

# MMORPG Economics

2007: Version 3

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MMORPG economics as illustrated by Runescape economics is different to real-world economics in some ways:

- **Volume Of Trade.** We can estimate the volume of trade in Runescape by extrapolating up from a sample. There are thirteen main Runescape trading forums. Sampling these suggested a volume of trade of 80million gp per forum per minute. These suggest a volume of trade of 1billion gp per minute in total on the forums. Using a mid-2007 exchange rate of US\$4=1million gp, this represents a volume of trade of US\$4,000 per minute. This multiplies up to roughly US\$6million per day; and US\$2.1bn per year.
- **GDP Per Capita Equivalent.** If GDP were equivalent to total volume of trade, and if all ten million Runescape players could be counted as active citizens (neither of which assumptions are really valid), then Runescape's GDP per capita is US\$208. That would make Gielinor (the country in which Runescape is played) one of the world's poorest countries – in between Myanmar and Guinea-Bissau on the GDP/capita league table. If we reduce that to the five million players who are active then GDP per capita doubles to US\$416, but Gielinor is still pretty "Third World" – in between Tajikistan and Mozambique.

Main problems with this calculation:

- Most of the five million are not truly active players; compare that to the fact that less than 200,000 are typically playing at any one time. This would drive the GDP/capita figure above the initial estimate.
  - Not all the trades listed at a given sample time on the forums will be completed. This would drive the GDP/capita figure below the initial estimate.
  - Trades undertaken via the Runescape forum represent only a small proportion of total trading. This would drive the GDP/capita figure above the initial estimate.
  - Many traded items will just be traded again, so actual new wealth created in any year will be less than that represented by the total volume of trade. This would drive the GDP/capita figure below the initial estimate.
- **Scale Economics.** Scale economies typically mean that, the larger the number of items made, the lower the unit price; hence prices of real-world items almost always fall the larger the numbers of units you trade. In many ways, this works in reverse in the virtual world because of the high value attributed to time and convenience: prices are higher the larger the volume of sales.
  - **Supply—Demand Economics.** This does operate in some ways but finding locations with different supply—demand balances is not always easy. One obvious example is the population levels of worlds. In theory, population levels would have no impact on the balance of supply and demand – they would likely both vary in proportion to population, so the ratio of supply to demand would be the same whatever the population. However, you need to add in at least two further factors. First, when buying some items (e.g. from a shop on Runescape),

you might imagine that demand would be least on lowest-population worlds and, hence, supplies would be highest and prices would be lowest. This logic, though, gets meffed up by the fact that buyers (including arbitrageurs) use this logic and seem to deliberately target low-population worlds to buy from shops. Thus you often find that low-population worlds have an unexpected excess of demand and under-supply. Higher-population worlds can be better places to buy from. Second, under Runescape, trading can break down on some very high-population worlds where so many people are trying to buy and sell that there are too many trading messages and it becomes much harder, not easier to a) have your message noticed by a potential trader; b) complete any trade.

- **Money Supply.** Where does the money come from? In Runescape, players (with one exception) cannot make money, nor do banks supply money. Instead, money comes into circulation largely from seven non-player character sources:
  - Start: all players get 25gp at the end of their initial tutorial
  - Drops: when an NPC is killed by a player
  - Shops: when a player sells an item to a shop
  - Robs: when members thieve
  - Quests: at the end of some quests there is a money reward
  - Events: donations from Mysterious Old Man
  - Games: a few mini-games provide money at the endIn addition, players with higher-level magic skills can "alch" items – change them into money.
- **Information Asymmetries.** Information asymmetries happen when one person in a trade knows more than another. They are an issue when the person "in the know" uses their information advantage for their own gain. Information asymmetries abound in MMORPGs: there are lots of players who do not know prevalent prices; there are players who don't know what items look like (e.g. passing off a piece of rope as a highly-priced abyssal whip); there are players who don't know you cannot "trim armour". However, the chance that a player can actually make use of an information asymmetry (i.e. find someone who knows less than them and is willing to trade) is more limited.
- **Other Trade Issues.**
  - Scamming – attempts at trading fraud – are ever-present, though only a minimum of care is required in order to avoid them.
  - Trades can be the equivalent of the "zipless f\*\*\*": no informational exchange, no conversation, no awareness of identities; just an exchange of items.

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