

# New Incentives for Players in Virtual Goods Trade

How the Marketplace in Diablo 3 Changes Trade with Virtual Good

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# **New Incentives for Players in Virtual Goods Trade – How the Marketplace in Diablo 3 Changes Trade with Virtual Goods**

## **Abstract**

Real money trade with virtual goods between players has long been viewed as an unreliable black market. With the introduction of the Real-Money-Auction-House in the game Diablo 3 the developers, Blizzard, are changing this. This official free market will change players incentives to participate in trade with virtual goods and in this study we try and predict how this change will manifest. We base our analysis on a discussion group and survey of potential players as well as basic market theories tied to the structural change that the Real-Money-Auction-House will introduce. Some of the primary incentives that we identified as changing are bound to the marketplace and its properties. More specifically the scale, centralization and security. Blizzard's latest games have a great amount of active players and we can assume many of these players will be inherited by Diablo 3. This combined with a free centralized market will create an highly efficient market where the price is set by the forces of supply and demand and the information available on the goods. The player to player markets of virtual goods have up until now been conducted through unofficial third party suppliers. Players on these third party markets are plagued by frauds and unreliability. By stepping in as a middleman for all transactions Blizzard will provide a secure marketplace. We found that enabling trade at a no-risk scenario is very attractive to most of the playerbase and will help the growth of this market.

## **Nya incitament för spelare inom handel med virtuella varor – Hur marknadsplatsen i Diablo 3 förändrar handeln med virtuella varor**

### **Sammanfattning**

Handel med virtuella varor för riktiga pengar mellan spelare har länge setts som en opålitlig svart marknad. Nu håller Blizzard, utvecklarna av Diablo 3, på att förändra detta synsett med introduktionen av Real-Money-Auction-House. Denna officiella fria marknad kommer att förändra spelares incitament för att delta på den. Vi försöker i denna analys att förutsäga dessa förändringar. Vi grundar vår undersökning på en fokusgrupp och en enkät, med tillägg av generella marknadsteorier som kan kopplas till den strukturella förändringen som Real-Money-Auction-House introducerar. En del av de primära incitamenten vi stött på är knutna till marknadsplatsen och dess egenskaper. Mer specifikt storleken, centraliseringen och säkerheten. Blizzards senaste spel har haft en stor skara av aktiva spelare och vi kan anta att många av dessa kommer att övergå till Diablo 3. Detta kombinerat med den fria centraliserade marknaden kommer att bilda en högeffektiv marknad där priset avgörs med hjälp av utbud och efterfrågan och informationen som finns tillgänglig för den specifika varan. Tidigare marknader för virtuella varor där spelare handlat sinsemellan har funnits hos inofficiella tredje-parts-aktörer. Spelare på dessa tredje-parts-marknader är ofta utsatta för bedrägerier och osäkerhet. Genom att etablera sig som en mellanhand för alla transaktioner så kommer Blizzard att skapa en säkrare marknadsplats. Vi kom fram till att införa handel utan risk för spelaren är mycket attraktivt och kommer stödja marknadens tillväxt.



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# 1 INTRODUCTION

*In this chapter the basics and the purpose of our idea will be presented. The main problem statement of the report comes after. A presentation of the scope and its limitations will follow.*

Trade is one of the primary bases of modern society. In recent years the nature of trade, along with society itself, has gone through radical changes. No longer is it just mere interchanges of tactile goods. The very concept of trade has expanded into the virtual domain.

The phenomenon of trade with virtual goods for real money, also known as Real-Money-Trade (RMT) is becoming more common. The RMT in early online games evolved as an underground market not endorsed by the developers and in most games today still is. Other game developers have adapted this as a business model and produce games solely funded through RMT of virtual goods. With the upcoming release of Diablo 3 and already 2 million preorders (Blizzard, 2012c) Blizzard will possibly create one of the biggest markets available, which is fully supported by the developers themselves.

According to Dataspelsbranschen, the total value of game sales in Sweden, Norway, Finland and Denmark combined up to 685 billion US dollars (Dataspelsbranschen, 2011). A report from the consulting firm Magid & Associates claims that world wide purchases of virtual goods added up to more than 2.3 billion US dollars in 2011 (Magid & Associates, 2011). These statistics point to the fact that the RMT market is significant, partly due to the success of online gaming. However, there is a lack of awareness on the subject. Vast amounts of time, and more recently money, are being spent in these virtual worlds and there are undeniably repercussions for society, individuals and technology.

## 1.1 Purpose

We have examined the possible change in the deciding factors introduced by the developer endorsed in-game RMT market of Diablo 3, specifically the Real-Money-Auction-House (RMAH) and its effect on the incentives for players to participate in this type of trade. The RMAH will allow players in the game to put up any item or character in the game for sale and thus create an extensive free market for RMT within the game. Since the game has not yet been released we can only speculate to what the effects will be, but with the game being highly anticipated there is much discussion around it and almost everyone with some knowledge of online games has an opinion of this fairly controversial change to the Diablo game-series. With research on similar cases, players' opinions and by applying economic theories we hope to foresee the impact the RMAH will have on players' behavior towards RMT.

## 1.2 Problem Statement

*With the incorporation of the Real-Money-Auction-House in the upcoming release of the online game Diablo 3 - how will the incentives for players to participate in trade of virtual goods change?*

Sub questions:

- How does a centralized market affect these incentives?
- What are the current motives for players to engage in Real-Money-Trade?
- How does the game developer, Blizzard's, endorsement of the Real-Money-Auction-House change players' attitude towards Real-Money-Trade of virtual goods?

## 1.3 Scope and Limitations

We will only scratch the surface of Diablo 3 trade from an economical and psychological perspective. Our focus is on the trade between players through the auction house in the game universe of Diablo 3. The purpose of this report is not to engage in economical number crunching but more to give a lighter interdisciplinary perspective on the phenomenon of trade with virtual goods. We don't have the competence to perform any deeper psychological analysis on the subject and will have to focus more on presumably shallow data we gather in our research. With that said we will use different economical and psychological models for our hypothesis without going any deeper than that.

This report is just a theory of how the RMAH will affect the virtual goods trade as a result of the game not being released yet. No actual data has been gathered from the final game but is based around economic theories, results from similar cases and experience from the pre-release test version of the game.



## 2 BACKGROUND

*In this chapter we try to clarify some of the concepts and knowledge needed to provide the reader with the context of the report.*

### 2.1 Concepts

**Virtual goods** - in this text also referred to as virtual items - an item that is intangible and immaterial but is still an embodiment of value. One of the more common examples are virtual items in an online game universe. This should not be confused with the broader term digital goods or information, for example e-books, movies and music. These digital goods are often tied to immaterial property rights, because they have a value irrespective of the form or environment. Virtual goods are much more limited and often constrained to a specific virtual world on a specific set of servers. We will use JAT Fairfield's definition of virtual goods. In his paper he indicates that there are some basic conditions that have to be fulfilled for a piece of virtual goods.

- The item is rivalrous, if you own that specific item only you own it, no one else can have exactly the same item as you. Others may have the same *type* of item as you but not the same item. In contrast to digital goods where multiple users can use the same item at the same time by just copying it.
- The item is persistent, this means that when you disconnect from the virtual world the item does not disappear and is there when you return.
- The item is interconnected, others can interact with it be it by viewing or using it.

(Fairfield 2005)

The definition of virtual goods can enable them to be regarded as a material object when looking at the aspects of trade. The translation between the two realms of "real" and "virtual" is the perceived utility the goods create for the player. Lehdonvirta, Wilska and Johnson claim that virtual goods can even fulfill the same needs as material goods in aesthetic and social roles in their respective subculture. (Lehdonvirta et al. 2009)

**RMT** - Real money trade, a term often used in conjunction with the subject of trade with virtual goods for real money.

**Utility** - often used in economic contexts as a form of satisfaction measurement or subjective value for the consumer. When someone gets their first car, the utility value for that car may be very high and useful in many ways whereas if that car would have been their tenth it would probably not be appreciated as much. Thus the utility value for the tenth car wouldn't be nearly as high as for the first one.

**RPG** is an abbreviation for role-playing game. RPG implies the player has control over a character, which continually evolves based on actions and choices made by the player. RPGs can be played alone or with other players depending on the game.

**Third party** - in the context of RMT: some organization or player not officially associated to the virtual world or the developers but still a supplier on the RMT market.

**Primary market** - the market for virtual goods where a player buys directly from the distributor of the game.

**Secondary market** - in general a market for used goods, but in the context of this analysis we are talking about player-to-player trade with virtual goods.

**RMAH** and **GAH** are abbreviations for Real-Money-Auction-House and Gold-Auction-House which are the two auction houses introduced in Diablo 3 where you can trade in-game items for real money and in-game currency respectively.

**Active incentives** is our term for incentives that are operated and changed upon action and thought from the individual. For example a person's attitude towards a product can change the subjective personal value of the product, and thereby the incentive for participation in trade. A more specific example: I think the color blue looks good, thus I am more inclined to buy a blue shirt than a red shirt.

**Passive incentives** is our term for incentives that are possibly operated but not changed upon action or thought from the individual. The individual cannot control these incentives. A simple example for a passive incentive is when a fee for engaging in trade on a market is removed, thus motivating for more trade. It is passive because the individual can not control it. It is important to have in mind that several individuals' active incentives can form a passive incentive. For example if many people want a certain product, there is a demand for it. Thus creating a passive incentive for supplying this type of product. In this way a passive incentive has been formed from many active.

## 2.2 Market Size

As most companies keep their subscriber data private it is difficult to get an overview of the potential participants on this market. A rough estimation from Ibe Van Geel on MMOdata.net suggests that the current number of total active players with online subscriptions in the most prominent Massively Multiplayer Online-games (MMO) are around 20 million (MMOdata, 2012b). If we look at the broader perspective of online games since the market of virtual goods does not only exist in MMO-games. The number of players then was around 121 million in 2009 (Lehdonvirta & Ernkvist 2011).

In North America, Europe and Japan, 22% participate in the secondary market, it generates an average spending per participating player of \$369 per year. Comparing this to China and other developing countries it is only \$87.5. North America, Europe and Japan only generate about \$578 million, compared with the \$1 825 million that China and other developing countries generate. (Lehdonvirta & Ernkvist 2011)

By judging these numbers and the ones presented in *figure 1*, it is possible to suggest that most of the consumers of virtual goods are located in North America, Europe and Japan while the producers are in China and other developing countries.

Country/Region	(A) Number of players. (mil)	(B) Share of players using the secondary market.	(C) Annual spending on the secondary market per player.	Secondary market size (A x B x C). (mil)
Korea	7	0.24	\$369	\$620
Europe, North America and Japan	30	0.22	\$369	\$578
China	69	0.25	\$87.5	\$1510
Other developing countries	15	0.24	\$87.5	\$315
<b>Total global market</b>	<b>121</b>			<b>\$3023</b>

*Fig. 1 (Lehdonvirta & Ernkvist 2011)*

## 2.3 What is Diablo 3?

Diablo 3 is an online roleplaying game (RPG) that is based on evolving your character and being able to defeat different types of monsters or other players within the game. The central parts in the progress of a player's character are the items that a player acquires. As the player's character stops evolving after reaching a certain point in the game the only thing that players can do to improve is finding new and better items to use. This is why trade has always been a central part of the Diablo-games. When players find different items that may not be suited for their character specifically but are valuable to another character they can trade these items for something more useful to them. The trade on this secondary market is what we will focus on in this paper.

## **2.4 Earlier Official Secondary RMT Markets**

### **2.4.1 Station Exchange in EverQuest 2**

With the launch of the Station Exchange program for the massive online RPG Everquest 2, players were given an official marketplace where to trade their virtual items for real money back in 2005. The announcement of this feature created discussion and controversy about the future of the game among the players. Sony Online Entertainment, the developers, therefore decided to only enable the feature on two new servers on its launch. Players were able to transfer their characters to these servers and put up their virtual goods for auction. (Robischon 2007)

According to the developers the introduction of the Station Exchange was not intended to eradicate or replace the third party trade of virtual goods on the secondary market. It was seen more as an experiment pioneering the business model of company revenue through an official secondary RMT market. The estimated trade through third parties stayed about the same after the introduction of the Station Exchange. Sony Online Entertainment suspects this was due to the fact that the Station Exchange only was implemented on 2 out of 30 servers and on these 28 remaining ones the unsanctioned trade through unofficial marketplaces remained the same. (Robischon 2007)

The transactional fee for each completed auction through Station Exchange consisted of the static fee of 1\$ for simply putting the item up for sale, and if a successful transaction was made 10% of the revenue was also paid to the developers. (Robischon 2007)

The introduction of the station exchange had some interesting effects on the customer support service. Previously 40% of the customer service time was focused on player disputes over third party trade of virtual goods. After the introduction of the Station Exchange the overall amount of customer support time dropped by 30%. (Robischon 2007)

## **2.5 Unofficial Secondary RMT Markets**

### **2.5.1 Diablo 2 and D2JSP**

D2JSP is the name of an online trade community created in 2002 that gained popularity with the program used for automatically collecting valuable items in Diablo 2 with the same name. The forum has since also been used indirectly for RMT in other games than Diablo 2. A category for Diablo 3 and its pre-release testing version is already open and active with transactions. (D2JSP, 2012a)

On these forums the users can trade with an established currency, forum gold, for the items that they needed and are offered by other users. This type of currency can only be bought with real money. The forum gold can not be “cashed out” directly through D2JSP, that could only be accomplished by having another user buy your forum gold for real money. The forum gold gives the users an established currency for trading with the items they found in the game and a common denominator for value. The D2JSP community was possibly one of the biggest trading hubs with

over 500,000 registered users but is not as popular today as it was during the prime of Diablo 2. (D2JSP, 2012b)

As the popularity of D2JSP grew back in 2002 the trade hub of D2JSP spread to many other games and forum gold is still the currency for trade in these games, although these other games have not really achieved the same attention as the original market of Diablo 2. (D2JSP, 2012b)

Besides D2JSP there are many third party suppliers that sell items on their websites professionally. Having in mind the game Diablo 2 was created back in 2000 the amount of traffic and participation on the market has dropped drastically but it is still relevant with the upcoming release of the follow up.

## 2.6 The Real-Money-Auction-House of Diablo 3

### 2.6.1 Concept

*“We're introducing a powerful auction house system that will provide a safe, fun, and easy-to-use way for players to buy and sell the loot they obtain in Diablo III. Items can be sold and purchased using real-world money or in-game gold.”*  
(Blizzard, 2012a)

This is how Blizzard describe the new auction house on their official webpage. The auction house feature consists of two different marketplaces as seen in figure 2. The gold auction house (GAH) where players can trade items for in-game currency (Diablo 3 gold) and the real money auction house (RMAH) where players trade items for real money.

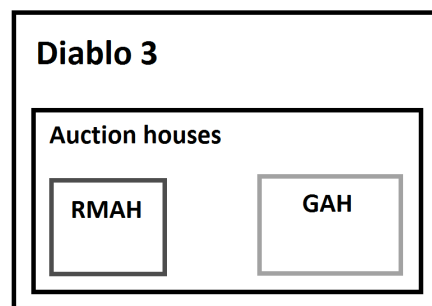


Fig 2. The auction houses of Diablo 3

In this part we will only focus on the auction house for real money, the RMAH. As stated above the auction house will provide players with an official marketplace sanctioned by Blizzard. Through the RMAH players can trade most items available in the game and in the future Blizzard also plan to enable character sales. They motivate the introduction of this feature with the following text.

*“The item-based nature of Diablo gameplay has always lent itself to an active trade-based ecosystem, and a significant part of this trade has been conducted through unsecure third-party organizations. This has led to numerous customer-service and game-experience issues that we've needed to account for. Our primary goal with the Diablo III auction house system is for it to serve as the foundation for a player-driven economy that's safe, fun, and accessible for everyone.” (Blizzard, 2012b)*

## 2.6.2 Procedure and Means of Trade

Players can access the RMAH interface from anywhere in the game to purchase or sell items at any time. Items can be put up for auction directly from your character or from their shared storage that is shared for all your characters connected to your account. When putting up an item for sale the player selects whether to put it up on the RMAH or the GAH. The posted item is transferred to the auction house where it is held until someone purchases it or the listing expires. The amount of time before a listing expires is 48 hours. When the transaction is complete or the listing expires the item is placed in the corresponding characters shared storage. (Blizzard, 2012b)

When bidding for an item, players will be able to place a current bid or a maximum bid if they wish to engage in automatic bidding. Users participating in an auction can check their status on the “currently winning” and “outbid” pages. The seller also has the option of setting a buyout price for the item, in this case the item is sold directly if the price is met. While using the RMAH all players are anonymous, and only Blizzard knows who is who. (Blizzard, 2012b)

Players can also use a feature called ‘*smart search*’, it is a functionality that lets a user find relevant items for their character. For example showing items that only their characters class can acquire or items that are the most beneficial to their character at the specific time. The user can also sort the table with auctions per price, time left, item efficiency or alphabetically. (Blizzard, 2012b)

<b><i>Region (Currency)</i></b>	<b><i>Transaction Fee</i></b>	<b><i>Withdrawal Fee</i></b>
<b>ARS</b>	<b>ARS 4.50</b>	<b>N/A</b>
<b>AUD</b>	<b>\$1</b>	<b>15%</b>
<b>BRL</b>	<b>BRL 1.80</b>	<b>N/A</b>
<b>CLP</b>	<b>CLP 500</b>	<b>N/A</b>
<b>EUR</b>	<b>€1</b>	<b>15%</b>
<b>GBP</b>	<b>1£</b>	<b>15%</b>
<b>MXN</b>	<b>MXN 12.00</b>	<b>15%</b>
<b>RUB</b>	<b>50 RUB</b>	<b>N/A</b>
<b>USD</b>	<b>\$1</b>	<b>15%</b>

*Fig. 3 (Blizzard, 2012b)*

Blizzard will deduct transaction fees from the seller for each virtual item transaction. The fees and currencies can be seen in *figure 3*. The transaction from real currency to in-game will be carried out

through a registered form of payment attached to the personal account of the user before it can be used in the RMAH. The reversed process is applied when a player successfully sells an item through the RMAH, again the money is placed on their personal account tied to the game. (Blizzard, 2012b)

To withdrawal money from the game there is a fee consisting of 15% of the price. The cash out option is only available in certain regions and currencies as seen in *figure 3*. The player has to choose if the earnings of a successful sale are to be kept on the game account balance or cashed out before putting up the items for sale on a per auction basis. (Blizzard, 2012b)

### 2.6.3 Restrictions

Blizzard does not intend to restrict the RMAH to a specific set of their own servers but sees it more as an option for players to participate if they want to.

*“The currency-based auction house is completely optional. Players who aren't interested in paying real money for items will still be able to rely on items they acquire through their own adventures, and they'll also be able to trade with friends and use the full-featured gold-based auction house.” (Blizzard, 2012b)*

The only permanent restriction concerning the RMAH at the moment is that it is not available to players who participate in the hardcore mode. Hardcore is a game mode where the player's character's death is permanent, meaning if you die your character and all items on that character are lost. During both play and trade in the hardcore mode the character is separated from the other game modes and can not interact with the RMAH. (Blizzard, 2012b)

*“All of a Hardcore character's items are forever lost upon that character's death, so to avoid the risk of a player spending real money on items that could then be permanently lost when the character dies, we decided to restrict the use of the currency-based auction house in Hardcore mode.” (Blizzard, 2012b)*

Blizzard has no intention of limiting the number of transactions an item can go through and you will be free to re-list items you have bought and used for some time or any possible combination of those. The only restriction being an unspecified time after a transaction before the item can be put up again. (Blizzard, 2012b)

## 3 THEORETICAL FRAMEWORK

*In this chapter we will go through the theories that will later support our answers to our problem statements.*

### 3.1 Trust as a Factor in Trade

#### 3.1.1 The Issue of Trust and Control Mechanisms

In every trade there is an element of risk, the classic example is the purchase of a used car. The seller knows much, if not everything about the car whereas the buyer only has a fraction of this information, this is called an *information asymmetry*. The seller might use this information asymmetry to their advantage to try and claim a higher price than the car is actually worth since the buyer is not aware of its defects. For any transaction to take place between the two parties there has to be an amount of trust involved. (Tan & Thoen 2001)

The asymmetry in virtual goods is not the same as the example above with the car. This is because virtual goods can not be manipulated by the individual in such a way that the changes are hidden from the buyer. If the description of a sword in the game says it does 20 damage the seller can not manipulate this information in any hidden way. Further the performance of virtual goods does not, in our case, decline with time as physical items do. The asymmetry is partly present in the difference of player knowledge of the game but the items properties are usually very specifically described. There are similarities between the example of the car and virtual goods. Such as information that is tied to the goods but not present at the place of the transaction. This can be what others think of the car such as reviews and expert opinions. The parties can find such information externally, for example on the web.

As indicated before much of the trade on the secondary market is conducted by smaller unofficial third party suppliers, the trust issue is if you will receive what you have paid for or be the target of an online fraud. The payment is usually made upfront and in some cases the customers have to hand out their credit card information directly if no other payment service is available. Even if the transaction is successful there is always a risk of being subject to an internet fraud or any other personal data exploit e.g. account information and passwords. This being a large risk threshold for the buyer as after this step has been made there is no guarantee of the virtual goods being delivered or of their personal data not getting compromised. (Zhuge et al. 2009)

To bypass this problem we can use control mechanisms to complement the lack of trust and information asymmetry between the trading parties. Control mechanisms are procedures and protocols there to see that the trading parties reach the action threshold and a successful fulfillment of the transaction is made. Where the lack of trust exists between two individuals a control mechanism can bridge that gap and a transaction can be initiated. Examples of control mechanisms can be contracts, escrows or any other type of guarantee framework. (Tan & Thoen 2001)



### 3.1.2 The Transaction Trust Model

Tan and Thoen present a model for this type of trade trust, figure 4.1. The two main components this model consists of are trust determinants and threshold determinants. The threshold determinants consists of potential gain and risk that motivates or counter-motivates a person to engage in a transaction. On the other side is trust which is described in greater detail in figure 4.2.

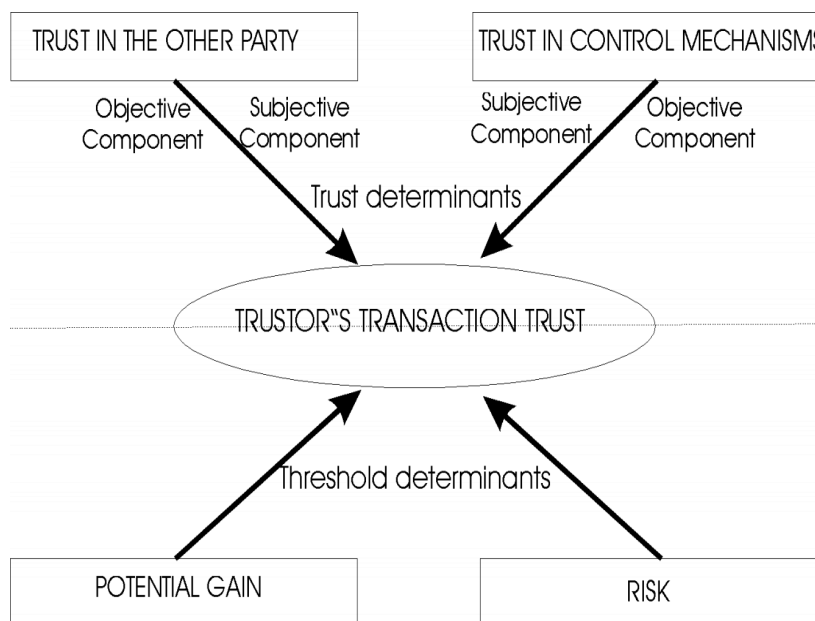


Fig. 4.1 Transaction trust model (Tan & Thoen 2001)

<b>Legend</b>	<b>Party Trust</b>	<b>Control Trust</b>
<b>Objective aspects:</b>	- Social signs: uniforms of police officers and doctors etc. You trust someone's medical advice, because he wears a doctor's uniform and/or a stethoscope.	- Control assessment; e.g. you trust the controls, because you assessed them using widely accepted auditing principles and your assessment positive.
<b>Subjective aspects:</b>	- 'Good vibrations'; e.g. you trust a person without any earlier experience or interaction, simply because he gives you good vibrations. Some people will call this intuition.  - Personal experience; e.g. you trust a person based on a history of previous interactions and positive experiences. In none of these interactions the person deceived you.  - Commuality; e.g. you trust the opinion of an expert, because others trust him too. (Typically, you are not expert enough to assess the quality of his opinion yourself, so you have to rely on your trust in the expert.)	- Understanding of controls; e.g. you trust a control system (e.g. the SET protocol for electronic credit card transactions), because you understand how it works.  - Commuality; e.g. you assume that a control system protects you against fraud, because everybody around you is relying on the system to do this.

Fig. 4.2 (Tan & Thoen 2001)

## 3.2 Efficient Market Hypothesis

### 3.2.1 Theoretical Model

The theory of an information efficient market was introduced by Eugene F. Fama in 1969 with his paper "Efficient Capital Markets". The concept of the efficient market hypothesis is centered around the belief that all participants on a market have access to the same information. (Fama 1969)

If they do, the agreed price for each transaction will be very close or even the same price as the "true" value of the item. This implies that whenever new information is available this will be reflected in the price as the buyers and sellers of these goods have the same prerequisites to know what it is truly worth and a fair price is established. (Malkiel 2003)

In the context of RMT the efficient market can be seen as something that was not possible before on a secondary market. This was due to the places of trade being split up between the several third party suppliers and information supplied on these marketplaces all varied along with the prices. With a centralized market where most, if not all, available goods and the information on these goods is available at any time for all participants it is highly prone to adopt the characteristics of an efficient market. This also leads to a more stable market with stable prices if no new information is introduced. As the game matures, peak number of players is reached and different equipment combinations have been optimized accordingly the prices will stabilize if no new information is introduced, the price reflecting the information known about the goods.

## **4 METHOD**

*In this chapter we go through the methods chosen for conducting our research and the process of implementing them.*

### **4.1 Preparation**

Our research target audience consists of people with knowledge of the Diablo universe or previous Blizzard games and are future players of Diablo 3.

When we started out with our research we were faced with the problem that the topic of Real Money Trade (RMT) could be sensitive and players might not be prepared to discuss it freely when having to expose their identity. Thus we started looking for participants online where the subjects wouldn't have to reveal themselves.

Another challenge was the setting for our research, as participation in games is associated with leisure time and something that is done for fun users might not see the significance of the topic discussed and respond with less useful information or none at all.

We choose to do both a discussion group for qualitative data and a survey for quantitative data. Our main goal with the discussion group was to get a more in-depth sample of the opinions around this new feature and what the players think will change whereas the survey was carried out with a more statistical mindset to gather quantitative data. In the discussion group participants could be pseudonymous, using a nickname for the discussion. In the survey the participants were anonymous.

### **4.2 Literature Study**

As the game has not yet been released we were not able to find any academic resources on the specific subject of Diablo 3. But there have been some studies on online games and their economical aspects. The subject of the literature we found was focused on virtual goods, players behavior, online economies, creation of subjective value and efficient markets.

### 4.3 Discussion groups

Our discussion groups were performed online on discussion forums where users gather to talk about different topics on the subject of Diablo 3. They were performed from the 19th to the 21st of March 2012 on these three different online forums; Diablo 3 (official forums provided by Blizzard), Incgamers (inofficial community forum for Diablo and many other games) and D2JSP (inofficial community forum, also previously mentioned trade hub, see 2.5.1). On the official Diablo 3 forum nine people responded. On Incgamers eleven responded and they had a more in-depth discussion. On D2JSP we only got two useful responses. All of the participants did not respond to all of the respective questions and the participants insight and depth of the answers provided varied heavily.

We created discussion threads on the forums and presented ourselves as two students gathering data for our report. This was with the aim of reaching potential players and those already active in the pre-release test version of the game and talk to them about their thoughts and feelings for the implementation of the RMAH to the game and the current RMT market.

The intention was for the discussion to be as unbiased as possible but with the nature of the discussion boards it is easy for users to float away from the subject and discuss irrelevant topics. With this in mind we introduced these questions when the discussion had picked up in our thread to steer the conversation in the right direction.

- With the endorsement from Blizzard, will the market for virtual items grow compared to earlier Blizzard games?
- How will this change in market size affect the trade from the buyers point of view?
- How will the centralization of trade to one place affect the buyers?
- Does Blizzard's support for Real-Money-Auction-House (RMAH) change players' attitude towards paying for virtual items?
- Will the "safety" of the auction house make players who earlier refrained from buying virtual items due to scams etc. change their opinion?

As there is a risk of misinterpreting the questions asked we always responded if any questions about clarification arose. Even so this should still be a factor to consider when judging these results. Having in mind that this was an online discussion open to any user or visitor to the thread there might have been users influencing others and/or intimidating them to affect their response.

## **4.4 Survey**

Our survey was distributed through the earlier mentioned discussions forums themed on Diablo 3 but also through social media channels such as Facebook and Twitter with the target audience in mind. With the questions asked in the survey slightly sensitive and personal we decided to make it an anonymous survey and therefore only present data in aggregated form.

At the end the user was presented with two optional questions were they could answer in free text on the topic of reasons for purchase and sale of virtual goods.

The form was filled in a Google spreadsheet and consisted of six questions. We also discussed the forms accessibility and comprehensiveness with our supervisor, group and acquainted persons as a form of pilot study to detect major flaws or misunderstandings before going public.

## **4.5 Credibility**

### **4.5.1 Technical**

Since all of our data gathering has been performed online there is always the risk of someone creating “false” identities within the medium to influence the results in an unfair way. We have performed the data gathering via Google forms. The forms have no protection against multiple answers. Most respondents have filled in a text answer in the optional questions. In turn most of those answers seem genuine.

### **4.5.2 Survey**

We have only concentrated on our target group, potential players, which already have an interest in the game and in turn may be biased on the subject.

Our survey should have been more comprehensive, both in content and number of respondents to achieve a definitive answer.

## 5 RESULTS

*In this chapter we present the results of our discussion group and survey.*

### 5.1 Discussion groups

At first we let the users talk freely on the subject of Real Money Trade (RMT), much of the focus was on the reasons for purchase and why players were willing to pay real money for these items. A large group of participants said that if it makes them happy, they simply buy it. Some of the factors calculated into this decision were elaborated to time they had to spend on the game acquiring these items and entertainment per dollar. There were two participants who claimed that what they gain in the game for their character would translate to the real world in form of feelings and satisfaction:

*“Virtual items can be considered as a proxy for nearly any motive for buying a physical product. The only thing that makes it proximate in nature is that it has no natural manifestation...”*

*“Stripping the qualities of items away, you will find that EVERY item, digital or not, serves one purpose: improve the living experience of the user. Using this as our lens for analysis, the items that the players buy serve no in game purpose as the player (and their feelings) are definitively outside of the game.”*

One participant opposed these statements and suggested the developers could use this type of player immersion in the game to their advantage:

*“Some might say that the games are a digital extension of your physical self - something alluded to in The Matrix. Some people have very real connections to digital goods. But, much like The Matrix, those that live in the real world do, in fact, devalue digital items or emotions tied with them. In the real world, men and women capitalize on the co-dependence people have created with their computers - and especially computer games.”*

Other participants got upset saying that it removes the sense of progression in the game and said it created an unfair element of advantage within the game to those who had not earned it properly.

After a while the discussion floated away from the subject and we asked the participants to answer the following questions. We lightly summarize the overall thoughts of the participants and quote some of their responses.

### 5.1.1 With the endorsement from Blizzard, will the market for virtual items grow compared to earlier Blizzard games?

All of our participants agreed that the market would expand with the introduction of Diablo 3 and that Blizzards change in policy against RMT and support of the trade platform would play a big part in this. One participant took the concept one step further and claimed it was just one of the new ways of making money:

*“Unquestionably. The market is now mainstream, and the whole concept is more accepted now than it was a few years ago. In my eyes, it’s just another form of DLC [Downloadable Content. After a game is purchased users can buy packs of new content at an additional cost], which is undeniably successful, and to some extent ebooks, iTunes, you name it. The only difference is who is selling whose content, and with Blizzard’s blessing, this doesn’t matter.”*

Another participant claimed you could not compare the earlier secondary markets in Blizzard’s games to this as it was something new and an integrated part of the Diablo 3 game:

*“Comparing it to D2JSP [See 2.5.1] is unfair. D2JSP was niche, regardless of how large it seemed, and an in-game AH [Auction house] blows it out of the water in terms of scale. The best comparison is to the Eve [EVE online, a sci-fi online RPG] economy, which is all player-controlled, and I think D3 [Diablo 3] stands to be significantly bigger (if the game doesn’t suck, which is my only concern of it all failing). If someone asked me for a ballpark, I’d say almost all players will try the RMAH [Real-Money-Auction-House], and a percentage (I’ll throw 20% out there) do so regularly. 20% of however many millions of players is a significant number.”*

### 5.1.2 How will this change in market size affect the trade from the buyers point of view?

The opinions on this question varied between participants there were four participants that believed that the introduction of this type of market would increase the rivalry between suppliers and thus push the prices down and that the prices would stabilize after a while. These answers were very short and three of these participants were agreeing to what the first one had said. Another participant claimed that prices might not be very stable at the start but would balance out as more and more people got better knowledge of the game and the items and when a certain type of playstyle combined with certain type of items that synergize well had been figure out:

*“From the buyers point-of-view, initially it will be costly for those that want the highest-end gear [the best items for the character] at any given time. Those selling will really have the upper hand until the game has had enough time and items to stabilize itself. Consequently, I think Blizzard would have made more from the RMAH [Real-Money-Auction-House] if they were able to include PvP [Player versus Player combat] upon release as those that strive for the top of the Arena [an instance within the game for players to duel] would be constantly buying and re-buying gear to stay at the top. It doesn’t benefit them to release PvP when skill+gear combinations have been worked out by the player base.”*

### 5.1.3 How will the centralization of trade to one place affect the buyers?

Everyone thought this was a positive change in some way and that there were only benefits for the buyers. Even if some participants were against the introduction of an official RMT element to the game, they still thought this was a positive change for those participating:

*“Overall this change will supply the buyers demand more vigorously, with one simple click they'll be aware of any improved related gear to their build and nothing besides another click will keep them away from purchasing it, the simplified aspect of buying and selling gear will overcome all the other misleading obstacles like, using credit cards, asking mom/dad to buy it, etc.”*

*“The centralization will give them [the buyers] all the right options without the need of searching too much for it, for a better price, a better service, if done right it's gonna be some mind blowing experience”*

### 5.1.4 Does Blizzard's support for Real-Money-Auction-House (RMAH) change players' attitude towards paying for virtual items?

The answers to this question were mostly positive to the statement that the attitude towards the secondary market for virtual goods would change:

*“It will make the trading environment a lot better for those that have used third-party sites (run the risk of scams, duped items disappearing, etc.) and will enlighten new traders of a market system easily accessed within the game client.”*

One participant claimed that this type of official player to player RMT was a feature of many future games and an attitude change in how we look at this type of content:

*“We're not far from having a generation of gamers who look at DLC [Downloadable Content. After a game is purchased users can buy packs of new content at a smaller fee] as just another part of the game (or, how to get the full game), and this is conceptually no different. In a few years, I expect any game (RPG [Role playing game] -style , at least, from WoW [World of Warcraft] to Borderlands and everything in between) that doesn't have a RMAH [Real-Money-Auction-House] -style feature to be left behind as outdated, and the companies that produce them will be ignoring a revenue stream.”*

Two of the participants had a slightly different perspective on the question, arguing that Blizzard had nothing to do with the attitude towards this market but rather that it depended on the success of the game itself and how much the players enjoy it:

*“I don't think the Blizzard support for a RMAH [Real-Money-Auction-House] will change players' attitudes towards paying real money for virtual items. The game itself, I think, will have more of an impact. If they make an enjoyable game that people will put a lot of time into playing, I think some people will see a benefit in paying a small amount of money to make it even more playable. However, if*



*the game doesn't hold interest for very long, those people will not bother spending actual money and may instead opt for the GAH. [Gold Auction House]"*

*"...the only thing preventing the AH [Auction house] from being this dynamic marketplace we all want it to be is the game itself. If the game sucks, and I feel there's a 50/50 chance of it (based on my months of time in the beta [A pre-release test version of the game]), the number of buyers won't be as high as it should be. Bliz [Blizzard] is the reason it could all fail, and if it does, shame on them."*

### **5.1.5 Will the "safety" of the auction house make players who earlier refrained from buying virtual items due to scams etc. change their opinion?**

The participants were unanimous, Blizzards supervision of the marketplace would make these players more encouraged to participate in RMT:

*"Absolutely. This is whats going to make the AH [Auction House] successful in the long run. I don't trust Bliz [Blizzard] to not screw things up, but I do trust them to own up for mistakes and repay the customer. I don't have this faith in any third party, or on something like eBay (although paypal [a form of internet payment method] chargebacks do help a bit there, but its a drawn-out process usually). I don't think safety will ever be a question, and as a result, the AH [Auction House] will blend into just being part of the game."*

*"I think a "safe" environment does have benefits that might draw in some more players to trade. This D3 [Diablo 3] forum is rife with Beta [A pre-release test version of the game] time scammers. At one point I thought about acquiring more FG [Forum Gold, see 2.5.1] to trade for some Beta time, but not anymore. The risk is higher than the reward, and I think that by providing a more safe and secure environment, Blizzard has lowered the risks to meet the needs of its players."*

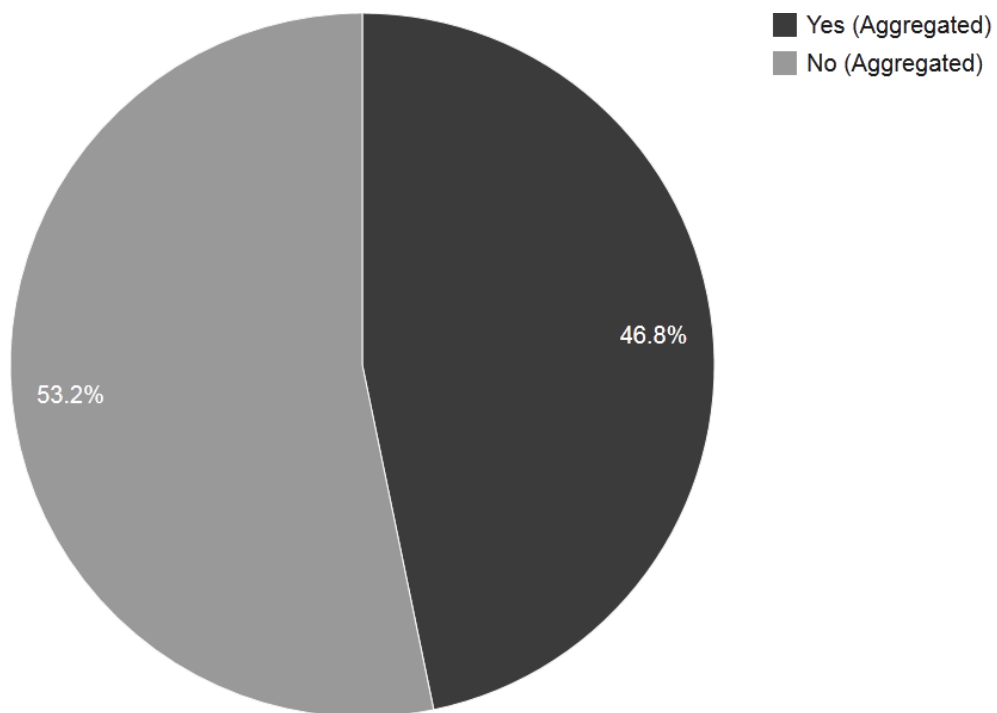
## 5.2 Survey

In our survey 77 potential Diablo 3 players participated. These are the statistics on their answers.

### 5.2.1 Have you traded with in-game goods for real money before?

Out of 77 participants, 36 had participated in RMT of some sort before, 41 had not. As we can see there is almost an even distribution with who has and who lacks experience of RMT. Our participants can misrepresent the playerbase as it is usually assumed on a distribution of 25% that participate in RMT (Lehdonvirta & Ernkvist 2011).

*Question 1 (percentage)*



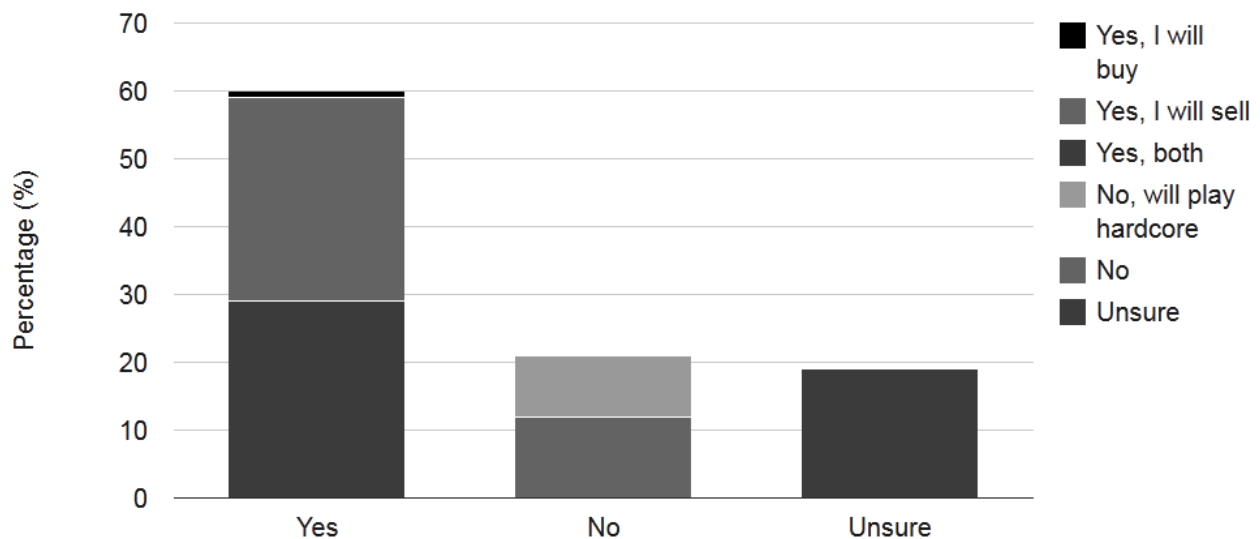
## 5.2.2 Will you participate in trade in the Diablo 3 Real-Money-Auction-House?

With almost 60% of the players planning to participate on the new RMAH, most of these are interested in selling their items or trading back and forth, only one player said he/she would only buy items. Out of the 16 players that didn't plan to participate on the RMAH, 7 were going to play the hardcore mode. We do not know if these 7 players would have traded through the RMAH if there was an option to do so. About 20% of the players were unsure if they would utilize the service of the RMAH. The players seem to have a focus on wanting to generate revenue from the RMAH, whether to simply profit or to use this for further trade. The attitude towards the RMAH seems to be mainly accommodative, even without speculating about those that are unsure and those that won't be able to use the feature.

*Question 2 (number of participants)*

	<i>Yes</i>	<i>No</i>	<i>Unsure</i>
Yes, both	22		
Yes, I will sell	23		
Yes, I will buy	1		
No		9	
No, will play hardcore		7	
Unsure			15
<b>Total</b>	<b>46</b>	<b>16</b>	<b>15</b>

*Question 2 (percentage)*



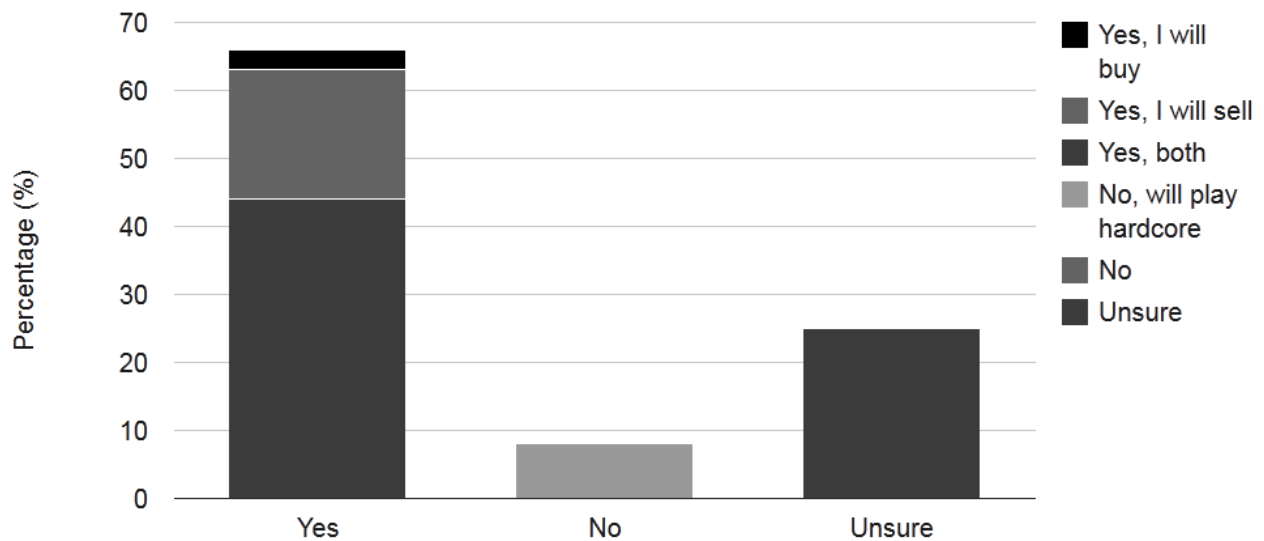
### 5.2.3 Will you participate in trade in the Diablo 3 Real-Money-Auction-House? (Have previous RMT experience)

Looking closer at this data we can split it up between those that have earlier experience of RMT and those who don't. In the group of players that had experience of RMT the dominant sub answer was that they will both sell and purchase goods. Out of the ones that said no, all were going to play hardcore and 25% were unsure. Ergo none of the players that had experience said explicitly no to participating on the RMAH. The high number of positive answers indicate that players that already have participated in some form of RMT are possibly more inclined to do so again, if this has something to do with the RMAH specifically or if this is just a general effect of having earlier experience of RMT we cannot say for sure due to the nature of our survey.

*Question 2, have RMT experience (number of participants)*

	<i>Yes</i>	<i>No</i>	<i>Unsure</i>
Yes, both	16		
Yes, I will sell	7		
Yes, I will buy	1		
No		0	
No, I will play hardcore		3	
Unsure			9
<b>Total</b>	<b>24</b>	<b>3</b>	<b>9</b>

*Question 2, have RMT experience (percentage)*



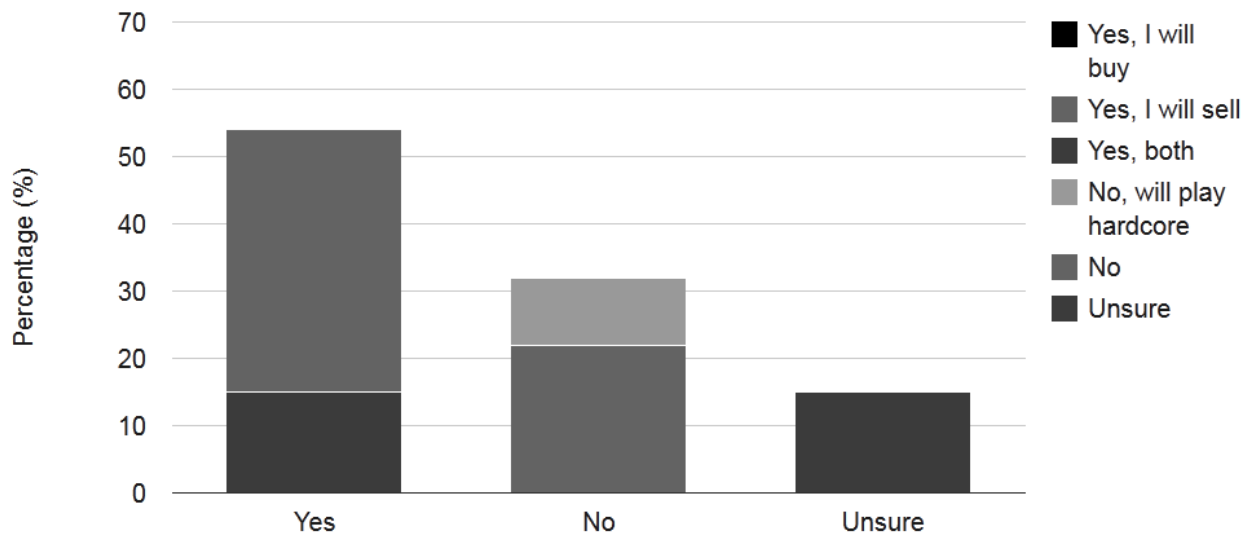
### 5.2.4 Will you participate in trade in the Diablo 3 Real-Money-Auction-House? (No previous RMT experience)

The category of participants with no previous experience of RMT had a more even distribution. Of the ones that answered yes the dominant part just wanted to sell goods on the RMAH. This might be due to that these players are intrigued by the opportunity of making real money from playing the game. They no longer have the same threshold to participate compared to earlier cases. Among those who answered no there were only 4 out of 14 that were going to play hardcore, suggesting this might be more a question of principles than a limitation of the RMAH feature.

*Question 2, have no RMT experience (number of participants)*

	<i>Yes</i>	<i>No</i>	<i>Unsure</i>
Yes, both	6		
Yes, I will sell	16		
Yes, I will buy	0		
No		9	
No, I will play hardcore		4	
Unsure			6
<b>Total</b>	<b>22</b>	<b>13</b>	<b>6</b>

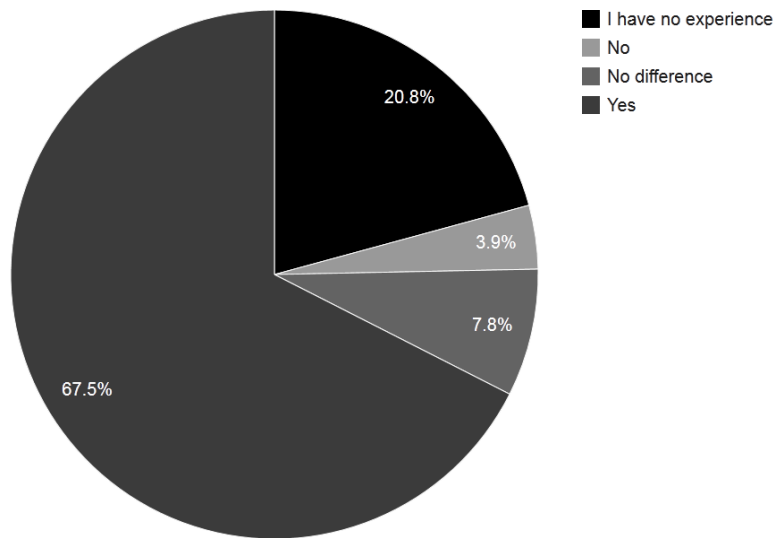
*Question 2, have no RMT experience (percentage)*



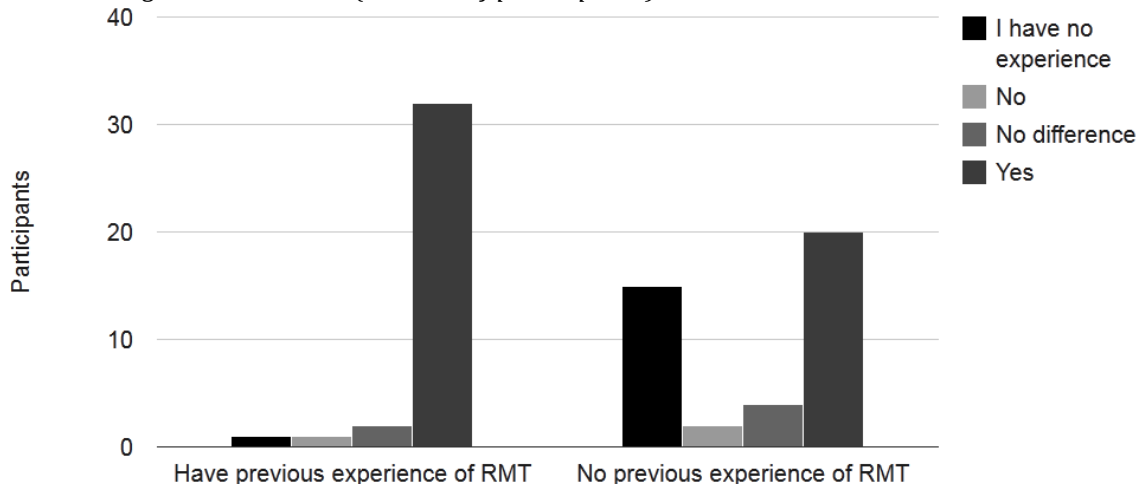
### 5.2.5 Do you feel the Real-Money-Auction-House is more reliable than previous unofficial marketplaces?

On the topic of the reliability of the RMAH, two thirds, in favor of the new marketplace being more reliable than previous ones. Many also answered that they have no experience since they had not participated in RMT before. If we again look closer on those that have experience of RMT and those who don't we can make some interesting distinctions. In the category of experienced players almost everyone felt that the new marketplace would be more reliable, out of those that had no experience about half of them said yes and the other said that they didn't have enough experience to decide. These results indicate that the players have faith in Blizzard to provide a safe marketplace. It in turn may encourage users who haven't felt enough trust in the transactions before to change their minds and start participating in RMT.

Question 3, aggregated amount (number of participants)



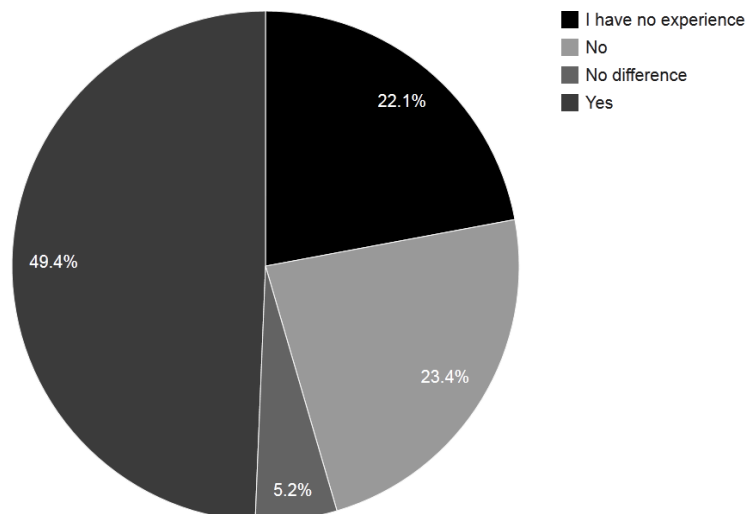
Question 3, categorized amounts (number of participants)



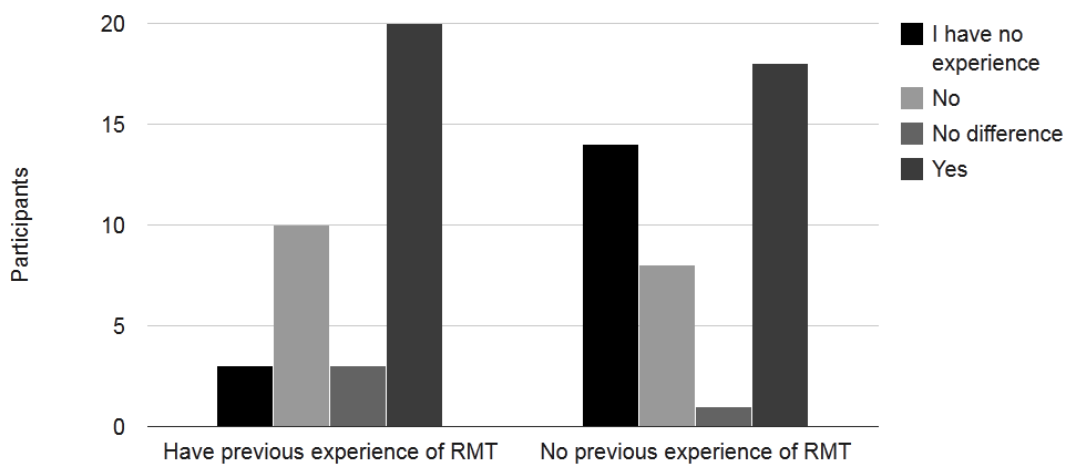
## 5.2.6 Do you think the prices will be more stable on the Real-Money-Auction-House compared to previous unofficial marketplaces?

When the players were asked whether or not the prices would be more stable on the RMAH there was much diversity in the answers almost half of the players thought the prices would become more stable than earlier, about 23% said that they didn't think the prices would become more stable, a small portion thought there would be no difference and again many replied that they had no previous experience. Looking at the categories of experience of RMT and no experience there are similar distributions in the answers, only difference being that in the no experience category there is a large portion that have replied that they don't have any experience of the RMT market. This diversity might be due to the users having different ideas of what the consequences of the introduction of the RMAH would be. There might also be some that think either will happen first followed by the other which there was no way of mediating through the answers.

Question 4, aggregated amount



Question 4, categorized amounts



### 5.2.7 Free text questions number five and six

The last two questions in the survey were optional, these questions were answered in free text. For question five, 22 answers were left blank and for question six, 18 answers were left blank. Also worth mentioning is that 21 answers for question five were very short and unusable. These types of answers were also provided by 8 participants on question six.

#### **Question 5: What are your main reasons for buying with real money?**

Time was the most prominent subject in the answers, often with the phrasing “saving time [in-game]”. Sometimes with comparisons between the time spent on their income in real life and in-game time it would take to earn or find a specific item. The second most occurring subject was “to acquire items in the game that are very rare”. These were mostly referred to as valued items, hard to find items or high-level gear. The third subject was about “earning money from trading”, referred to as trading or reselling. Reselling meaning selling after a purchase without having intent to use it in the first place.

Other answers that occurred at least more than once were “competition/ease of play”, “cheap hobby/entertainment” and “experiencing the full game”. All of these had a sparse occurrence.

#### **Question 6: What are your main reasons to sell for real money?**

“Money”, “earning money playing” and “earning money from my skills” were the most prominent subjects. Other prominent categories were “to sell off unneeded items” and “sell to buy other items in the game for real money”.

Other answers that occurred at least more than once were “for getting something back”, perhaps meaning to get something back from the time and money invested. Another was “to buy other games with the money”. Both of these had a sparse occurrence.



## 6 ANALYSIS

*In this part we will categorize and analyze the results from the research.*

### 6.1 Active Incentives

From the free text questions in our survey we could gather some important information on the subjective reasons for players to participate in Real Money Trade (RMT). Most of the players who gave reasons for purchase of items, bought them instead of having to spend time on the task of acquiring that item. This might seem strange at first since why would a player pay extra for skipping parts of the game they just bought? The answer is players see some parts of the game more as work than play. An item can be so rare that a player has to repeat a single task so many times before they acquire it that players no longer see that part of the game as fun. They are ready to pay for not having to perform these tedious and time-consuming tasks themselves. The reason being they still want to be able to enjoy the other parts of the game that require the equipment and time investment. Some players also thought they could make money from just trading and reselling the bought items at a later time and the motivation for these actions was simply to profit or gain wealth within the game. On the reasons for selling these were pretty unanimous and concerned the aspect of simply making real money, be it by selling off unneeded items or simply showing off their skill and dedication within the game. This was touched upon in other parts of the survey, many players are tempted to utilize the Real-Money-Auction-House (RMAH) as some sort of income for their time spent within the game universe.

The free discussion in the beginning of our discussion group is about what is real and how the virtual world connects with the real world. One participant concludes that the items in the game themselves are not real, but the player's emotions are. That items are valued by the feelings they create for the user. This is the connection with the real world according to them.

It is an indication of their belief, trust and immersion in these virtual worlds. These participants recognize the virtual goods as being virtual but see no difference between the feeling of satisfaction these virtual goods create compared to physical goods bought with the same intent. This can be seen as the main overlaying incentive for the players to participate in RMT as all the other mentioned reasons can be applied with the same logic. This is also something we can see mentioned in Lehdonvirta's studies (See 2.1, Virtual goods) (Lehdonvirta et al. 2009).

## 6.2 Passive Incentives

### 6.2.1 Centralization of Trade

Aggregating all the previous marketplaces into one central hub for trade is mainly seen as a positive change, even if some players by opinion were against the implementation of the RMAH. This change will according to the players reflect a more ordinary market with less interference of trust and security issues from trading with third parties.

The subject of who will benefit from the implementation of the RMAH is a point the participants disagreed on. Specifically the starting period of the game when players have not explored the whole game world and don't have access to all the different items in the game. The players argue that at this point there are shortages in the supply of items in the game which would benefit the seller. This creates a misrepresented market and opportunities for generating excess profit compared to the items true value. This type of market could be seen as an interference on an efficient market (See 3.2) but it is important to have in mind that this is only something that occurs at the start up phase of the game. When new information is introduced constantly the prices on the goods adjusting accordingly but as they change so rapidly there is a delay before the prices adjust and it is in these situations that the assumption of an efficient market are invalid.

The improved interface is also mentioned together with the aggregated marketplace. The searching of goods is greatly diminished, with just a few clicks you will be able to instantly reward yourself and your character. This seems to be something Blizzard also has had in mind when designing the auction house with features like "smart search" (See 2.6.2). This property enables players that have no knowledge of the game to still see what items would be of most benefit to them and what the cost of these are. These features will contribute towards the auction house adopting some of the properties of an efficient market (See 3.2) as the information flow will increase and players are automatically presented with items that benefit their character.

The security the RMAH brings to the market is also elaborated on. One participant says the risk of being scammed are discouraging potential buyers from trading with third parties and that the market is missing out on many participants due to this. Additionally it was mentioned that there are problems in identifying players and knowing their reputation as a trader. The auction house lets everybody know what they will get from a transaction. The security of the Diablo 3 auction house is a great incentive for players who have earlier refrained from participating on the RMT market to start trading. We can also see this in Tan & Thoen's trust model (See 3.1.2). The RMAH provides a control mechanism that bridges the lack of trust and security for this type of transactions enabling the market to reach new potential participants.

### 6.2.2 Blizzards Endorsement of RMT

Participants mention the heightened acceptance of RMT and see the RMAH as a deregulation in Blizzard's RMT policy. One user even claimed this was a natural change in Blizzards business model and other companies would soon follow, games that didn't implement something similar to RMAH would become outdated. He/she even compared it to the likes of downloadable content (DLC) where users could pay an additional cost to receive new content for the game they already bought. This is a strong indication that RMT has become an everyday business and that even though players have different opinions on the matter this type of trade is recognized and becoming even more common, this is probably something Diablo 3 and the RMAH will contribute to even more.

The participants also mention the aggregation of the marketplaces and that it will create something significantly larger than any of the older markets such as D2JSP [See 2.5.1] and other third party marketplaces due to its size and support. One participant points out how the market will become free and that it does not matter who is selling to who anymore with Blizzards blessing they would all profit from the transaction. An interesting opinion also emerged that Blizzards endorsement might not change players' attitudes to engage in RMT but rather the game might influence it. If the game is immersive enough and people enjoy it, they will invest time and money and become more prone to participate on the RMAH supporting the RMT market.

In general players agree that the RMAH will change people's trust and attitude towards RMT significantly but how this will happen seems to be disagreed on. The integration into the game, the liability of Blizzard and the overall safety are some of the factors and we expect these will all contribute towards the market going mainstream.

## 7 DISCUSSION

*In this chapter we discuss and relate our results with the perspective of our theories and background.*

### 7.1 Diablo 3 and the Market for Real Money Trade

As we can see the market for Real Money Trade (RMT) today is already considerably large (See 2.2) and looks to have a promising future. Blizzard can currently be considered one of the biggest game developers active today and have over the years gathered fans from their different game series, we expect that Diablo 3 will inherit many of these players. Research has shown that around 25% of the player base participates in the RMT market (Lehdonvirta & Ernkvist 2011) and looking at Blizzard's current flagship, World of Warcraft, which at its peak had around 12 million active players (MMOdata, 2012a), Diablo 3 could become the biggest official secondary RMT market ever created.

### 7.2 Increased Information Flow

With an increase in participants on the market we can assume there will be an increase in information flow and efficiency as all participants basically have access to the same information, the prices then should reflect the knowledge available about the goods. The community of the Diablo 3 game also distributes much of the information via out-of-game resources such as forums and fan websites as they discover the game mechanics and what items that are optimal. This combined with the anticipated scale of players will further increase the information flow in and around the game and its items which in turn paves way for a potential efficient market.

As players through out the whole game try to evolve their character to become as strong as possible they strive to have the best possible items available at any time. This optimization is usually done by experimenting with different types of items and strategies. When a good combination is found it usually spreads very quickly through the different information channels surrounding the game, thus the value of these items increases. This in turn should lead to more stabilized prices in the long run but in the infancy of the marketplace there might be price fluctuations as the usage for all items may not have been optimized yet and new information is introduced with discoveries of new optimal play styles and item combinations.

The price of each item may differ depending on what information around its properties has been established at the specific time. As Blizzard has decided to not implement player versus player combat with the launch of the game there might be some large scale changes on the market coming up in the future as the same gear optimization process mentioned above has to be done for this type of combat. The information currently available might only reflect what is known about combat against computer enemies and similar type of play styles. This can disrupt the established prices already but with the information flow in the long run will become more and more stable.

Based on these points we argue that there is a high probability of the RMT market for Diablo 3 to become an information efficient market (See 3.2) due to the information provided through the Real-Money-Auction-House (RMAH) and the large scale participation.

### 7.3 Trust and Security

Not everyone is in favor of this new feature being implemented, but the general feel of accommodation towards the introduction of the RMAH is supported by the data gathered through our survey (See 5.2.2, 5.2.3 & 5.2.4). There also seems to be faith in Blizzard's authority and supervision of the market, the players seem to have faith in the way transactions will be handled and feel this type of trade is more secure than previously. This trust factor can be explained with Tan and Thoen's transaction trust model (See 3.1) and shows how the RMAH and Blizzard bridges the gap for the lack of trust and information asymmetry between the two trading parties.

Blizzard and more specifically the RMAH functioning as a middleman for the transaction would fulfill the *communality* aspect (See 3.1.2 & Fig 4.2) of *subjective control trust* as most if not all transactions within the game will be processed through the RMAH. For the RMAH, *control assessment* (See 3.1.2 & Fig 4.2) is limited as a detailed protocol of the transactions has not been released and probably never will be fully exposed as this might leave the system vulnerable to exploits and hacking. It is also limited to the knowledge and time the player has. Auditing transactional systems is simply not something the majority of people do.

In our case the RMAH of Diablo 3 would step in as a prominent control mechanism to complement the lack of trust that has existed on the secondary RMT market and thus encourage new and old users to participate on the market.

### 7.4 Difference from Earlier Markets

As mentioned in our background this type of marketplace control mechanism has been introduced in other game universes with varied results (See 2.4.1), the main distinction being none of them have been implemented as thorough or with the same scale as a Blizzard game induces today. Control mechanisms for RMT are usually found in primary markets where the player is buying directly from the developer. There are very few large scale instances of a RMT control mechanism for a secondary market (player to player trade).

The implementation of the Station Exchange (See 2.4.1) by Sony Online Entertainment was mainly successful but was performed more in the mindset of an experiment rather than a possible revenue producer and in a very small scale as it was only implemented on two servers out of 30. Also this feature was not present at the start of the game and might be one of the reasons it caused great controversy and a rift within the player base. Blizzard has somewhat avoided this with preparing the players by announcing the feature long before the game is released. Now there is more of an acceptance as all players are aware of what the frameworks of the game are before they start. The

RMAH will be present on every instance of the game with the only limitation being for hardcore players.

In Blizzard's latest MMO-games there has been some form of RMT but it has always been unsanctioned by them and this is where player generated trading communities and third party suppliers have stepped in. The most prominent trading community for the Diablo universe would be D2JSP (See 2.5.1). The problem with these unofficial trading nexuses is you basically have the same trust issues as through third party sites, trust and security, you expose yourself to online frauds and take a risk trusting the other party. D2JSP introduced some smaller control mechanisms after some problems with trade scams. They used a *mediator*, a third player that had a reputation of being honest and would hold both the forum gold and the item and then execute the transaction when both trading parties delivered what was agreed. This was a rather tedious task and was fragile in security, nevertheless it was a well used control mechanism of D2JSP.

## 7.5 Attitude Towards RMT

From the opinions in the discussion groups there is an indication that the attitude towards RMT is changing. Monetizing parts of the game or material connected to the game is getting more common. How it manifests itself is very different but it can be seen in most successful games today as they have additional content available at a small price (Downloadable content, DLC) or some form of RMT implemented. The web minimizes consumers' distance both physically and psychologically from the purchase, it is available just one click away. There is no room for the lengthy process of explaining what the possibilities are of a product when we are already bombarded with so much information. The specific content needs to be directly connected to the price, e.g. a certain sword that within the game gives you the power to fight the mightiest foes and it is worth \$5. A game for \$60 where you can level up a character and then go through various quests to acquire this sword is not as direct and might be missed out if not marketed properly.

## 7.6 Weaknesses in our Study

Our discussion groups have consisted of persons active on the forums. It is probable that they don't represent the whole spectrum of players of the game. They have also shown an above average level of participation in RMT (See 5.2.1) that proves their great involvement in games and may be more prone to favor such features as a RMAH.

As with any prediction this work is heavily reliant on theory, similar cases and speculation. Our data is on the opinions and thoughts of players who have participated in the pre-release test version of the game or have a strong interest in the Diablo game universe. This data is purely subjective and the answers of every participant might differ once the game is out and the feature has actually been implemented. As some respondents in our survey said much of the incentives depend on the success of the game.

Lehdonvirta among others claims one should be careful when analyzing virtual worlds from a macroeconomic perspective, his main argument implying that many of the variables are not translated into virtual economy e.g. unemployment, can a participant in a virtual economy be considered unemployed? (Lehdonvirta 2005) Most of our theories are based on more general assumptions of trade and not so specifically tied around variables in the real world. Even if some of our models have used variables that are specific for a real world market we have tried to apply these to the context of RMT, regardless this is still important to have in mind when analyzing the content of this paper.

We have not integrated the variable of inflation properly in our prediction. The inflation on goods and virtual currency will probably have repercussions on this type of market if the expected scale of participation is reached. The inflation variable can be viewed as a part of the efficient market hypothesis due to it being heavily reliant on the information available at any certain point in time. The hypothesis says that the prices reflect the information available on the goods, and in this case information about the abundance is much more accessible with the introduction of the RMAH.

Some of the data and numbers that we have come across have been from uncertain resources, the main problem originating from the fact that most of these secondary market transactions are performed through smaller unofficial third parties. Some of their presented data, if any at all, can not directly be guaranteed to be accurate. Some of our academic sources have also in turn been based on these types of data and calculated estimations.

## 8 CONCLUSION

*In this chapter we summarize our thoughts and arguments on the subject.*

### 8.1 Problem Statements

#### 8.1.1 How does a centralized market affect these incentives?

##### *Trust*

As we can see in our research there is great trust in Blizzard's authority and their handling of the RMAH. They are creating an official marketplace where the players can gather and trade with the complement of a control mechanism to smooth the previous trust issues as seen in Tan & Thoen's trust model (See 3.1). This type of control mechanism will also remove the information asymmetry that has existed on the secondary Real Money Trade (RMT) marketplaces. By centralizing all of the trade to their control mechanism, the RMAH, Blizzard can guarantee a safe transaction and provide a safe marketplace for those that choose to participate.

##### *Efficient Market*

By aggregating all previous marketplaces this also creates a more efficient market. Prices can always be seen by anyone at any time in the game meaning everyone has access to the same information at any given time (See 3.2). The effect of an efficient market also contributes from the larger amount of players that are anticipated to be active on this market. The increased size will create a better reflection of the information available in the price due to the increased amount of information flow in and around the game. This "true price" will encourage users to participate in trade.

The extent of both of these points is however difficult to foresee and could be less than marginal once the RMAH actually is implemented, nevertheless these are valid points we have identified as possible attributes of this new secondary RMT market.

#### 8.1.2 What are the current motives for players to engage in Real-Money-Trade?

##### *Current Active Incentives*

The subjective value generated for the player by virtual goods enables a interest in trading these items. We have touched upon some of the more common reasons that induce utility in these virtual items, unfortunately there are as many factors in this as there are participants on the market, as the utility is always subjective in regard to the individual. What we can say is that this game universe has established such a level of immersion that players see utility in virtual goods. They are heavily invested in these virtual worlds and no longer see a difference between physical real world items that benefit themselves or virtual world items that benefit their characters. The utility for the



virtual goods is no longer restricted to the virtual world, it is translated to the real world and the players.

#### *Current Passive Incentives*

As RMT is becoming increasingly common players see this as a natural complement to the game where they can participate in order to make their experience more enjoyable. The increasing number of players utilizing the primary and secondary markets create an acceptance of the phenomenon and thus increase the probability of others participating.

As there is an increasing demand for this type of goods there are also incentives for those who produce and sell virtual goods, this is a large market and there are many customers to supply. Many players are intrigued by the opportunity of capitalizing on their time spent in a virtual world. The competition is high and this favors inhabitants in countries with general low income and organized groups with very high production efficiency.

### **8.1.3 How does Blizzard's endorsement of the Real-Money-Auction-House (RMAH) change players' attitude towards RMT of virtual items?**

The demand for a RMT market has existed for some time now and this can clearly be seen in Blizzard's latest flagship World of Warcraft where third party trading on the secondary market has been the most prominent. The secondary market is plagued by trust issues and has received a black market status by many developers, many players also inherit this view as they trust the developers and do not want to step out of bounds. By supporting this kind of secondary market and providing the element of trust to the market Blizzard gives everyone interested in this type of trade a chance to participate. Judging from our results (See 5.1.5 & 5.2.5) there are many who have earlier refrained from participating on this type of market due to the uncertainties of the transaction and legitimacy. This is a passive incentive as the element of trust is crucial for any transaction to be carried out, in this case provided by the control mechanism of the RMAH.

We believe this is crucial for the establishment of the secondary RMT market. The primary market for RMT has already been established as a reliable income source for developers. The primary market can be very lucrative but this does not enable free trade that lets the forces of supply and demand control the market. By creating a free market that is player driven Blizzard give the players a passive incentive to participate in trade. The market can also be seen as self-regulating due to the forces of supply and demand and no external adjustments should be necessary. Blizzard will capitalize from every successful transaction within the game and thus their interest lies in letting the players trade as much as possible. This change is what probably will make RMT a casual everyday business in the future of Diablo 3.

#### **8.1.4 With the incorporation of the Real-Money-Auction-House in the upcoming release of the online game Diablo 3 - how will the incentives for players to participate in trade of virtual goods change?**

There are strong indications in our results (See chapter 5) that the attitude towards the RMAH and RMT in general are becoming an everyday business and simply a part of the game. In Diablo 3 Blizzard has taken this one step further. By enabling players to easily trade within the game this secondary RMT marketplace will be truly integrated and part of the game experience. The heightened acceptance together with a safe market will most likely increase the amount of participants on this market compared to earlier games. As more players participate on the market there is an increase in information flow and prices should in the long run become as close to the “true” value as possible. Both the heightened trust in the market and fairness of the prices can be explained with the theoretical models provided in chapter three.

As we see it the active incentives will not go through any dramatic changes for those already participating on the market. For those who have refrained from this type of trade due to their principles and the policy Blizzard has had in earlier games this feature could induce an attitude change towards this type of trade and further increase the amount of participants on the market.

The large scale changes will be for the passive incentives as these are interconnected with the design of the marketplace. The factors mentioned in our earlier chapters will most likely create a safe and information efficient market for the players to trade on. The introduction of an official element to this type of trade will together with these factors inspire a fair and trustworthy atmosphere for secondary RMT. Whether players will choose to utilize this feature fully is yet to be seen.

## **8.2 Further Research**

As much of our conclusions are predictions on what we think the future will look like, it would only be natural to analyze the results of the actual game once it has been released. This can be used as a takeoff point for that analysis, to compare and review our predictions to actual in-game data or opinions of active players.

Every economic transaction is recorded by Blizzard within the RMAH. Even the specific actions of players in the game could be stored somewhere. This would generate vast amounts of detailed economic data on RMT. How Blizzard will utilize this information is yet to be seen but if any of this data would be publicly released it would be interesting to analyze.

An interesting topic we stumbled upon in one of our discussion groups was the discussion of real and virtual utility, when these converge and what the consequences of such a translation are. This goes beyond the scope of this paper but would certainly be an interesting sequel to some of the results gathered in this report.

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## **APPENDIX 1. QUESTIONS FOR THE DISCUSSION GROUPS**

- With the endorsement from Blizzard, will the market for virtual items grow compared to earlier Blizzard games?
- How will this change in market size affect the trade from the buyers point of view?
- How will the centralization of trade to one place affect the buyers?
- Does Blizzard's support for Real-Money-Auction-House (RMAH) change players' attitude towards paying for virtual items?
- Will the "safety" of the auction house make players who earlier refrained from buying virtual items due to scams etc. change their opinion?

## **APPENDIX 2. QUESTIONS FOR THE SURVEY**

- Have you traded with in-game goods for real money before?
- Will you participate in trade in the Diablo 3 real money auction house?
- Will you participate in trade in the Diablo 3 gold auction house?
- Do you feel the real money auction house is more reliable than previous unofficial marketplaces?
- Do you think the prices will be more stable on the real money auction house compared to previous unofficial marketplaces?
- What are your main reasons for buying with real money?
- What are your main reasons to sell for real money?

