

# MMORPGs: An Economic Perspective

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## 1 Introduction

Massively Multiplayer Online Role Playing Games (MMORPGs)<sup>1</sup> are video games in which many thousands of users experience a shared, persistent environment. The users can interact with each other and the game world continues to exist independently of which users are currently playing. Recently MMORPGs have become increasingly popular in America as more households receive high-speed Internet access and video games continue to penetrate mainstream culture.

Most MMORPGs have similar gameplay. The player first creates a customized character and assumes the role of the character in an online environment. He develops his character by completing various tasks that usually involve combating computer-controlled characters cooperatively or competitively with other players. Character development includes finding equipment and making the character learn new skills. The game focuses increasingly on teamwork and immersing the player in the online community. The player is encouraged to officially join a long-term team known as a guild to complete more difficult tasks.

The early stages of the MMORPG, in which the player develops the character, often involve a large initial time expenditure. This causes the player to

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<sup>1</sup>Note that the term MMORPG is interchangeable with MMO and MMOG.

want to continue playing after he or she has already invested time in developing his character. In the later stages, the player is involved in the community and has made friends, encouraging the user to continue playing. This is important because revenues are generated primarily from a subscription fee or periodically released expansions to the game rather than the up-front cost of the game.

Currently the most popular MMORPG in America is World of Warcraft (WoW), made by Blizzard, followed by Guild Wars (GW), made by ArenaNet. WoW appeals to the hardcore gamers, who spend much of their time playing video games. This means that Blizzard can charge a substantial monthly subscription fee (currently \$15 with discounts offered for choosing year-long subscription plans) and require a large time investment for character development without losing their user base. ArenaNet, on the other hand, is employing a strategy designed to capture a wider audience. GW is designed to require less time and there is no subscription fee. Instead ArenaNet sells periodic expansions for the game.

## **2 Niche and Target Market Identification**

How can massive online games, which tend to all leverage the benefits of massive social networks to differentiate themselves from single-player games, differentiate themselves from each other? One differentiable aspect is the quality of the game components, including factors like graphical detail, program reliability and performance, and level of gameplay immersion. Player skill level is another variable that can differentiate games. Increased development effort can increase the spread of skill levels the game appeals to. Games can also be differentiated by the level of time commitment they demand in order for the player to stay competitive with other players, although there is considerable spread. Games are also differentiated by their themes (though this is a hard quality to measure). Different pricing strategies can also dif-

ferentiate games. For certain games, players with a wide variety of skill will all be attracted to the game.

What determines whether a specific area of the market (as defined by the differentiable qualities mentioned above) is profitable to enter depends on the number of consumers there are, the number of competing products available, and the ability of the entrant to successfully compete with the established incumbents. Even in an area where there are many products, an entrant could be very profitable if it was superior quality and had a better pricing scheme.

Low quality games are generally bad entrants, since there are many low quality games and they are less differentiated. We have identified several areas that would be profitable to enter (assuming the entrant is developed properly):

- *High quality game area*- Very high quality games, requiring a medium skill level (with a very wide spread), requiring a low to medium time investment. This is an area with potentially the largest market. The consumers at this level tend to have a large network of outside-the-game friends, which is very beneficial since those players will be able to recruit players and keep them playing. Generally the games targeting these consumers require a medium time investment. However, a game with a somewhat lower time investment would be better since it requires less content, is attractive to a larger group of players, and as long as players enjoy the time they do spend in the game, their willingness to pay would not change significantly due to the inelastic nature of the industry. This area of the market does have a glut of products in it already; however, it may be possible that by developing a higher quality product, which would be effective since the marginal cost per subscriber is very low, a game can best its direct competitors.
- *A woman's game*- A game targeted towards female gamers, specifically with the goal of drawing new females into gaming. It would have to

assume that players come in with little skill and would have to require a low time investment and be able to run on the lower-performance computers that women tend to have compared to men. A significant social aspect to a woman-targeted should trigger positive feedback so that many potential customers could be drawn in. Women have strong social interactions that could be leveraged to accomplish this. However, it is difficult to target the female demographic since their tastes are generally harder to predict and more diverse than that of the male gamer.

- *Low time game area-* The ideal area for a game requiring only a small time commitment would be one that is high quality and requires a medium level of skill. Entrants in this area would primarily be targeting customers that like and have played online games previously but, due to jobs or school work, are unable to make a large enough time commitment for a normal online game. Entrants in this area could be an altered version of a game from another market area that require reduced time by having characters develop faster. The altered version would have higher subscription fees, but people would still play it as people with little free time tend to value their time highly.

### 3 Strategies

Identifying niches is an important part of designing a successful entrant. Other strategies however, such as unique pricing schemes, can greatly enhance the success of an entrant. The purpose of the strategies falls into at least one, and usually more, of the following categories: pricing strategies, getting more people in the game (broadening the market), locking players in, and getting more money from players. Different strategies will perform better in certain game markets, but most of these strategies are generally useful unless the cost of implementation is excessive.

## Pricing strategies

One aspect of a game that significantly affects its appeal is its pricing model. Most games either use a monthly subscription fee or release a new content expansion for purchase once a year or so. The expansions, also known as episodes, usually contain a significant amount of content and cost roughly three times the monthly fee of a comparable game. Successful subscription-based games often will release a few expansions to keep players interested, but not at the frequency of the non-subscription based games. Which pricing strategy works best depends on market position and the amount of content in the game. Games that are expected to dominate the market, such as Blizzards *World of Warcraft*, should use a subscription-based model with a few content expansions as such expansions are expensive to produce and infrequently released. Some games are released with enough built-in content to interest players for long periods of time. The subscription model applies best to these games. Other games have content that is readily exhausted; in a game with a significant story-line, players will only want to hear the story once. These types of games naturally fit the content expansion model because players can wait patiently for expansions without constantly paying a subscription fee.

One trend becoming more popular is to offer certain kinds of very specific content upgrades. For instance, some games allow players to purchase a new graphical upgrade for a specific in-game object. This mini-content upgrade idea works well in conjunction with both subscription- and expansion-based games. It allows for the extraction of more money from dedicated players. This strategy works best for content that most players dont care about but that some players might value highly. If all players value the content highly, the content would be better suited to release as a part of an expansion.

Another strategy would be to target a broader market by offering a tiered product. For instance, there could multiple servers available for use in an online game. The different servers could have different content levels or other

discriminating factors, and each could have a different subscription price to match. An excellent way to do this would be to have the lowest tier version use a simple combat system that is easy to learn but quickly becomes boring. The higher, more expensive tiers would have a more complex combat system based on the simple one, which would be more interesting and would perform better. Such a game could appeal to both high- and low-skill players. The usefulness of this strategy is that it expands the potential market without increasing development costs significantly. It additionally serves to increase revenues in a way similar to price discrimination—with multiple tiers it is possible to get players to pay prices closer to how much they truly value the game. Some players will also get drawn into the lowest-cost version and become locked-in. Then if it is easy to upgrade, players will later swap up to higher subscription tiers. This appears to be a rather novel strategy that is not in use by any major games. This strategy would work especially well for the the high quality market area since in this market having a broader appeal creates many more potential customers.

## **Getting more players**

One strategy that already has some popularity is to offer bonuses to players that recruit friends to join the game. Friends are much better at convincing other friends to play than faceless companies are. Players are motivated to recruit friends by game-related kickbacks (ie free subscription time) and also because they want more people to play with. This strategy would be particularly effective for the high-quality game market with its significant social interactions and broad appeal. This strategy also would work well with women-targeted games since that demographic tends to be social and, since many do not play games and would not know of the games existence, would require more recruitment. The strategy will work for the other identified market areas as well, but not as effectively.

## **Locking-in**

The key feature of online games is their ability to lock customers in. Few similar product markets share this feature to the same extent as online games have very large switching costs. While obviously strategies that lock in customers are important, most are in-game so they are outside the scope of this paper. The strategies mainly work by causing the player to create bonds within the game: either to their character, the storyline, or the friends and teams they play with. While this strategy is important, since it is game-specific, we will only mention it to say that leveraging positive feedback is a critical component in MMOs.

## **Getting more money from players**

Items are a critical part of online game: better items can lead to a much more favorable playing experience. Elite items are made hard to obtain, causing a significant market to develop in which players with little time can buy items from other players that farm the items (collecting items with the sole intent of exchanging or selling them to other players). The company that develops a game has a natural monopoly on selling items from that game. Not only could it facilitate trade between players in-game (for a fee), but it could sell items that it created as the company incurs no real expense in creating virtual items. A potential problem with this strategy is that players will anticipate having to spend a lot of money to stay competitive, so players might avoid the game altogether. One way to combat this would be to offer two separate versions of the game: one normal subscription-based version with an online market place for trade (but no item creation), another with lower-priced subscription-based version but with item creation. In the second type described, players would have to spend money on items to stay competitive, making up for the lower subscription revenues. This gives players a choice in which virtual-item market policy they wish to participate in.

This strategy appeals well to the amateur but relatively wealthy player who plays high-quality games with low time commitments.

One obvious way for companies to generate more revenue from the games they produce is to capture a larger fraction of the revenue created by retail. High-speed Internet is becoming increasingly common, especially for gamers. Already some games have a streaming content method for their game engines, where most of the game content is downloaded to players although the game is still purchased in stores. If all the game content can be delivered directly via download, than the company can selling some copies of the game online directly, capturing all available revenue. This strategy has already been used to an extent, although information about its success is not publicly available. This strategy applies most accurately to high-quality games since those players are more likely to have high-speed internet.

A related concept to the tiered subscriptions idea would be to offer additional services people consume synergistically with games. An example would be Ventrillo servers, which is a voice service that teams use to coordinate in-game activities. The company could offer the services as an extra fee on top of the subscription cost. This has several natural advantages in that it could integrate part of the interface into the game, offers a consolidated bill, and also has nearly free advertising to its players. The company already has the inputs it needs to provide such services, mostly servers and associated bandwidth. Another example of such a service would be guild webservers. Many top guilds have websites to coordinate events and advertise their activities. The company could offer guild websites that were a vastly superior product by integrating the game and website or offering website templates well suited to guild websites. An example of game and website integration would be having the game post player statistics to the website, while the website could send event information to the game to be displayed in-game. Such coordination would be a highly valued feature by most serious guilds, and players in such guilds are usually willing to spend money to support

their guilds. This strategy appears to be novel; a few games offer minor extra services, but such services tend to be minimal and are not integrated into the game itself. This strategy would work best with the high quality market area, since that area has lots of players participating in serious guilds.

## 4 Five Forces Analysis

Here we analyze the massively-multipaper market in terms of the classic five

	Product:	MMORPGs
	Competitors:	Blizzard, Mystic, Sony Online Entertainment, NCsoft
	Rivalry:	Low
	Substitutes:	Console Gaming, First Person Shooters, Real-Time Strategy Games
	Potential Entrants:	Gaming firms
	Buyers:	Gamers
forces.	Buyer bargaining power:	Low- firms may choose prices but are limited by industry conditions
	Suppliers:	Programmers, Hardware Firms, Software Firms, Servers
	Supplier bargaining power:	Low- most programmers and hardware companies have low leverage against firms but software companies have some leverage through licensing
	Complements:	Internet, Computer Hardware, Fansites, Servers

### Buyer Bargaining Power

- *Buyer Concentration vs. Firm Concentration* - low, buyers have no leverage against firms in numbers

- *Bargaining Leverage* - low, although buyers can choose products from various firms, MMORPGs have an industry standard in fees so buyer costs are similar
- *Buyer Volume* - low, most buyers only buy one copy of a game
- *Buyer Switching Costs vs. Firm Switching Costs* - buyer switching costs much lower than firm switching costs, but still difficult for buyers to switch
- *Buyer Information Availability* - buyer has a lot of information, ranging from websites to magazines to their own friends; rarely do good games go unnoticed, regardless of brand recognition; some buyers still uneducated but skilled ones usually are
- *Substitute Products Availability* - high, substitute products are easily accessible and in the same price range as MMORPGs
- *Buyer Price Sensitivity*- low, gamers stay somewhat constant even if the subscription price varies somewhat

## Supplier Bargaining Power

- *Supplier Switching Costs vs. Firm Switching Costs* - high leverage, since firms cannot afford to switch the development of a product but programmers may leave and join another firm
- *Substitute Inputs* - low, programmers and computers are required to make games; firms may choose to buy an engine to program their game with or create their own engine
- *Supplier Concentration to Firm Concentration Ratio* - varies, many programmers are available, but experienced management and project designers are not as abundant

- *Inputs Costs vs. Product Price* - low, unless the product is unsuccessful; development costs are high but marginal costs are low
- *Importance of Volume to Supplier* - high, a significant number of programmers are required in order to successfully implement a project; product relies on selling high volume since marginal cost of software is very low

## Entry

- *Entry Barriers* - MMORPG design and implementation requires significant resources compared to other games, preventing entry for very small firms; usually a strong theme is required eg WarCraft, Star Wars
- *Brand Equity* - very strong, companies with a strong brand are much more likely to sell products than those without, eg Blizzard
- *Switching Costs* - high with MMORPGs, a lot of time and money invested, as well as social aspects and character attachment
- *Capital Requirements* - low compared to other industries; high compared to other game types
- *Distribution* - distribution is accessible to most companies, games from somewhat small firms are still available at most stores
- *Learning Curve* - high, experience is extremely important for success; new entrants lack knowledge of implementation even if they have good ideas
- *Expected Retaliation* - low, established firms do not retaliate against new firms because of growing market and incumbent status

## Substitutes

- *Buyer Propensity to Substitute* - high, people like having other activities which do not involve sitting in front of their computers for hours
- *Relative Price Performance of Substitutes* - varies; console games cost a similar amount but getting friends together at the same place takes time and traveling costs; First Person Shooters and Real-Time Strategy games are usually non-subscription based and therefore have very high relative price performance
- *Buyer Switching Costs* - very high, people invest time making social connections in MMORPGs, valuing such interaction as justifying a monthly fee or continual costs for expansions
- *Perceived Level of Product Differentiation* - high; most players do not subscribe to more than one MMORPG at a time so there is social differentiation; gameplay usually varies in different games, fitting players preferences

## Rivalry

- *Market Shape* - a few strong firms exist on top, with a moderate number of middle- tier firms, and a increasingly large amount of smaller firms; the most lucrative position to be in is at the top of the market with millions of buyers
- *Buyer Power* - low, buyers do not have much leverage so firms do not need to compete
- *Supplier Power* - varies, most programmers have low power but high level programmers may leave their firms in order to pursue goals at a new one. Blizzards former employees of Mike OBrien, Patrick Wyatt, and Jeff Strain, became the founders of ArenaNet.

- *Threat of New Entrants* - lower than normal games, the production and maintenance costs of MMORPGs are too high for most small firms unless they have a unique product.
- *Threat of Substitute Products* - low, there are no direct substitute products since console gaming requires more organization; other types of games are differentiated based on gameplay
- *Number of Competitors* - growing rapidly, especially at middle tiers
- *Industry Growth* - industry is expanding very quickly so rivalry is low
- *Competitor Diversity* - high, firms focus on trying to differentiate their products through perks
- *Informational Complexity and Asymmetry* - very high, all firms know everything about other games since information is publicized and available; player reactions are unknown until later in development of games
- *Brand Equity* - a few strong firms stand: Blizzard, Mystic, Sony Online, NCsoft

## Complements

- *Broadband Internet* - players need faster and more stable network connections for gaming
- *Computer Hardware* - players want better hardware to support their gaming from high-performing computer chips to surround-sound speakers to laser-precision mice
- *Fansites* - players want as much information as possible about MMORPGs gain competitive advantages and be able to interact more with the existing social community

- *Servers* - communication is becoming more and more important in games, fueling the growth of voice chat, websites, and other organizational tools which require servers and bandwidth

## 5 Summary

There are many companies entering the online gaming market. Many of the companies are not good entrants. Ideal candidate companies for entry have significant development experience, a solid brand name, and a well formulated idea for their entry. They target a niche—whether the cash-strapped hard-core college student, casual female gamer, or wealthy yet time-pressed businessman. Applying the strategies described above will increase the success of a new entrant, but certain strategies will not always be applicable, so experience and a sharp management team is key.