

CLASSIFYING REAL MONEY TRADING IN VIRTUAL WORLD

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ABSTRACT

Virtual world activities related to the buying and selling of virtual currency, virtual items, and services with real world money are referred as Real Money Trading (RMT). Although there is a great deal of evidence for the growth of RMT in virtual world, there is also evidence to suggest that many companies are struggling to become involved with RMT. A framework for classifying RMT in virtual world is essential for devising successful virtual business strategies. A key component in the process of formulating the optimal competitive strategy is to understand the unique characteristics of RMT and the implications behind those characteristics. This study aims to propose a classification of RMT based upon the characteristics of products and services, the transaction and marketplace, as well as the currency and exchange systems.

Keywords: Virtual world, virtual economy, virtual goods, virtual property, Second Life, Entropia Universe world of Warcraft.

INTRODUCTION

Real money trading (RMT) refers to the trading of virtual world currency, virtual items, and services for real money. RMT activities are not isolated from the real world: they have created a “dual economy” where users can exchange real money flow in and out the virtual world economy and real world economy. Dependent on the market configuration of RMT in each virtual world, users may earn virtual money by engaging in various activities and experiences in virtual world or purchase virtual currency with real money.

RMT has been receiving more attention in the last 10 years due to the massive increase in the money generated in such virtual economies. RMT generated over \$2.1 billion in USA alone in 2011 [23]. The social virtual world Second Life (SL) with about 900,000 active users has generated more than \$500 million in GDP in 2014 [31].

It is not only real world companies that are attracted to seek commercial opportunities in the RMT market in virtual world; individual entrepreneurs have also been drawn to this new market. Although there is a great deal of evidence for the growth of RMT in virtual worlds, there is also evidence to suggest that many companies - in particular early adopters of RMT - are concerned about the return on investment in RMT and have ceased their projects. While projects such as Oracle’s Darkstar [32] and Google’s Lively have been terminated [33] due to the lack of benefits to the companies, individuals such as Anshe Chung and Aimee Weber managed to generate over \$1 million of wealth from RMT [23]. Social virtual world users in SL have also got to payout \$60 million in real world money. Obviously, RMT involves unique characteristics that are very different from traditional business and ecommerce. Why, we can ask, would some RMT sellers or companies be able to monetize virtual products made of digital bit while some fail to do so? Understanding these characteristics and the implications behind the characteristics are essential for devising successful RMT strategies.

The objective of this paper is to create a better understanding of different forms of RMT and their potential implications for business strategies. A classification framework of RMT is proposed based upon the characteristics of products and services, the transaction and marketplace as well as the currency and exchange systems.

RMT CLASSIFICATION FRAMEWORK

In order to provide classification framework of RMT, this study references to the components in business model and map the related RMT elements in each component. A business model is widely regarded as the process used by companies for creating and commercializing value. However, business model is much more than the way the process is implemented [7], [24]. Some researchers consider the business model as the way of making different business processes fit together, and the manner by which it takes the business toward achieving its business goals [22]. In contrast, others look at the business model as the main idea of the business strategy, where this business strategy can be applied to the different business processes [26]. A summary of different business model components based on previous research are listed in

Table 1.

Gordijn et al., 2005; Hodge & Cagle, 2004; Linder & Cantrell, 2000 have classified and investigated the existing business models in their researches, their classification findings show that there are a lot of common factors that have been found in the three studies. “Value proposition”, “customer relationship”, and “revenue model” are common in the three studies, while “target customers”, “distribution channel”, “partnership”, “cost structure” is common in two of the three studies. “Capability” is only found in Gordijn et al. (2005) study, “ownership model” and “interaction model” is only found in Hodge & Cagle (2004) research.

Table 1. Business Model Comparison.

	Value proposition	Target Customer	Distribution Channel	Customer Relationships	Capability	Partnership	Cost Structure	Revenue Model	Ownership Models	Interaction Models
Osterwalder et al. (2005) e-business model	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗
Hodge & Cagle (2004) e-business model	✓	✓	✗	✓	✗	✓	✗	✓	✓	✓
Linder, (2000) e-business model	✓	✗	✓	✓	✗	✗	✓	✓	✗	✗

Value Proposition

Value proposition refers to the type of service and/or product delivered to the customer, the different categories and features of each of these services, and/or products, and the problem or service that we are trying to assist the customer with [5], [10]. Ownership and consumption mode in the virtual worlds is linked to the type of products and service provided, and it the way of consuming these products.

Target Customer

This section discusses the types of targeted customer for the service and/or product which is going to be offered in VWs [5], [10]. The motivation to participate in the virtual world is the main key that can be used to target the right customer.

Distribution Channel

The section focuses on the channels that users need to be reached, they ways and mechanisms through which we can reach them, the integration of this process with the rest of the business model, and the cost of the overall process [5], [10]. As RMT have a different kind of markets that either run under the developer management or using 3rd party platform, distribution channel will be different based on the market characteristics.

Customer Relationships

This refers to the type of relationship and engagement that the customer expects from the company, the integration of this kind of engagement with the rest of the business model, and the cost of this integration [5], [10]. Also the market place and the way it works will control the different ways of customer relationships that can be used.

Capability

The features and functionality that can be provided by the company's products and/or services that can add value and customer satisfaction to the items provided [5], [10]. Different virtual world provides a different tools and limitation to create items, this capability of changing the virtual world content and surrounding in the process of doing business.

Partnership

The key partners needed to support the business, the services needed from these partners or suppliers, and the alternative partnerships or suppliers. All of these are important to the success of the business [5], [10].

Cost Structure

This part focuses on the cost needed to implement all the elements in the business model and to make them integrated into an efficient whole, this costing includes testing, implementing, and improving [5], [10].

Revenue Model

This part focuses on the value that the customers are willing to pay for the services and/or products, the way to make payments, and the effect of the new business model on the revenue generated [5], [10]. Earning virtual currency, exchange rate direct ion, and exchange market all is the backbone for the revenue model in any business model.

Ownership Model

Ownership plays an important role in the business model, as this business model can be changed based on whether the company is owned by an individual or by a cooperation. Privately owned businesses will be act differently within the business model, when compared to cooperation owned business, as each of them will have a different vision, mission, and business drivers [11].

Interaction Model

Characteristics of the business model can be changed based on the way the seller and buyers interact with the user interface of the website, virtual world, or real store. That is why interaction plays a fundamental role in the customers’ and suppliers’ experience, and in the way they are communicating and connected together [11].

This study has developing links between business model and RMT elements through investigating the RMT elements and the business models common elements as explained in table 2.

Table 2. Mapping of RMT elements and Business Model Components

RMT categories	RMT elements	Business model Components
Products & Services	Delivery	Distribution channel
	Crafting & Design	Capability
	Consumption Mode	Value proposition
	Motivation	Target customer
	Ownership	Value proposition
Transaction & Market Place	Transaction Type	Interaction model
	Market Place	Distribution model / customer relationships
Currency & Exchange market	Exchange Direction	Revenue model
	Exchange Rate	
	Earning virtual currency	

Figure 1 shows the proposed classification framework. The proposed framework will not only be of benefit to companies and individuals who want to participate in RMT, but will also be of benefit to RMT researchers to understanding the generalization of results from existing studies as well as identifying existing research gaps for future research.

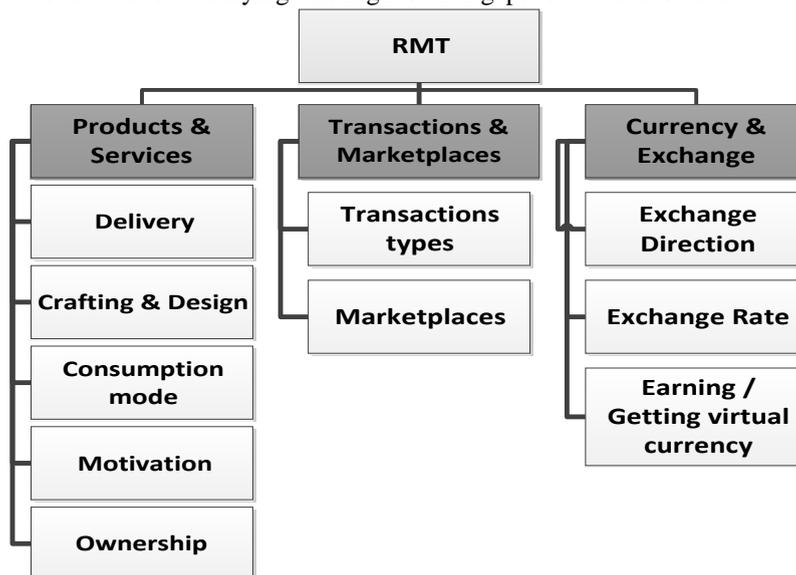


Figure 1. RMT classification framework

PRODUCTS & SERVICES

Types of products and services delivered to the customers form the value proposition of a business model [24]. Products and services in RMT can be classified in terms of: 1) different ways for delivering the products or services for customers; 2) possibility for users to create or design virtual products and services; 3) different cost models of the products or services; 4) different utility of the virtual products or services from virtual worlds; and 5) different kind of ownership of the products created by users and who gets the ownership of these products.

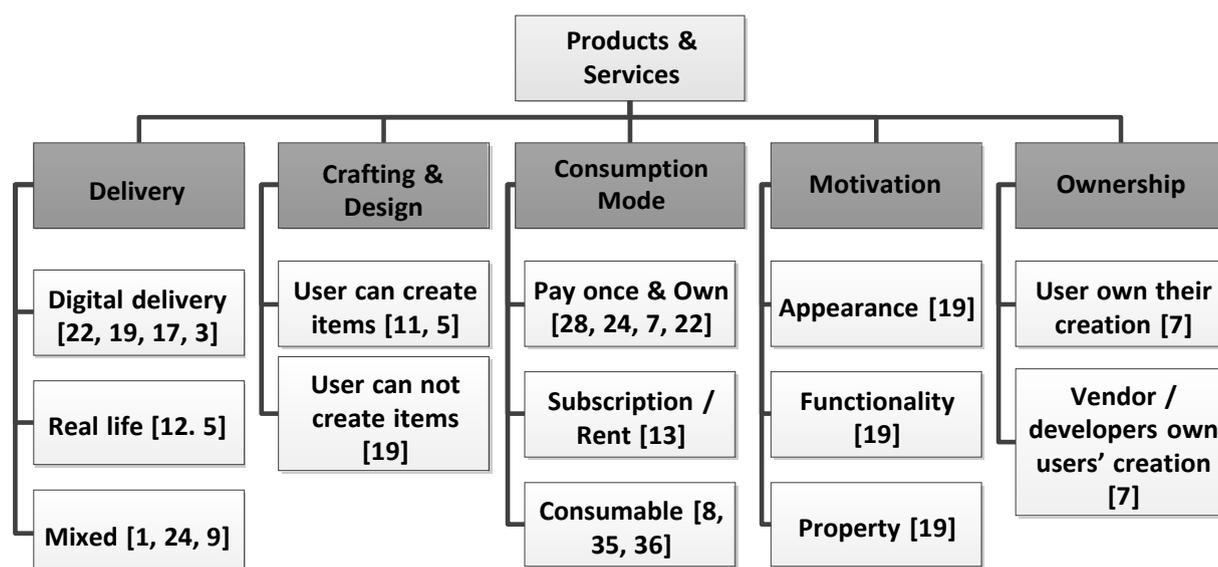


Figure 2. RMT products & services classification

Delivery

Delivering the virtual products and services in RMT can be accomplished through a variety of means. The most common way is the digital in-world delivery, which happens when a user buys a virtual item and they get it delivered to their virtual presence without leaving the virtual world. Another way for delivering products and services in RMT is physical delivery when a user buys a real product or services with virtual currency in virtual world. There is also a mixed delivery method where users can get both the virtual item in virtual world and an equivalent of it in real life. RMT strategies need to consider the differences of these delivery modes. For instance, the real world car manufacturer Toyota realized that launching a digital version of a car with the same appearance and features of the real life model in virtual world where users can fly or teleport may not be attractive to the virtual world users [13].

Digital delivery

Exchanging virtual currency with virtual goods is the most common type of RMT. Users can purchase virtual goods - including clothes, cars, furniture, and pets - with virtual currency. These virtual goods can then be delivered digitally to the avatar representing the users in virtual world. Users can also pay for virtual services such as real estate, education, health care, and governmental services [9], [30].

This type of RMT began in game-oriented virtual worlds, where users can exchange virtual currency, weapons and armors to enhance the appearance of their avatars and their gaming experience. Virtual currency and items are obtained through looting the corpses of fallen enemies, as rewards for completing quests, by using trade skills such as blacksmithing, and by trading [19]. Similarly in social-oriented virtual world such as SL, digital delivered virtual goods; in particular virtual fashion items are the most popular type of products in SL RMT [28].

Real life

SL has been used by many well-known real world brands in the last few years for promoting and marketing their real world products. Some of the well-known companies that have joined SL for promoting, marketing, and brand awareness purposes include 1-800-Flowers.com, Adidas, Calvin Klein, Dell, IBM, Nike, Nissan, Toyota, and Mercedes-Benz [29]. Users can browse the virtual representation of the products or the product catalogue in virtual world and click to purchase a real world version of those products. These transactions can happen within the virtual world, or users can be redirected from the virtual world to the company website to finalize the purchase and payment processes. For example, 1-800-Flowers allows SL users to browse different flowers arrangements in its SL store front and click to order and send real flowers [27].

Mixed

Delivering virtual products and services can also have a mixed delivery model. Users can interact with virtual products that have identical presence in real life and purchase both the digital and real life versions [15].

American Apparel used to provide identical products in both their virtual and real stores, in which case the customer and his avatar can wear the same model and color of jeans or t-shirt. This innovative idea combines the virtual shopping experience with the real life shopping experience by purchasing the same item in both real and virtual life [12]. Similarly, Dell has setup a shop in SL offering PCs to SL users, and also allows them to order new PCs for their real life [17].

Crafting And Design

Crafting and design of virtual products and services refers to the possibility, flexibility, and limitations for users to create virtual items. Each virtual world has its own designing tools and limitations for user created virtual items. The possibility of user created virtual items enable very different type of market structure and business opportunities for RMT.

User can create items

Virtual worlds - such as Entropia Universe (EU) and SL - allows users to create virtual items only using the built-in designing tools. For example, SL users can create virtual items by clicking the Build button, which brings up a menu of 3D shapes: box, cylinder, prism, spheres, torus, tube, ring, sculpted, tree, and grass. Modifying and combining these shapes in various ways can create virtual items. Different virtual worlds have different level of flexibility for user created virtual items. SL also provides the Linden Scripting Language allowing users with programming skills to design the interactions of virtual items.

Companies and users can use these design tools and scripting language to create virtual items such as houses, clothes, electronics, and furniture, which they can then sell to other users. There are a few success stories for individuals who have been successful in selling their own designs in the virtual worlds, one of the most famous individuals is Anshe Chung, who owns a virtual estate business in SL and has extended her business to include other virtual worlds [29]. Companies also leverage the creativity and capability of these design tools to collect customer feedback for real product development. For example, car makers such as General Motors and Nissan provide customizable cars in SL to gather customer feedback from the modified vehicles [13].

Users cannot create items

In some virtual worlds, users are not able to create virtual items and can only obtain and use the virtual items designed by the virtual world developers. Most of these virtual worlds are the game oriented virtual worlds, such as World of Warcraft (WoW) and EverQuest. For example, WoW users can use the virtual currency (gold), to bid for virtual items such as clothing gear and guardian pets in the Auction House in the virtual world, or to purchase virtual items from vendor non-player characters [19]. In this type of RMT, the virtual world developer has exclusive control of the products or services offered.

Consumption Mode

Virtual products and services in RMT have various cost models. Users may pay once to own virtual items, or pay weekly, monthly, or yearly to subscribe to virtual services. Users can also pay for virtual consumables. Different consumption modes may influence RMT sellers pricing strategies and users willingness to pay for virtual items and services [5].

Pay once and own

Very similar to real life, purchasers pay once for a virtual item and then can own/possess it. Some virtual worlds allow the transfer of ownership of the virtual item after the purchase from one user to another user. Some even allow the purchase to edit and modify, then resell the virtual item they bought, which is the case with SL virtual items. [3], [6], [8], [9].

Subscription / rent

Users may subscribe or rent virtual items and services in RMT. In SL, users need to subscribe (rent) the land from the virtual world developer, Linden Lab, in order to use the land for developing or building real estate or any property. Users are allowed to use the land as long as they keep paying the subscription fees [16]. The same concept applies for renting a unit or a house in SL from other users; you need to keep paying weekly or monthly in order for you to be able to stay in the property.

Consumable

Virtual world experience or consumables are items which users pay for once and then consume. Consumable virtual items, once used, no longer exist in the virtual world. RMT sellers can earn from providing live performances or hosting virtual art galleries. Professional singers have conducted live music concerts in SL via their avatars in virtual world and can have conversation with the listeners [34]. RMT users can also trade virtual consumables such as virtual foods. For example, in SL marketplace, users can purchase virtual food and drink such as a consumable virtual pizza with 8 slices that are shareable, where users can share it with other SL friends [35]. In EU, tools used for hunting, crafting and mining are consumables: the tools will deteriorate when used repeatedly. Each tool in EU has a decay value assigned to control how many times the tool can be used [36].

Motivation

Users have different motivations for buying virtual products and services, including enhancing the appearance of their avatars, the functionality and interactions in which the avatars can perform and participate, and investment in virtual property.

Appearance mainly motivates users who would like to have a unique appearance; functionality motivates mainly gaming users who want to have stronger and more powerful avatars. Some users who spend money buying property, houses, and lands may be motivated by the investment value of virtual property.

Appearance

Users in VWs would like to feel that their avatars are unique in a variety of different ways, starting from appearance, clothes, feature, and items owned. This leads to the trend that users would like to buy different and unique items even if they have to pay real money for it [19].

Functionality

Users of virtual worlds who are more game oriented are more attracted to develop their avatars functionalities. Starting from their avatars strength in different ways such as attacking techniques, defending techniques, strategy, and intelligence. For this

reason users are willing to spend hours in-game developing these functionalities, or to buy these functionalities when possible [19].

Property

Owning and renting properties is also interesting to a specific type of users in VWs. These users are motivated to buy their different kind of properties such as lands, units, houses, and business. Virtual worlds provide different housing options available with different sizes, features, and landscapes.

An example of property investment is Australian EU player named David Storey, who bought a virtual island in EU for PED 265,000. The property itself is a lush tropical island complete with a castle, “Storey says he considers it an investment and aims to make a profit as MindArk continues to develop the island. In June he said he had already recovered approximately USD 9 000 through taxation and property sales” [19].

Ownership

Ownership rights used to be one of the main issues in RMT. Ownership rights and terms of service vary significantly from one virtual world to another. Virtual item ownership is defined by the terms of services of each virtual world.

User own their creation

Virtual worlds such as SL have given the ownership rights to the users who create their virtual items inside the virtual world. Sellers can give specific permissions for their virtual item created by themselves when they sell it. For example, SL gives the users the ownership rights for the virtual items they create, with the possibility of transferring the ownerships to other SL users by selling the virtual item to other SL users or transferring the items as gifts to other SL users. Virtual item creators can give permission for the buyer to edit, modify, and resell when transferring the ownership of the virtual items to the buyers [8].

Vendor/developer own users' creation

On the other hand, most of the MMORPGs required user to forgo any intellectual property rights to access their virtual world. For example, Mythic Entertainment and EU terms of services defined that whatever the users created in the virtual worlds will be owned by the virtual world developers [8].

TRANSACTIONS & MARKETPLACES

Transaction and market environment can greatly impact the nature of an economy. The characteristics of the transaction nature of the marketplace are discussed in this section.

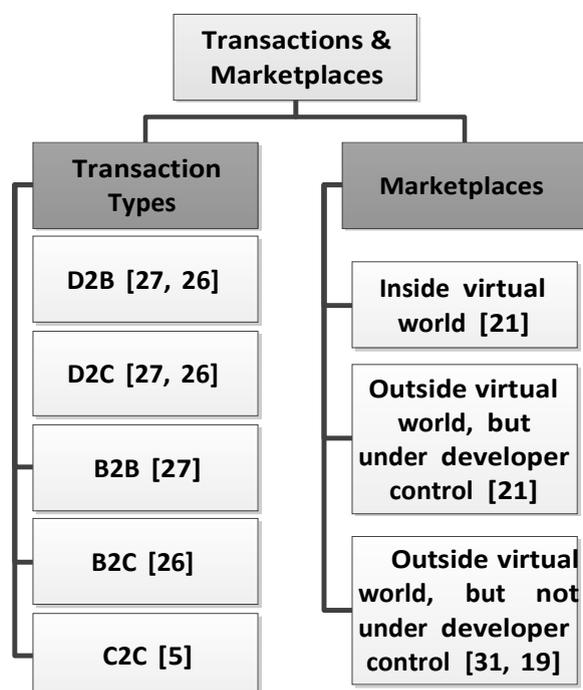


Figure 3. RMT transactions and market environment classification

Transaction Type

Transactions in RMT can be divided to 5 main types, based on the characteristics of the two entities involved in the transaction. These include Developer-to-Business (D2B), Developer-to-Customer (D2C), Business-to-Business (B2B), Business-to-

Customer (B2C), or Customer-to-Customer (C2C).

D2B

Developer to Business RMT refers to the transactions that take place between real world businesses and virtual world developers. For example, the transaction between Linden Lab, SL developer and companies such as Dell, IBM, and Toyota for rent or buy a land in SL for hosting their virtual storefronts are considered as D2B RMT [4], [10].

D2C

Developer to Customer RMT refers to the transactions that take place between virtual world developers and virtual world individual users. For example, WoW users purchasing tokens from Blizzard, the developer of WoW, for exchange gold in the game and SL users purchasing land from Linden Lab are considered as D2C RMT [4], [10].

B2B

B2B RMT transaction can take place between companies for activities in virtual world. Companies such as The Electric Sheep Company, The New Media Consortium, and New Business Horizons Ltd. are service providers offering services to businesses and organizations that wish to create a presence within virtual world [4].

B2C

Many companies get attracted to the virtual worlds (VWs) especially to the social oriented virtual worlds such as SL. Companies such as IBM acquired more than 20 islands in 2007 and thousands of its employees have created avatars in SL. The CEO of IBM announced that his company have invested US\$10 million to develop the 3D internet. Leading brands such as Nike, Lacoste, and Toyota uses SL to expand their brand image products awareness [10]. The main target of these companies is to sell to their either the virtual product to virtual users or attract them to buy the real products. This type of RMT transaction is considered as B2C RMT.

C2C

Virtual world users have earned profits by selling virtual items that they have created or services and experience they can provide. This kind of RMT transaction that takes place between to virtual world users is considered as C2C RMT [29]. EU users collecting virtual objects, and trading these to other users is an example of C2C RMT. The transaction that happens between Anshe Chung and other SL users before she professionally managed her real estate business was considered as C2C RMT. She subsequently expanded her business and officially had her VW real estate business established in SL, and turned from a small individual business to an official business with more employees working for it [29].

Marketplaces

There are different types of marketplaces both inside and outside virtual worlds to support and facilitate RMT [14]. These marketplaces can be classified into 3 types: 1) in-world marketplaces where the exchange of virtual items take place inside the virtual world; 2) out-world marketplaces which is developed by the virtual world developer, usually in form of a website site; and 3) 3rd party marketplaces which have emerged due to the need to exchange virtual items when no marketplaces have been provided by the game developers.

Inside virtual world

Virtual worlds such as WoW, EU and SL have RMT transactions that take place directly inside the virtual world (in-world). WoW users and EU users can bid for virtual items in the Auction House. They can then use, share, and exchange the virtual items within a guild. In SL, users can also purchase from and sell to one another directly [14]. These in-world marketplace provides an immersive virtual world shopping experience that resembles the shopping experience in real life.

Outside Virtual Worlds But Under Developer Control

Virtual worlds such as SL have a website which is called Second Life Marketplace (www.marketplace.secondlife.com) where users can list virtual items that they have created for sales, and can search for virtual items available for purchase. This marketplace provides a completely open trading platform between users with the transaction take place there using L\$ [14].

Outside Virtual Worlds But Not Under Developer Control

Some virtual worlds do not have a marketplace for virtual item exchange. For example, before introducing the Station Exchange service, EverQuest did not have a dedicated marketplace. For such virtual worlds there are different kinds of marketplace that have been generated outside the virtual worlds and outside the game developer control [15,16]. Users may also make use of online marketplace for e-commerce such as eBay to post their virtual items for sale or auction. The buyer can buy or bid on the items, then pay through credit cards or via PayPal, with both the buyer and seller arranging how to deliver the virtual items in the virtual world [15,16].

CURRENCY & EXCHANGE MARKET

Monetary systems for RMT are different in different virtual worlds, with various types of virtual currency and currency exchange systems. For the transaction to take place in the virtual worlds there is a need for a monetary system to be used; there have been

two common Monterey systems used in the virtual world which are virtual currency (such as PED in EU or L\$ in SL) and gold which is used in WoW and EverQuest.

Users have different ways to obtain virtual currency, and different virtual currencies could have an exchange rate that is determined by different mechanisms. This section is going to discuss these unique characteristics of the monetary systems used in the RMT of different types of virtual worlds.

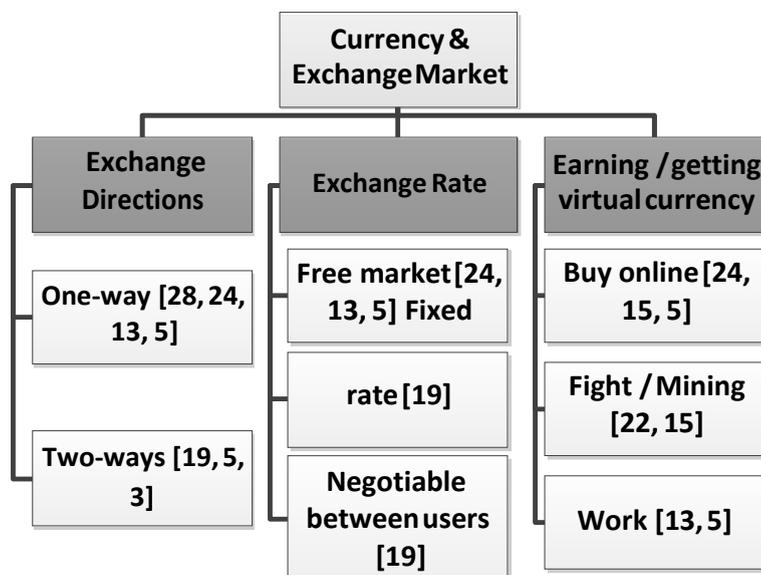


Figure 4. RMT currency and exchange rate classification

Currency Exchange Direction

There are mainly two different types of currency exchange directions in VWs. one-way direction; where user can exchange the real money to virtual currency and cannot exchange the virtual currency back to real money (such as WoW Gold). Alternatively, in two-ways virtual currency exchange such as the exchange of real money to L\$ and PED, users can exchange real money to virtual currency as well as exchanging virtual currency back to real money.

One-way

Virtual worlds such as WoW and EverQuest offer only one-way direction of exchanging currency through their exchange systems. User can buy gold using real money through different transaction methods such as PayPal or credit/debit cards. But if users have more gold than they need, they will only be able to exchange the gold with virtual items in the virtual worlds and they will not be able to change gold back to real money [16], [29]. The only way WoW users will be able exchange gold back to real money is to take place outside the developers control using some 3rd party websites. However, users caught performing such transactions outside WoW can have their accounts terminated or be banned [3], [6].

Two-ways

Both SL and EU have their own exchange rates, where SL has free market exchange rates while EU have a fixed exchange rate [16,24]. Both of EU and SL provide the two-way transactions where users can exchange U.S. dollar to PED or L\$ and vice versa using they developer/vendor exchange system. Players can buy virtual currencies from game developers by using a credit card, PayPal, bank transfer or various online payment systems, and when players wish to sell their extra virtual currency back to the developer using the current exchange rate, the developer sends the money using an international bank transfer [19], [29].

Exchange Rate

Virtual currencies used for RMT in different virtual worlds have different currency exchange systems. The exchange rate of the virtual currency can be free market exchange rate changing (based on the demand and supply), or pre-determined fixed exchange rate (determined by the virtual world developers), and a flexible exchange rate (negotiable between users). Different exchange rates of virtual currency will have significant impacts and risks on pricing and business strategies for RMT, similar to those of international trade.

Free market

L\$ has a free market exchange rate on the demand and supply of the currency, user can exchange L\$ with real money using SL official L\$ Exchange, LindeX, or other 3rd party L\$ exchange services. In 2011, it is reported that the users was able to buy L\$ at L\$ 260 for US\$1 plus the service fees, while in 2010 the exchange rate is at about L\$ 269 for US\$1 [16], [29]. Another example of the free currency exchange rate is the new token trading system introduced in April 2015 by Blizzard for its WoW virtual worlds. It have been reported that the initially the exchange rate for each one climbed past the 30,000 at the launch of the new

system, but fell sharply within hours to around \$20 for 22,000 [2].

Fixed rate

On the other hand, virtual worlds such as EU have a fixed exchange rate determined by the developer at \$1 for 10 PED [19].

Negotiable between users

The new token trading system introduced for WoW is only for the North America users. While transaction taking place between users from other regions than North America for gold, items, and user's account transfer was taking place unofficially, again the WoW terms of services, in other websites. These websites are specializing in buying the gold from users who want to sell gold with low price and sell it to other user with higher prices and generating profits [19]. Users can sell gold, virtual items, and user's accounts directly to each other, the selling and buying rate will be negotiated between the buyer and seller. The same kind of transactions between EverQuest users is found in online marketplaces such as eBay and in PlayerAuctions.com. However, EverQuest developer, Sony Online Entertainment has later banned this kind of transactions.

Earning / Getting Virtual Currency

There are different ways that users can gain virtual currency, and these ways are different from one virtual world to another. Most of the gaming virtual world users need to fight or complete missions in order to gain gold (such as WoW and EU). Other virtual users can work in the virtual worlds, working as a sales person and real estate agent is common in SL. The other easiest option is to buy exchanging real money with virtual currency based on the exchange market rate.

Buy online

SL, EU and WoW have promoted their virtual currencies to have a real value. In SL, users can buy L\$ in-world paying real money using online payment methods such as credit card or PayPal. SL also has a virtual exchange office where user can buy L\$ for the current market rate or request a limited buy offer with better exchange rate [25], [29]. In EU, users can purchase PED with real money and can also withdraw PED to their real world bank account through the company website. In April 2015 Blizzard, developer of WoW, allows North American WoW players to swap real cash for game gold [2].

Fight / mining

In both EU and WoW users can gain items or gold, which can then be used or be sold. In EU, after completing some fighting/quests, items will be dropped for users to collect. These collected items can then be sold to other users for earning PED. Similarly, in WoW, when users slay monsters or accomplish the quests they gain virtual items which can be sold to computer-controlled merchants for gold in the player-to-game economy [9], [25].

Work

Getting employed in the virtual worlds is another alternative way to get virtual currency. In SL for example users can work in one of many businesses which are established there, in order to earn Linden Dollars (L\$). There are different types of jobs that SL users can undertake to earn L\$. These jobs include serving as a real estate agent, a salesperson, a customer services and support staff, a disc jockey or a dancer in SL [16], [29]. Avatars also can work as a freelancer where they can use their skills in producing virtual items such as pets, cars, clothes, houses, and electronics, which they can then sell to other users in return for L\$.

CONCLUSIONS

Various attempts of RMT by well-known brands have not yet received the returns on investment as expected. While there are some significant transactions and new forms of RMT business emerged. What are the factors that influence the success of RMT and the characteristics of different types of RMT are essential questions to ask for formulating a viable RMT business strategy. In this study, we have outlined a classification framework for RMT based on the characteristics of products and services, the transaction and marketplace as well as the currency and exchange systems. Such a classification is necessary because the market environment and products and services offered in RMT can be very different from traditional market and e-business. How much companies can capitalize on the growth of RMT depends upon how much we understand the characteristics of this new virtual economy and marketplace.

LIMITATIONS & FUTURE STUDIES

There are several limitations in this study that can generate an opportunity for further studies. Our study is focusing on only 5 virtual worlds without collecting information from users of virtual worlds, especially in terms of their expectations, concerns, opinions and attitudes.

Future research could conduct a similar investigation but in more MMORPGS platforms based on different platform bases and economic system, which would help adding robustness to our research. Empirical examination is needed in future research to further validate the findings in this study by examining the different MMORPGS.

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