each President chooses low (red), mid (yellow) or high (green) price (use 2 hands if president of 2 companies). For low bids, shift the price up the board a number of boxes equal to the red value in the associated color (eg. if $30, it shifts -2 to $10). For high bids, shift the price down the board a number of boxes equal to the green value (eg. if $5, it shifts to $35). For mid bids shift the price up or down in the same matter based on the matching yellow value. If the bid has no matching shift color, then no shift occurs (eg. a low bid at $5 has no price impact)

- Next, proceed in CO (1 loop ie. execute the following sequence once for each company)

  - Using a decision cube which all players (excluding the president) reveal simultaneously, players choose to buy (green), sell (red) or pass (black). Non-shareholders who choose sell are set to pass, players with debt or insufficient cash to buy a share who choose buy are set to pass)

  - Match 1 buyer with 1 seller (First yet-to-transact match in PO from after president) and they exchange 1 share at the trade price. Repeat that process until there are only yet-to-transact buyers or sellers (or neither) remaining

  - These remaining yet-to-transact buyers/sellers transact with the president as follows:

    * Buyers (PO from president) buy 1 share each from the president. If the president runs out of shares then buyers buy from the bank (if any shares available) or the company treasury (if any shares available) at the current price. If buying from the treasury, add the amount paid for

the share to the company's net cash and increase issued shares by 1

  ∗ Sellers (PO from president) sell 1 share each to the president. Note that the president is forced to buy with debt if holding insufficient cash for the purchase

8   Treasury

- Proceed in PO (1 loop ie. execute the following sequence once for each player)

  – Each player may buy 1 or may sell 1 (not both) share transacting with any target active company cash at the current price. To buy, the target company must have less than 10 issued shares or the bank owns at least 1 share (always buy from the bank if possible). To sell, the target company must have at least 2 shares held by players including the selling player (thus 1 share must remain in player hands for any company with at least 1 issued share). A player must sell (if possible) when holding debt. If buying from the bank, no impact on issued shares and payment goes to the bank. If buying from the company, increase issued shares by 1 and payment goes to the company's cash (forced to take loan(s) if needed). If selling to the company, decrease shares by 1 and payment comes from the company's cash

End of Treasury Phase:

- Update Presidents (in CO). All president certs are revoked. The president for the candidate company is the largest shareholder with less than 2 president certs, with ties broken in PO starting with the previous president. If there are no candidates, the company will have no president this turn (can't make any M&A offers)

- Interest. Individuals pay interest on loans at $20 per loan. Cover negative balances with new loans (interest is also charged on the new loans)

- Bankruptcy (in PO). Players may optionally declare personal bankruptcy (mandatory if holding 2+ loans). If so, return their loans and cash to the bank while shares are owned by the bank (bank simply holds the shares, bank never buys shares and is always bought from ahead of the treasury where the latter would be the usual source of shares. When a player buys shares from the bank, the company does not recieve any cash

9   Mergers & Acquisitions

- Companies with more loans than the absolute max are insolvent

- Potential bidding companies: Solvent companies with a president

- Potential target companies: All companies

- Votes require more than 50% shares to pass (ties = failed vote). Insolvent company shares always vote to pass as bidder or as target

- Proceed in PO (1 loop ie. execute the following sequence once for each player)

  – The acting player may initiate a bid or pass. If initiating a bid, the initiator chooses the target company

  – Using decision cubes which all players reveal simultaneously, each company president bids a high (green), mid (yellow) or low (red) offer price, propose a merger (blue) or not participate (black). Use 2 hands if president of 2 companies. If more than 1 company bids high, those companies must re-bid in the same way with either a mid or high bid price (after moving the price to the high price using the same method that sets prices in the Trading Phase). If a player is bidding with 2 companies, they must select 2 different types of bids (eg. merger and high bid)

  – Resolve bids from highest to lowest then resolve merger proposals - ties broken in CO. Shareholder-related vote ensues (for, against or abstain) for first the target and then the bidder if the target vote passes. If the target ever rejects a high/mid/low bid immediately move to merger proposals. Any invalid proposals (high/mid/low that would yield consolidated net cash needing debt greater than bidding company max debt OR mergers where consolidated shares would be greater than 10) are removed as invalid. If there are no successful bids or merger proposals, the initiating player pays $20 to the bank

  – If target and bidder votes both pass, all assets (trains, net cash) convert to the bidder's assets. If the bidder does not have enough trains then they decide which trains to retain (from either company). If acquisition, bid offer price is paid out to shareholders of the target from the bidding company. If merger, all shares of the target are converted 1 for 1 into the bidding company's shares. Insolvent companies automatically agree to all bids (no shareholder vote ensues for the target in this case)

– If there are no successful bids for an insolvent company then it is bankrupt, remove company cash marker and trains

– If a company is removed from a merger, acquisition or bankrupcy, it is made available during the IPO Phase (a city HQ company)

10   IPO

- Proceed in PO (1 loop ie. execute the following sequence once for each player). To trigger an IPO, the player must have enough cash to buy 2 shares ($50 in round 2, $100 in round 3 and 4) and no debt

  – The acting player may trigger 1 IPO or pass. If triggering an IPO, they select the IPO'ing company. Using a decision cube which all players (excluding the acting player) reveal simultaneously, players bid Yes (green) or No (red)

    ∗ Shares are purchased at $25 (round 2) $50 per share (round 3 and 4)

    ∗ (a) Next, in PO (1 loop) each player starting after the acting player buys 1 share (must buy if bid Yes/triggered, has sufficient cash to buy without taking and has no loans. Otherwise, must not buy). The acting player must buy 1 share if the player has enough cash (debt is not forced).

    ∗ Repeat (a) until 4 or more shares are purchased or noone purchases during the loop

    ∗ If 3 or fewer shares purchased, the IPO fails (return cash paid back to players and the acting player pays $20 fee to the bank

    ∗ If successful, place new company on the $0 position of income track, CO position is below all companies, issued shares is set equal to # of shares purchased, price is set to $25 (round 2) or $50 (round 2 and 3), company cash is set to issued shares x price

End of IPO Phase:

- Update Presidents (in CO). All president certs are revoked. The president for the candidate company is the largest shareholder with less than 2 president certs with ties broken in PO starting with the previous president. If there are no candidates, the company will have no president

11   Operate

Companies with no president skip all actions during the Operate Phase

Extra Open Line Action: (Proceed in CO, 1 loop ie. execute the following once for each company with an unplaced factory HQ hub) The company must take an "Open line" action (same sequence as below) to place its factory HQ hub (and build a line starting from the placed factory hub). This is a free action (such companies will operate later as usual). May not place the factory hub adjacent to a matching-color resource hub or adjacent to any city hub

Proceed in CO (1 loop ie. execute the following sequence once for each company): The President proposes any work-program spending up to what max debt will allow: 1st, they may (optional) open 1 line. 2nd, they manage trains. 3rd they deliver passengers then goods then resources)

- Open line (Optional, max 1 line). Min track-length = 1. Max track-length = turn # + 1. Min/Max Track length excludes the start/end hub. Start a new line from a "rights" hub or from any city hub if the company has no rights hubs (must pay for rights per below if applicable). End the line on any hub or empty hex. If ending on an empty hex (not a common move, almost always you will want to connect to a resource, factory or city hub), place a transfer hub on the hex. May only place new (yellow) track on empty tiles or on "Bulldozable" tiles (ie. company-controlled track, company-controlled transfer hubs ie. transfer hubs with no other company lines connected or abandoned track ie. track making up a line with no owning train). Instead of bulldozing, you may upgrade any yellow tile with a green tile as long as you maintain the original track line. After finishing the new line, place a company train on the new line. The company pays the costs for the new line as follows:

  – Track: $20 per newly placed track tile (do not need to pay for recycled track ie. track that did not need replacing by building over part of an abandoned line)

  – Rights: Pay bank for "rights" to newly connected hubs (hubs that the company wasn't already connected to via another line). Requires payment to the bank for EACH other company (called a "triggering" company) connected to the same newly connected hub. The "rights" cost is equal to $20 x turn # minus $20 x shares held by the acting president of the triggering company (to a min of $0 per triggering company). For example, lets say in round 3, acting company A attaches a line to a hub that is also connected to by company B and C. The president of A

holds 4 shares of company B and 1 share of company C. In this case, the rights cost would be $0 from triggering company B ($20 x 3 - $20 x 4 to a min of $0) + $40 from company C ($20 x 3 - $20 x 1) = total payment (paid to the bank) of $40 for "rights" to the hub

– Advanced Engineering Costs: An additional $20 x turn # if the new line is built to max length possible ie. track tiles making up the line = turn # + 1

• Manage trains

  – (Mandatory) Remove all company trains from broken lines (due to bulldozing)

  – (may repeat this action until up to 10 are on board) EXPAND Action: Place a train from supply onto an available line (a line with no train) that is attached to a hub with acting company's rights. Pay for any "Rights" triggers as per the "Open Line" rules above

  – (may repeat this action until min of 1 is on board) CUT Action: Remove a train from a line to supply (after the first cut action may not take any more expand actions)

  – Remove transfer hubs with no connected company-lines

• Deliver (No Player Decisions)

  – Resources/Goods/Passengers Logic:

    * Oil/Fish/Coal -> Furniture/Cheese/Tools -> Passengers waiting -> Passengers delivered

  – Conduct 3 sets of deliveries. A delivery means moving a passenger, good or resource from a source hub across company owned lines (and possibly through hubs) to a destination hub that demands it. 1st: deliver all possible waiting passengers. 2nd: deliver all possible goods. 3rd: deliver all possible resources. Resolve any choices by whichever delivery would shorten (resources/goods) or lengthen (passengers) delivery distance. Delivery distance = hex distance (inclusive of hubs) from source to destination ("as the crow flies"). If 2 candidate destinations are equdistant, ship to the better bonus delivery (if still tied) top-most hub then (if still tied) to the right-most hub. Rules for deliveries are as follows:

    * Resources and goods are sent to a connected factory or city (respectively) that demands them (color-match), and can pass through hubs.

    * Waiting passengers are sent to a connected city. They may not pass through factory and resource hubs (city and transfer hubs only)

* A max of 1 item may be delivered from a selected source to a selected destination hub (clarification: 2 city hubs could each deliver 1 passenger to the other as the source/destination hub are swapped. As long as the selected source hasn't delivered to the selected destination, the delivery of 1 item is possible)

* After finishing all deliveries, produce 1 good per delivered resource if a factory hub has 1 type of its demanded goods or 2 goods per delivered resource if the factory has both types of its demanded goods. If a delivery depletes a resource hub, add resources equal to the turn # to all remaining unconnected (by any company-owned lines) resource-hubs of the matching type

* Upon delivering a good to a City, add a waiting passenger (add 2 if there are no waiting passengers)

– As deliveries are made, adjust the income board for the operating company as follows (Min = -100, Max = 990)

  * Delivered Resources/Goods/Passengers: delivery distance (inclusive of hubs, as the crow flies) x $10

  * Market Gain/Loss after each item delivery = [supply of that type (at source) – demand of that type (at destination)] x $10. This can result in a negative value. For this calculation, waiting/delivered passengers act identically. (eg. a company delivers a passenger from a city hub with 3 waiting passengers to city hub with 1 waiting passenger and 0 delivered passengers. After the delivery, the source city hub now has 2 waiting passengers and the destination city hub has 1 waiting passenger and 1 delivered passenger (total =2). The market gain is thus 2 - 2 = 0 x $10 = $0. Another example: Resource hub has 5 oil, one of those is delivered to a factory that has 1 existing oil, end result would be 4 oil on the source and 2 oil at destination. The market gain is thus 4-2 = 2 x $10 = $20.

  * Train Costs: Subtract Turn # per train x $10

  * Interest: -$10 per $100 loan held by the comany

  * If at a negative balance, remove cash equal to income. If not enough cash, take new loans to cover the outstanding amount ($100 per loan)

  * If at a positive balance: President decides whether to payout or retain (must retain on turn 5 and during a company's first operating round)

· Payout: each share generates current income/issued-shares (round per share amount to increments of $5 per share, remainder not paid out goes to the company). Eg. 130 income paid to 4 shares would payout $30 per share + $10 to the company

· Retain: company adds cash equal to income

End of Operate phase (in CO)

- Remove (delivered) resources/goods in matching-color factories/cities and (delivered) passengers in cities

- Set new CO = lowest to highest income (ties prioritize whoever operated later in this operating phase). Move priority marker to next player in PO

- Set Target Price = [Company Net Cash + Income]/issued-shares (round down to the nearest increment of 5 per share). Eg. Cash = 80, Debt = 100, Income = 210, Shares = 5. Target Price = [80 – 100 + 210] = 190/5 = 38 round down to $35 per share (min = 0). Target price is the leftmost column on the Cash & Income board (it may not be labeled depending on the version you have).

12   Game End

The game ends after the 5th turn is completed. The winner is determined by highest net worth calculated as: Player Net Cash + Company Share Value

Company Share Value = Company Net Cash/issued-shares rounded down (to the nearest 1)

Part III

Addenda

13   Map

- The map consists of hexagons of various types:

  Cities: City hexagons contain name(s) of the cities.
  Rural hexagons: All other hexagons are rural.

- Terrain is marked with a symbol on those hexagons.

- Resource possible starting locations are marked with an X.

14   Cash & Income Board

- The Cash & Income Board consists of target price, turn, shares, cash, income and max debt tracking.

15   Optional Rules: Priority Auctions

- For advanced players, an agreed upon bid method for determining starting priority can be used.

  – Method #1:
  – Method #2: All players secretly choose a bid, which can be of any value (loans can be taken if won). Simultaneously reveal bids. Highest bid selects the seating order and gives the priority marker to any player.

    * If tied for first selection, then the players who are tied pay their bids to the bank, and those tied players repeat the bidding process until a winner is determined.
    * All bids are paid to the bank and players take loans as required to cover the cost.

16   Expansion: Alberta v1 and v2

- 138 hexes, 113 can have track for Alberta v1, 136 hexes, 112 can have track for Alberta v2

17   Expansion: Appalachia

- 155 hexes, 126 can have track for Appalachia v1

18   Expansion: Investments

Expansion Rule for Experienced Players: **Investments**. Investments add assymetric information to what game-end company value is

- 24 investment markers (12 "+4" and 12 "+0") are added to the bank

- During setup, each player receives 4 investment markers (identical on the front) with these values on the back: (+40, +40, 0, 0)

- After opening a line, the president may place 1 invest-
  ment on one of the yellow track tiles making up the newly
  opened line. Add a multiplier marker (x4 if turn 1, x3 if
  turn 2, 2x if turn 3)

- When opening a line, a president may not bulldoze or up-
  grade a tile with an investment on it

At game-end, reveal investment markers. For each investment
marker, add cash equal to the value on the investment marker
x the multiplier to the company that controls the line that the
investment is a part of

19   Design Notes

- Designer Contact Information: Justin Ander-
  son   ruski.canuk@gmail.com   and   Marc   Voyer
  thethrax887@gmail.com

- Design Note - the aim of Train Tycoon is

  – Educational. An attempt to more accurately model
    how real-world markets trade and how M&A works
    (educational)

  – Fun. An attempt to streamline/speed up decisions
    via more simultaneous actions (such as setting
    prices, bidding for shares and bidding on M&A) and
    to have player constantly engaged (less waiting for
    other players to decide, more simultaneous decision-
    making)