

Real *World of Warcraft* Economics

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Many people look at *World of Warcraft* as just another video game that drains people's lives away to a non-existent social life. However, these people do not realize the many knowledgeable things that can be learned from observing, playing, and thinking about the dynamics of the game. There are many interesting things that can be learned from WoW, of these the economic situation of *World of Warcraft* is particularly intriguing. Being that the *World of Warcraft* is a virtual world, it can become fairly easy to shrug off the fact that there might be more to the game than meets the eye. However, since it is a "world" it has to abide by many of the by laws and inevitabilities that are inherent in real life in order for it to function. Economics is no exception and as we begin to unravel the many dynamic layers to the *World of Warcraft's* economic system, it starts to become apparent how many things in the game either relate to or are exactly the same as the United States of America's economy.

A Simple Economic Lesson

Quite possibly one of the simplest parts to an economy is the supply and demand factor. Everyone is familiar with it as our lives are surrounded by supply and demand. An easy example of showing and understanding supply and demand can be seen in the housing market. In this scenario of supply and demand, the supply is the number of

homes for sale on the market and the demand is the number of people looking to purchase. When the demand for housing is high, the number of homes for sale is low. This shortage in homes for sale drives the cost of buying a house upwards. Likewise, when the demand for housing is low, the number of homes for sale is high. This surplus in homes for sale drives the cost of buying a house downwards. High demand results in shortages, which results in high costs and low demand results in surplus' that in turn brings about low costs.

Now that there is an understanding for how supply and demand works, lets begin to examine how any of this fits into *World of Warcraft*. To effectively show supply and demand in the *World of Warcraft*, we chose three different servers to analyze economic trends of supply and demand as well as to show the unique relationship the total population and the population ratio plays in the variance and range of prices.

The Quantitative Quest For Knowledge

The quest to gather data was simple, but rather time consuming. Due to time constraints, we chose to analyze three different servers. In order to get the best possible data, with only three servers, we decided that we would analyze a low population server in Alterac Mountains, a medium population server in Dalvengyr, and a full population server in Arthas. After choosing the servers, we each made one character per server but as rival factions, one of us choosing to side with the Alliance for all three servers and the other joining forces with the Horde. After rolling our characters, we then walked to the closest main city so as to get to an auction house. It did not matter what city we went to as all auction houses for each faction are linked with the major cities' auction houses.

Upon arriving in the auction house, we then set to work on gathering our data on what we believed to be six different items of general everyday importance.

The Netherweave Bag was our first choice because it is always crucial to have bag space and as the Netherweave Bag has sixteen slots, it is a convenient and affordable way for both new characters and old to store their items. Netherweave Cloth in stacks of twenty was our second item involved in our research. The reason for this is that Netherweave Cloth is a trade good and is used primarily in Tailoring and First Aid as well as in Engineering and Blacksmithing. In other words, there is never a shortage in demand for Netherweave Cloth so we thought it would be interesting to see the price variance for different factions as well as the different servers. The third item we chose was a Teardrop Living Ruby. A Teardrop Living Ruby really only has one use which is to socket a piece of armor or weapon. The reason for choosing this particular trade-good was to show the supply and demand of a popular finished product. As a Teardrop Living Ruby is the finished product of a Jewelcrafter, we thought it important to include this item in our investigation, as it is both a product and something that is always being made and bought. The fourth item chosen was a Star of Elune. A Star of Elune is considered a trade-good and is used primarily for Jewelcrafting. Since a Star of Elune is an entire gem, untouched by Jewelcrafters and not ready to be put into a socket, as it has no stats, we thought it provided enough difference from the Teardrop Living Ruby to include it in our research. The fifth item was a single Mote of Mana. A single Mote of Mana does little good for anyone. However, when someone obtains ten Mote's of Mana, they can combine them to create a Primal Mana which is used in almost every profession including Blacksmithing, Alchemy, Tailoring, Engineering, Enchanting, Jewelcrafting,

and Leatherworking. We elected to take down data on a single Mote of Mana rather than the Primal Mana because we wanted to show the price of this item in its simplest form before it became something more useful. A second reason for choosing this route is because of our sixth and final item that we recorded information on. We chose the Primal Might as our sixth item not only because it is highly used in almost every profession but also because the high cost just to make the item. A Primal Earth, Air, Fire, Mana, and Water all go into making a Primal Might making this both a coveted and highly expensive item to purchase, so we were very intrigued by what we might find on the supply and demand side of things.

The data we proceeded to gather on these six items were the prices of every item on each server. To ensure that our data was as accurate as possible, we did not round up or down, but took everything at its exact buyout price. To further ensure accuracy when it came to comparing the price of an item across factions, we recorded information at the same time per server. We ended up doing this process three entire times over the course of a week and after we had compiled all the information, we began to graph it so as to help with our in-depth analysis.

World of Warcraft's Economics Unveiled

According to Alexander Villacampa , “It is incorrect to believe that economic analysis can only be applied to ‘real world’ occurrences but in fact it can be used to understand all interpersonal relationships, virtual and ‘real’.¹” World of Warcraft uses a wide variety of economic concepts that virtually go unnoticed. Through examination of

¹ Villacamp, Alexander. “Economics of World of Warcraft”. LewRockwell.
<<http://www.lewrockwell.com/orig7/villacampa1.html>>

the Auction Houses, for Horde and Alliance, interesting economic concepts can be uncovered. The models that are utilized in World of Warcraft are, Specialization, Supply and Demand, Perfect Competition Marginalism, Outsourcing, and Inflation

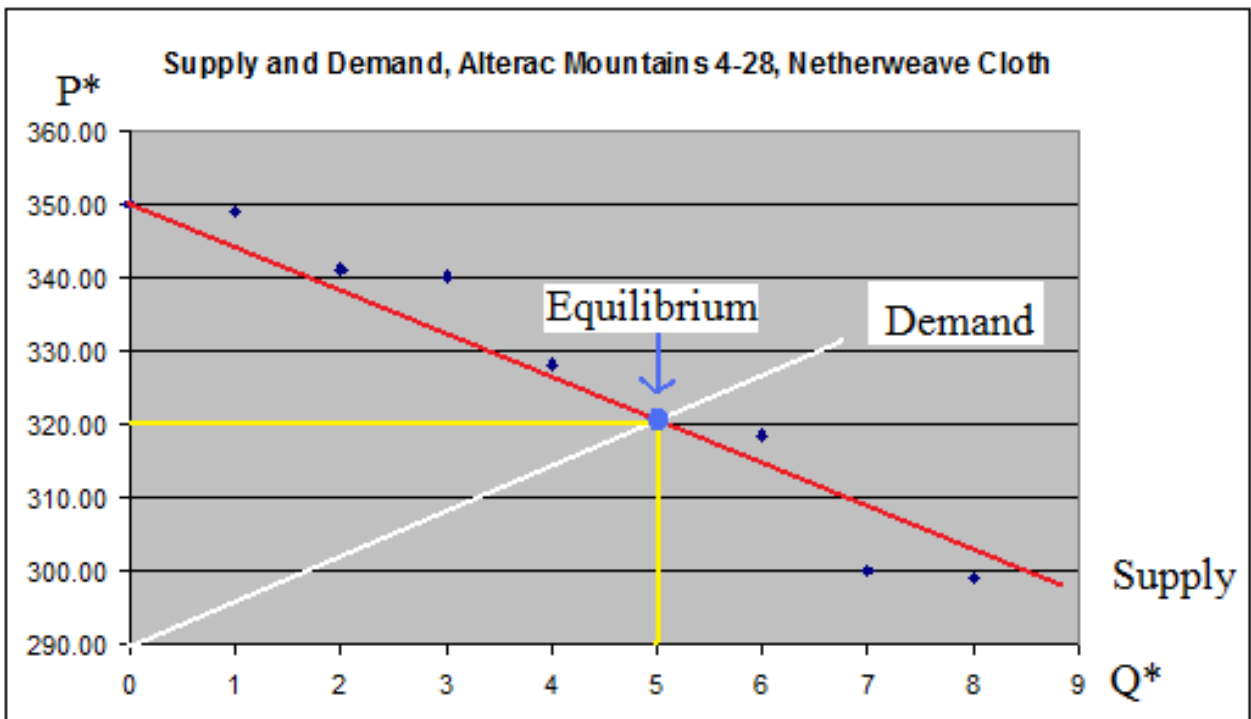
World of Warcraft has 11 primary professions, three gathering professions and eight crafting professions. Each in game user can choose up to two primary professions. In gathering professions such as, herbalism, mining, and skinning the in game user collects raw materials and can either sell their materials or use them in their crafting profession. The crafting professions that we will be focusing on are jewel crafting, Alchemy and Tailoring because they are the three professions that primarily use or create our 6 chosen Auction House items. In some professions such as alchemy and tailoring there are certain specializations. For example a tailor can choose to specialize in mooncloth, shadowweave or spellfire tailoring². What professions and specializations enable for characters is certain bonuses on certain items they can create and items only their specialization class can create. In economics the division of professions and specializations classes allows for a division of labor. Division of labor allows individual characters to invest their time and money in a certain field to receive the highest possible return. Division of labor also allows for gains from trade, where the producer (i.e leatherworking) buys from the gatherer (i.e. skinner). An example of this concept is a person who farms (collects) goods from monsters that drop Netherweave cloth. This person then puts their product in the Auction House. The Tailor buys the Netherweave to produce a finished product, Netherweave Bags. This transaction can also be described as comparative advantage, where trade benefits both parties involved.

Supply and demand plays a huge role in the economics of World of Warcraft.

² "Tailoring." WoWwiki. 18 May 2008 < <http://www.wowwiki.com/Tailoring>>

Supply and demand is described as, “organizing principle to explain prices and quantities of goods sold and changes thereof in a market economy.”³ The three servers whose populations are high (24,000), medium (17,000) and low (7,500) show a relative stable correlation between server size, demand, and amount of items, supply. In figures 1.1 and 1.2 show how supply and demand effect prices (P*) of certain products. Arthas, figure 1.1, is a high population server containing 15,432 accounts on the Horde side. Alterac Mountains, figure 1.2, only has a population of 554 Horde accounts. The overwhelming number of Netherweave cloth auctions in Arthas allows for the supply of that product to be saturated thus lowering the equilibrium to 3 gold and 6 silver or 306.00. Alterac Mountains on the other hand has less people and thus fewer supplies, making the equilibrium price for 20 Netherweave 3 gold 20 silver or 320.00.

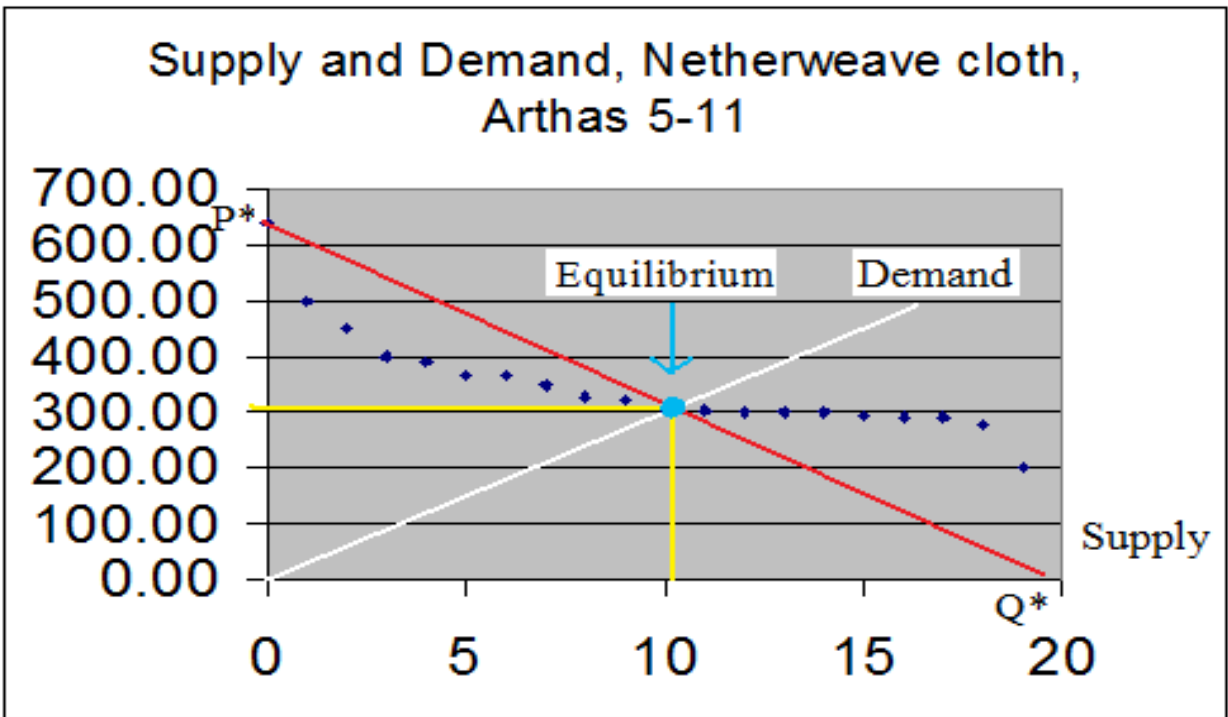
1.1



³ "Economics." [Wikipedia](http://wikipedia.org). 18 May 2008 <http://wikipedia.org>.

The supply and demand graphs show us where buyer and seller power exists. Buyer power is where the consumer has more options to buy from thus reducing seller power, ability to set prices. For example the consumers in Arthas have a wide variety of prices to choose from, the seller has to either accommodate the buyer and reduce their prices or hold out until the market changes. This concept is inverse for a server such as Alterac Mountains, since there is less competition, buyers can set their prices regardless of what is the standard value.

1.2



With few exceptions most items in World of Warcraft are open to Perfect Competition. There are numerous guides on the Internet that explain how to make in game gold. The one that most relates to our topic and may be useful to World of Warcraft entrepreneurs is how to control the virtual market. Most sites essentially try to reduce buyer power and recommend a variety of ways to do this. The entry “World of

Warcraft Economics” on the website *Allakhazam’s Magical Realm* gives you some insight on how to control the market in the preceding text.

To control this market, what you would do is completely buy out all of the [items] every last one of them... If someone puts them up for less, immediately buy them out. Make sure to no more than double [the price] at first... But, once the price is accepted then you could do the same thing, this time at a higher price... If too many people do this, which ALWAYS happens, abandon the market.... You ARE monopolizing a market and giving people no choice but to buy from you.⁴

Although skilled people can apply this process, the process is long and tedious. Certain programs such as auctioneer are a good way to monitor prices in the Auction House. This method can only be successfully implemented with items such as Teardrop Living Ruby, which had 94 Auction House appearances across our three servers over our three-day data entries. The reason it is easier to control smaller markets is because you can buyout the market by buying 3-10 items. It would be extremely hard to control the market of Netherweave Cloth where 94 Auction House appearances happened in one day in Alterac Mountains for the Horde population of 554.

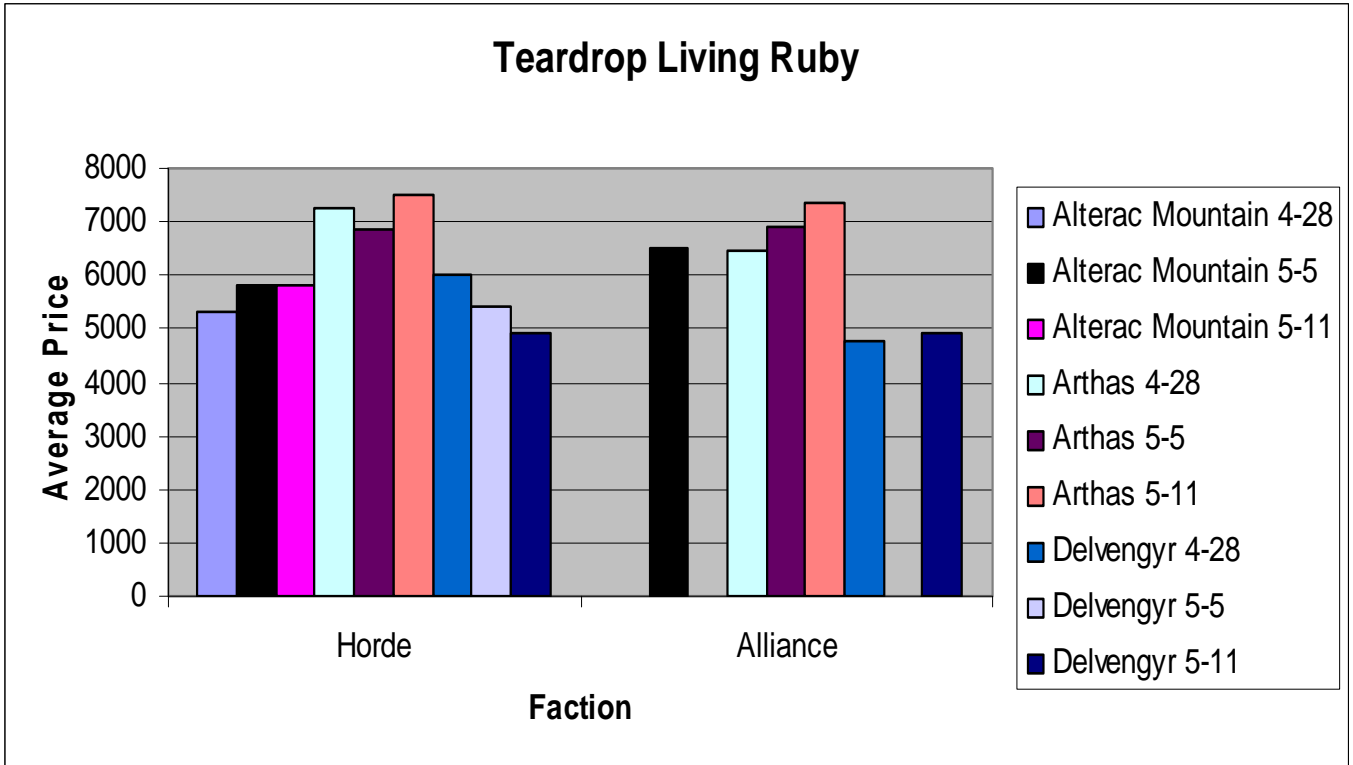
Perfect Competition is described as “an economic model that describes a hypothetical market form in which no producer or consumer has the market power to influence prices.⁵” World of Warcraft economics is based entirely by the players involved and is thus subject to random occurrences such a mote of mana being priced 100 gold above the normal price. This can be shown in items that are both scarce and

⁴ "World of Warcraft Economics." *Allakhazam*. 18 May 2008 <<http://wow.allakhazam.com/>>.

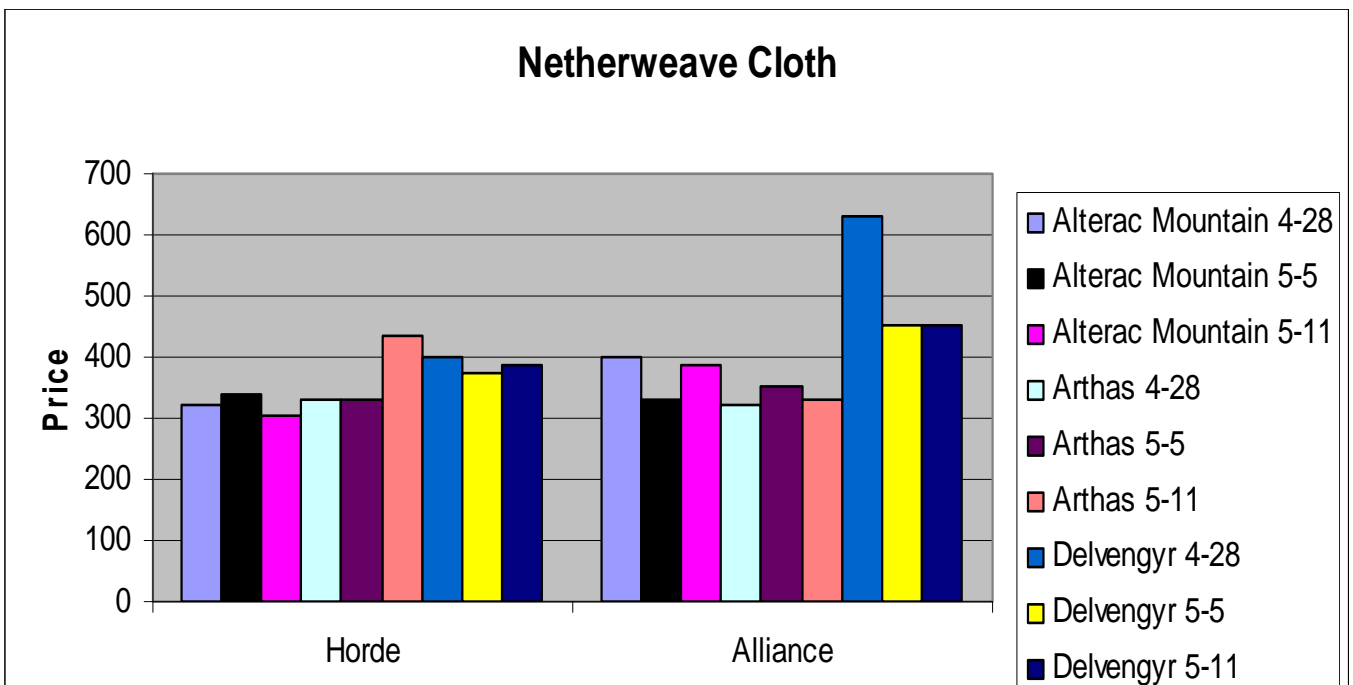
⁵ "Economics." *Wikipedia*. 18 May 2008 <<http://wikipedia.org>>.

abundant. Figures 2.1 and 3.1 show the average prices for teardrop living ruby and netherweave cloth according to faction and server. The economics of World of Warcraft uses many aspects of real world economics but because it used by inexperienced players the prices can become more flexible.

2.1



2.2



Over time I believe that prices for each item will inevitably rise for each server. The reason for this is because of outsourcing and inflation. Outsourcing is the use of overseas markets that compete with domestic production. There is a huge market in Chinese gold farming. Under paid Chinese work for 12 hour shifts in order to collect large amounts of gold and sell that gold to regular users abroad⁶. What this does is cause inflation, the relative rise in prices of goods and services, because more gold is in circulation than should be normally.

We spent many hours gathering data and putting together information. A World of Warcraft Modification (Mod) like Auctioneer would have been of great help. However, as easy to use as Auctioneer is, it is advisable to use discretion when compiling information on items being sold in the auction house as there have been accounts of people who use it to tweak the natural economics of the World of Warcraft, which is another subject on its own.

The Beginning of the End

We've come a long way in a short time since the beginning of our quest to understand the clever and subtle economics embedded in the World of Warcraft. Not even we could imagine the scale that economics plays in the virtual world when we began our initial research, but one answer ushered in more ways that the game's

⁶ Wagner James Au. "Inside World of Warcraft Golf Farm, Future of Work." Gigaom. <<http://gigaom.com/2006/11/26/world-of-warcraft-gold-farmers>>

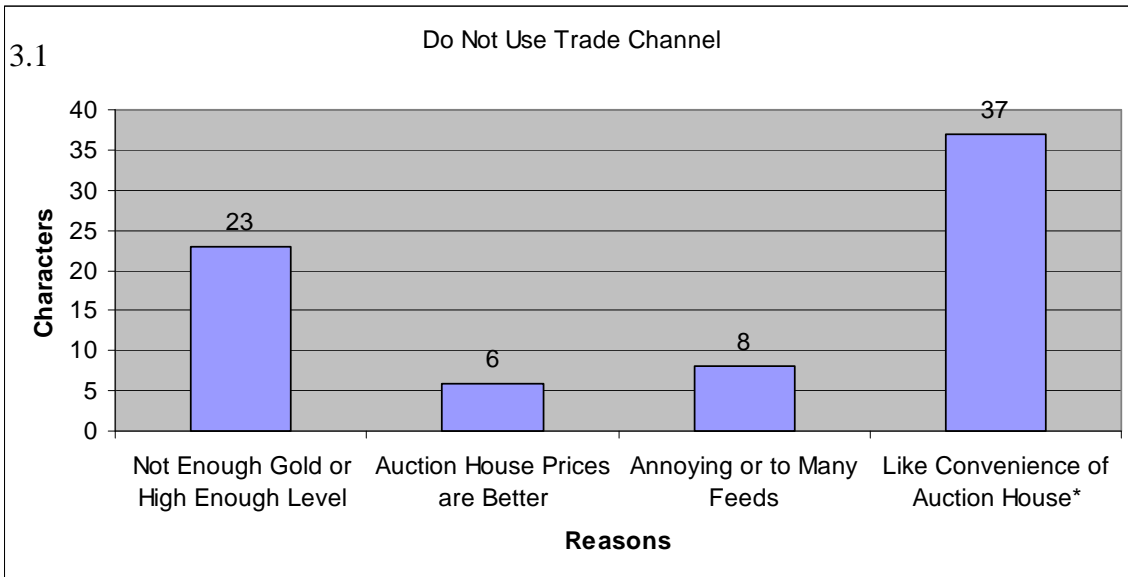
underlying economic system was similar to the United States economy such as a less subtle economic similarity that is present in the game is the trade channel.

The trade channel is used for people who desire to sell their items with a more vocal approach. In all the main cities of both the horde and the alliance, the gamer is bombarded with the talk in the trade channel. The most common way that buyers and sellers assault the trade channel is by saying Want To Sell (WTS) or Want To Buy (WTB) item of interest for amount of gold, Please Send Tell (PST). It can be argued that the more “stock-broker type” approach sells items quicker. However, this argument, as with most arguments has a few flaws.

We surveyed fifty people within the game asking each person if they paid attention to the trade channel when they enter a big city. Of the fifty people, thirty-seven of them said they never pay attention to the trade channel, nine of them said they only pay attention if they are looking to make a purchase, and four of them said they always keep an eye out for a good deal. For the people who said that they never pay attention to the trade channel, we asked them why they don't. Of the thirty-seven, twenty-three of them said that they did not have the gold to spend on the high caliber items that are generally trying to be sold in the trade channel, eight of them said they found the trade channel annoying, and six of them felt the auction house had better deals. All participants agreed that the auction house was more convenient. These findings are represented in graphs 3.1 and 3.2.

If the argument is that trade channels make it faster to sell items as opposed to the auction house is to be believed, the question that must be asked is how is this possible if 75% of the people surveyed said they do not even pay attention? The possible answer is

not solid by any means, but when observing the trade channel, it becomes apparent that there are really not that many items trying to be sold in the first place. The majority of the items being sold are being done so by the same person and that person will spam his items of what he or she is selling over and over. If you get a few people doing this in a big city, it makes it appear like there is lots of activity. Now, factor in that roughly 10% of the people coming into the city are open to purchasing and it drives up the demand for the few items that are on sale. As has been found, the trade channel full of buyers and sellers is efficient even if only a small amount of people on a servers population participate in it which is similar to America where only a small percentage of our population participate directly in the stock market.



*Total participants



*Total participants

Conclusion

It is quite impressive how many things go into the *World of Warcraft*, but this is one of the greatest strengths of the game. The fact that *World of Warcraft* is multi-dimensional gives it great versatility. Not only does it boast a fantastic game-play experience, but it actually is a virtual world and in every world there is some form of an economic system. As it turns out, the underlying economic system in *World of Warcraft* is highly advanced and has many elements like supply and demand, perfect competition, marginalism, specialization, outsourcing, and inflation that are seen in the United States' economic system.

Well, looking around, it appears that we have completed all the objectives for this quest, which must mean that our Quest For Knowledge has been a success. Hopefully, you have been enlightened and have gained some much-needed experience as you continue your quest for greatness and intellectual superiority.