

Archbishop Masdevallia Rolfeana, newly ordained leader of the Glorious Orchid Society leaned against his ceramic exoskeleton wondering about the state of the economy. The scientists at the Astronomical Observatory had recently discovered the existence of several stellar anomalies that might be tunnels to distant star systems. This desire to explore the skies coupled with a dwindling supply of natural resources would force him to spend his time tinkering with the economy. Ahhhhhhhhh thank the Many Leafed Gods!

This article is to help new players develop an economy to help them start the exploration of space. The Orchid Society focused on one population center and although this streamlines your economy it is not the only solution. Please take this article with a grain of salt since we are still early in the game.

Basic Economy

Every empire starts with 5 population centers with the following items:
(Industrial Complex = IC, Strip-mines = SM, Construction Materials = CM, Raw Resources = Raw, Fission Plants = FP)

Pop 1: 150k IC, 50 Shipyards, 10 Fuel Refineries, 10k SM, 2 FP, 20M Raw, and 5M CM

Pop 2: 150k IC, 25 Shipyards, 10k SM, 2 FP, 14.9M Raw, and 1M CM

Pop 3: 75k IC, 12 Ship yards, 5k SM, 1 FP, 6.9M Raw, 500k CM

Pop 4: 75k IC, 12 Ship yards, 5k SM, 1 FP, 6.9M Raw, 500k CM

Pop 5: 50k IC, 1 Shipyard, 5k SM, 1 FP, 5.9M Raw, and 250k CM

This means a starting economy has 500k Industrial Complexes, 35k Strip-mines a stockpile of Raw Resources and Construction Materials and 7 Fission Power Plants.

An Empire also has a series of resources with associated yields, which enable the Empire to build an economic base not focused purely on the conversion of Raw Resources from strip-mines.

Basic Equations and Rules

A starting empire has to understand several basic equations and rules in order to ensure that they succeed on their first turn.

1. All orders (outside of material production) are run in sequence. This means that if you want to assign a character to a ship you must do that before the ship leaves to go to the warp point. On an economic front if you plan on transferring goods between population groups **you need to build your transportation center first!**
2. All Production is done in the order you assign them to the Production Q. Make sure that finished goods come after initial goods. DO NOT try to make Steel before Iron!
3. The equation for building mines is: # of Mines = $5 * [Product Yield - 21]$. There are threads on the message board that address this but this equation seems to work.
4. An empire is required to have 4 Industrial Complexes for every Strip Mine + 10% to process refined goods. This means if you have 10000 strip-mines in Population Group 1; you need 44,000 Industrial Complexes. 40,000 of the IC handle the processing of Raw Resources into a product (say Iron) and then 4000 Industrial Complexes to handle the conversion of the Iron into Steel. This is not an absolute rule but seems to work very well.
5. Dismantling of Installations is a 0 cost and instantaneous process!
6. All construction needs to work backwards. This is not a rule but should be. Determine your end good and work backward to figure out the product requirements. An example of this is as follows:

You want to make 100 10cm Autocannons every turn. This requires thinking through your production Queue so that you have the following:

BI 12000 Iron, [Insert your Pop Group ID here], 100, Yes
BI 6000 Crystals, [Insert your Pop Group ID here], 110, Yes
BI 2000 Refined Crystals, [Insert your Pop Group ID here], 120, Yes
BI 1000 Gaseous Materials, [Insert your Pop Group ID here], 130, Yes
BI 1000 Petro Chemicals, [Insert your Pop Group ID here], 140, Yes
BI 1000 Industrial Chemicals, [Insert your Pop Group ID here], 150, Yes
BI 1000 Synthetic Materials, [Insert your Pop Group ID here], 200, Yes
BI 4000 Steel. [Insert your Pop Group ID here], 210, Yes
(Assign it to the Q before the 10 CM Autocannon!!! See rule #5)
[4000 Steel requires 12000 Iron, which could come from your mines, or Raw Materials]
BI 1000 Electronics, [Insert your Pop Group ID here], 220, Yes
[1000 Electronics requires 2000 Refined Crystals and 1000 Synthetic Materials]
BI 100 10 Cm Autocannon. [Insert your Pop Group ID here], 300, Yes
(Assign them to your production Q (see rule 2))
[100 Autocannons require 4000 steel and 1000 Electronics]

This production sequence if placed in the Production Q correctly would produce 100 10cm Autocannons in one turn (if not tooled). A player will have multiple items they wish to produce every turn and will have to adjust the initial Q multiple times before having it set correctly. An example of this would be if a player wished to build 100 10cm autocannons, 25 Colonial Berthings and 1 Survey Lander a turn. We discussed the sequence for the autocannons but the player would have to change the steel and iron builds to account for the addition of Colonial Berthings into the Q and change almost everything else to account for the Survey Lander cost.

Turn 1 Thoughts

Taking the basic rules and ideas into account can seem somewhat overwhelming. Most players use an excel spreadsheet to handle the calculations for the economy. With the initial setup a player quickly sees the following:

1. That their empire is over tooled in Industrial Complexes having around 500,000 IC and only needing around 154,000 IC [(35k SM *4) + 10%].
2. That their empire cannot produce enough goods to handle all the desires and requirements of the emperor!!!
3. The maximum efficiency for an empire is around 90,000 strip mines and the required 400,000 Industrial Complexes. Many empires will think they can produce huge amounts of strip mines but one quickly realizes that Raw Materials are nice but one needs Industrial Complexes to handle the production. A 10,000 Strip Mine increase to the empires economy in effect costs 54,000 * 500 or 27,000,000 Construction Materials [10,000 strip mines + 40,000 Industrial Complexes + 4,000 IC for the 10% rule]
4. There is not enough population to build all these facilities!

Sample Turn 1 [Colonizer Setup]

Before we go down the path of The Orchid Society one must understand that I developed a colonizer empire. This in effect means my production is geared towards building Colonial Berthings and colonizing the planets in my system. There are several different set-ups out there all with pros and cons and each set up would change the first turn development process. A Pirate empire might build ships and weapons before colonial berthings.

Items to Note for Turn 1:

1. An empire starts with less than 10 Million Construction Materials. With a required cost of 27 Million to build 10,000 strip-mines an empire cannot build their economy from starting resources.
2. A starting empire has a huge surplus of Industrial Complexes to start the game. An empire starts with 500,000 IC and 35k Strip mines. If the almost perfect equation is as follows:

Total Installations = Strip Mines + Industrial Complexes **and**

4.4 Industrial Complexes = 1 Strip mines **then**

535,000 Total Complexes = x (Strip Mines) + y (Industrial Complexes) where $y = 4.4 * x$ **or**

$$535,000 = x + 4.4x \text{ or } 535,000 = 5.4x$$

In effect your almost perfect Strip Mine ration is around 90,000 since an empire needs also build mines and power plants and these use some of the Construction Materials.

3. In order to transfer all the materials an empire is required to have transportation centers.

Turn 1 Plan:

1. Build TC in all 5 population centers
2. Dismantle all Industrial Complexes, Strip Mines, Fission Power Plants and Shipyards at 4 out of 5 population Centers
3. Transfer All construction Materials (from item 2 and stockpiled), Population, and stockpiled resources from each of the Population Centers to the Main Population Center. NOTE: the Transfer all will not transfer population so each item needs to be entered
4. Build all mines (based on the formula) at the main population center
5. Calculate Power Requirements based on mines and strip mines and build Fission Plants.
Note: You need between 13 and 15 roughly
6. Determine if you are going to use the pathfinders in the production Q or scrap them
7. Build Slips if needed (1 slip per ship being built. Currently your shipyard is occupied for 5 turns due to having 5 Pathfinders in Q and being able to only build 1 ship a turn)
8. Build Shipyards if needed.
9. Build Industrial Complexes and Strip Mines based on the equation above.
10. Set up Science Research per your empire's direction and goals
11. Develop Industry Q:
 - a) Your empire will produce around 90 Million Raw Materials
 - b) Steel is the most important material to start the game
 - c) Our economies are initially weak and resource constrained.

A Sample Q for a colonizer with an end goal to colonize worlds by building a 100 Colonial Berthing ship with 50,000 Cargo Holds to ONLY work in system would be as follows:

50 Colonial Berthings:

50 Colonial Berthings = Requires 2,500,000 Steel
2.5M Steel = Required 7.5 M Iron
7.5M Iron = 75M Raw Resources – Iron Production from Mines

25,000 Cargo Holds:

25,000 Cargo Holds = 125,000 steel
125,000 Steel = 375,000 Iron
375,000 Iron = 3,750,000 Raw Materials

1 MK I Nuke Engine: (I scrapped my 5 Pathfinders in Q so did not worry about this)

200 Steel
100 Electronics
100 Synthetic Materials
100 Processed Radioactive

25,000 Construction Materials: (You need 500 per colonist to build something)

50,000 Timber = 150,000 Lumber
25,000 Steel = 75,000 Iron

This sequence will enable you to build a 100 Colonial berthing ship every other turn. The ship would have 50k cargo and could carry 50,000 Construction Material for the 100 colonists. Of course this sequence of builds does not take into account the following:

- a) the growing need for Construction Material as additional ships come on line (in effect 50k per ship per turn as they move back and forth)
- b) The requirement for colonial beacons
- c) The requirement for processed radioactive for your fission plants
- d) Construction Materials to build more installations on the home world
- e) The need for Cargo Bays for explorer ships
- f) Weapons for troops, new ships etc.....
- g) Anything else your empire wants to do.....

Every empire is different and has different goals and ideas. I wanted to present a simple way to understand the turn 1 requirements. Beyond the build of Industrial complexes, mines and strip mines there is no right answer.

Best wishes and good gaming!

Martin Burlingame (MadMartinB@yahoo.com)
The Orchid Society

