

Analysis of Auction House in World of Warcraft

Nick Dekutoski, Michael Hopkins, Teddy Sirotek

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Professor Richard Colby

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Abstract

The video game *World of Warcraft* is known as a Massively Multiplayer Online Role Playing Game that currently has over 10 million players. The economy in *World of Warcraft* is governed by many of the same rules that control the real world economy. In an attempt to manipulate and control the in-game economy we gathered copper ore in large amounts to flood the market. We found the average price over the time frame of a week and then undercut that price by 50 percent. Upon doing this, we saw that many other players in the game were then following the price that we set. The price was brought down far enough for a long enough period of time that the website wowecon.com picked up the significant drop in price.

Introduction

Imagine a place where 10 million people, a number larger than half the population of Australia, gather in a community. Yet, this place can not be seen on a map. It is known as the Massively Multiplayer Online Role Playing Game (MMORPG) *World of Warcraft*. Due to the amount of people who play, many rules that govern the real world also govern the *World of Warcraft*, such as social mannerisms rules to economic rules. In an article written by Stjernholm and Beaudoin (2008) titled "Real World of Warcraft Economics" they discuss how the economy in game follows the same rules that our real world economy does. According to them, the in-game market follows principals such as Supply and Demand. Sclark (2008) wrote an article titled "World of Warcraft Economics" on Allakhazam. According to him, one of the primary ways to make gold in *World of Warcraft* is to "Buy low/sell High." He states that by prices of an item will tend to go down if there is a large supply or a low demand, the opposite is true as well.

In the real economy, people are able to manipulate it. According to the Satow (2009), Jim Cramer has manipulated the stock market in the past. In the 1970's and 1980's, the Hunt Brothers attempted to corner the silver market. They did in fact succeed to an extent causing a nearly 500% raise in silver prices (Trumbore, 2009). Yasuo Hamanaka, also known as "Mr. Copper" attempted to corner the copper market and wound up going to prison (Serrill, 2006).

In our study, we will be using this information to find if it is possible to manipulate the market of *World of Warcraft* by utilizing the rules of Supply and Demand, and

the tactic of buying low and selling high. This will be accomplished by flooding the market with various raw materials at prices strategically set.

Methods

In an attempt to make an observable impact on the auction house, we decided to observe the average price of an item, and release a significant amount of that item at a lower price. We hypothesized that by releasing items at a significantly lower price they will sell out quickly, and the average price of the auctions would decrease. We chose to try to affect the average price of Copper Ore. In order to choose this as our target operant, we took account of several aspects of Copper and the auction house. First, that there was a continual high supply and demand for Copper Ore, that is that nearly every day all auctions of Copper Ore sell out, and new ones posted. Second, Copper Ore is used for many in-game professions such as Blacksmithing, Engineering, Jewelcrafting, who craft items using Copper Ore. Lastly, there are many people trading Copper Ore and other materials in an attempt to make a profit. We also recorded averages for Silverleaf and Peacebloom, two low level herbs which we could have gathered while gathering Copper. However, we found that the prices were not stable enough in the auction house, and there were days at a time when there would be only one or no auctions of these materials. Gathering these materials also proved cumbersome because we could only have either the "find herbs" or "find Minerals" ability enabled at a time. For these reasons, we chose to only gather Copper Ore, and were able to gather 260 Copper Ore, or 18 stacks.

First, we recorded the average price of stacks of 20 Copper Ore in the auction house twice each day, once at 2AM EST and once at 2PM EST on the “Dalvengyr” server, which is based in the Eastern Time zone. We excluded all auctions of Copper Ore that were not in stacks of 20 because the price fluctuated too much and was not consistent with the price for stacks of 20. We recorded this data on the auction house for 10 days, April 26th -May 7th 2009.

The in-game currency system is set-up in denominations of “Gold” “Silver” and “Copper.” Copper is the lowest denomination, 100 Copper is equivalent to 1 Silver. Similarly, 100 Silver is equal to 1 Gold. All prices were recorded in terms of Gold, Silver, and Copper, or “G, S and B.” During this 10-day pre-flood period we determined our baseline average price of Copper Ore was 7G 49S 78C by averaging all our recorded prices.

During this time we collected as much Copper Ore as we could. In order to most productively gather Copper Ore we had our highest-level character run around Mulgore, which is a low-level starting zone with many deposits of Copper Ore. We also used the Gatherer add-on, which records spots where we’ve gathered material and marks them on our mini-map so we know where Copper Ore is most clustered when we return to those spots in the future.

We then flooded the auction house on May 7th at 5PM Eastern Time. At 4:50pm there were 6 auctions of 20 stacks with an average price of 6G 64S 25C. We calculated our weekly average (from our previous twice daily scans of the auction house) and found it to be 7G 49S 78C. From there we calculated the price we would flood the market at, 50% below that price, which was 3G 74S 89C. This number is

56% of the daily average, and undercut all competition with 20 stacks at that buyout price. Our auction was posted to have a length of 48hrs. In order for our auctions to be seen by more people we decided to release our gathered Copper Ore (a total of 18 stacks) over a period of 24 hours, evenly spacing the time of the auctions and the amount. So we posted 6 auctions of Copper Ore at 5:00PM Eastern then 8 hours later at 1:00am Eastern another 6 auctions, and finally at 9:00am on May 8th we posted the final 6 stacks. Each of these were posted at the same price, 50% of our 10 day average or 3G 74S 89C. We also took a screen shot of the Copper Ore auctions listed every time we posted our new auctions so that we track who is posting each auction. This allowed us to analyze the sellers and attempt to find any patterns in the auction house posts, as well as see if any of the buyers of our materials re-posted them. In order to determine if our auctions were re-posted, will also record the buyers of our auctions, and compare these with the screen shots.

Results

After we compiled the data for 10 days we then took the overall average of that 10-day period. This turned out to be 7G 49S 89C. Using this price, we posted our own auctions at 50% lower than the average price, which was 3G 74S 89C. We posted three separate times over the course of 24 hours. We posted six full stacks of copper ore every eight hours.

During the following 24 hours, we observed the auction house and kept track of the buyers. After the first post (5:30pm May 6, 2009), there was little change in the prices in the auction house. Other players were still posting full stacks, well above the average price. However later that night at 1:30am, there were other

players undercutting our prices by up to 5%, so there prices were fluctuating around 3G 40S 00C. However, this trend did not continue through the second posting on May 7th. Players kept their prices around the average buyout price. Undercutting the average price by no more than 6% and posting higher no more than 15%. After our third post on May 7th at 7pm, players were posting auctions up to 20% above the average buyout price. At this time, the lowest buyout price was 5% over the average at 7G 87S 38C. This was 37S 49C higher than the total average price.

We noticed that once we started drastically undercutting the average buyout price as well as the other player's buyout prices, the average prices started to drop to lower numbers. However, on May 9th, 2009, the player Stonesobr bought up other players low price auctions, as well as one of ours, and sold them for almost 300% higher than the average price. His cheapest auction was a stack of 20 copper ore for 13G 55S 00C. This quickly changed the drop in average prices to a spike, which was noted on wowecon.. Wowecon is a site that compiles the prices of all items sold in the auction house. Also, it compiles the data for each server and for both the Alliance and Horde. Since we posted multiple stacks at a reduced price the drop in average buyout prices per item was seen on wowecon.com on May 9th, 2009, with a spike in prices on May 11th, 2009 because of Stonesobr high priced auctions.

Discussion

Significance

This study is significant because it shows on a small scale that players can successfully manipulate the economy in *World of Warcraft*. As shown by the decreasing average prices of copper ore after our auctions followed by the increasing averages because of the character Stonesobr, the prices can be controlled. This enables the players to control the market and make a very large profit in a small amount of time. For example, we posted 18 auctions each for 3G 74S 89C, which was 50% lower than the average, and came out with a profit of 67G 48S 02C. Seeing this, if we were to post even at 85% or 6G 37S 40C compared to the average price we would have come out with a profit of 114G 73S 31C. This shows that by gathering up a large amount of materials like we did, and posting them at a decreased price, we controlled the market for a brief period of time. Also, we made a nice profit, which could have been larger, if we decided too while still undercutting and dropping the average buyout prices.

Implications

The results of our study can have several implications on *World of Warcraft* players. First, as demonstrated by Stonesobr, if one pays attention to the auction house prices, and notices a dip in the average price, one can buy up all auctions and control the market. By "playing" the market in this way, there is a very lucrative opportunity for making gold. This gives the player a potential to earn a large amount of money without having to spend any time gathering the materials themselves. While nobody bought up our auctions and re-posted them directly, if Stonesobr or

any other player had noticed our auctions at 50% below the 10-day average they could have taken advantage of this and bought up all our items and re-posted them at even just double the price they could have presumably made a 200% profit, or 3G 74S 89B per auction. For low-level players this profit is very significant, and this strategy could prove very profitable. This practice of buying low and selling high could be used with other materials for the same effect, and at a much higher level could yield an even greater profit. Our study proves that this could be an effective way to earn money that does not require the player's time to gather materials.

Another implication of our study is that a player who times when he or she posts his or her auctions can add to his or her auction house earnings as well. By recording the average price of materials, an observant player can spot when items are selling at a particularly high price, and take advantage of this and post his items then. By posting when the market is inflated, the player has the opportunity to make more gold than they would have on an average day. If the observant player combines this with stockpiled materials till an opportune time when the market is inflated, and posts several auctions on such an occasion, they could stand to make even more gold.

Lastly, as demonstrated by the player Stonesobr, if one has the cash or materials, completely controlling the market can be extremely profitable. If the average price is extremely low on a particular day, and a character has the capital, he or she could buy all the supply of Copper in the auction house. This would give them the ability to set price ridiculously high and not have to worry about competition. While Stonesobr's price was over 200% our calculated average, he or

she still managed to sell many of his items. It is easy to see how lucrative this could be for a player with enough gold to afford it.

Limitations

When attempting to manipulate an in-game economy, there are several limitations. According to the Warcraft Census, there are over 9,000 characters in the horde faction on the Dalvengyr server. Because of this, there are constantly materials being put into the auction house and being bought. We attempted to control the price with 18 stacks of copper. The next day the price remained at the low number we put it at. However, the price went back up again. To truly bring down the average price for an extended period of time, a player would have to have much more copper than we did. Furthermore, a player would have to keep injecting the copper each day for longer than 24 hours.

Another limitation is one that follows real economic rules--the tactic of buying low and selling high. Stonesobr bought up all the copper we put in and immediately priced it significantly higher. There are players in the *World of Warcraft* with incredibly large amounts of gold. Because of these players, even if we started our project with 200 stacks of copper instead of 18, there would still be players who could afford to buy all of them.

Add-ons provide added game play value to *World of Warcraft*. The add-on, Auctioneer helps players properly price their items to put up for auction. In addition to helping sell items, it aids in buying. Auctioneer keeps a live database that keeps track of the current, and historic pricing. When looking at an item it displays the items price in a percentage. 100 percent represents the historic average. A percent

less than 100, or more than 100 percent means that the item is priced low or high respectively. To truly manipulate and permanently bring down the price of a material, the historic average price has to be brought down. For some players, their Auctioneer has stored months of data. Competing with this much data will take a lot of materials.

References

- Satow, J. (2009). *Jim cramer shorting stocks, manipulating markets, saying the SEC doesn't understand*. Retrieved 5/15, 2009, from http://www.huffingtonpost.com/2009/03/11/jim-cramer-shorting-stock_n_173824.html
- Sclark. (2007). *Guide: World of Warcraft economics*. Retrieved 5/7, 2009, from <http://wow.allakhazam.com/db/guides.html?guide=464>
- Stjernholm, C., & Beaudoin, J. (2008). *Real world of warcraft economics*.
- Trumbore, B. *Educate yourself - the hunt brothers and the silver bubble*. Retrieved 05/15, 2009, from http://www.buyandhold.com/bh/en/education/history/2000/hunt_bros.html
- Villacampa, A. (2006). *The economics of 'world of warcraft'*. Retrieved 05/12, 2009, from <http://www.lewrockwell.com/orig7/villacampa1.html>
- Warcraft Census - dalvengyr*. (2009). Retrieved 05/20, 2009, from <http://www.warcraftrealms.com/census.php?serverid=666&factionid=2&minlevel=1&maxlevel=80&servertypeid=2>
- WoW gold price research: A world of warcraft economic study*. (2007). Retrieved 05/01, 2009, from <http://www.gamerprice.com/wow-gold-study.html>

