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Sharing and Social Production as Business Opportunities: The Zipcar Case Study and Analysis

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INTRODUCTION

This paper addresses the issue of business model opportunities over Internet-based networks. It also takes into consideration the study and analysis of several business model patterns developed by technology-integrated platforms.

Business models have gained greater importance since technology is increasingly connecting individuals to information in better and efficient ways. This connectivity is changing the world of consumption, social community and mobility. In a global economy where production is decentralized, the instant access to products or services is becoming increasingly more practical than actual ownership.

Sharing is a method of social production, which is challenging systems such as price-based and hierarchy-based platforms. Whereas these outdated systems are undermining productivity, economies and societies, social sharing excels productivity and is providing additional benefits to the planet. By increasing efficiency, reducing waste, developing more durable and safer products as well as services, the surplus generated by over production is reused.

The world is evolving within technology-integrated platforms and network infrastructures, finding new opportunities of doing business “electronically” with results. Distinctive factors such as environmental concerns, economic crises, technologies, and individual lifestyles are what drive the economy today.

Social production is a concept built on social relations and principles such as product service systems, redistribution markets, and collaborative lifestyles rather than depending on prices, firms and bureaucracies to mobilize and allocate resources. In this new context, products are simply shared and the information about them flows accordingly.

The cost of any shared good is split over transactions and users, so that better designed products can always be a competitive advantage for any business model in new circumstances. The era of sharing-based platforms has just begun. Social media fosters new share-based businesses by using mobile networks and the Web. These businesses

can offer and provide relevant and customized content instantaneously to customers, thus delivering a highly targeted value.

Peer-to-peer sharing allows for potential growth, change, and self-access to resources faster and often at a closer proximity. Sharing companies no longer have to sustain the overhead cost of purchasing and maintaining their assets, as the cost of sharing is generally lower than ownership. Social production helps society by using the goods already available in the market more efficiently while operating effectively within environmental guidelines rather than producing even more new goods.

Certainly not all physical products can be shared, but searching for opportunities to do so can lead to an increase in profit and efficiency.

The Zipcar case study considers the power of sharing as a source of production and sustainable growth. The Business Model Canvas is used to address all the assumptions issued by Zipcar. The company is developing an outstanding business model based on subscriptions to continuously grow the number of users engaged. Moreover, the Zipcar analysis shows revenues and EBITDA data to better understand the working capital process and the retention rate related to each customer.

In conclusion, Zipcar will be evaluated on the business opportunities that they will reach nationally and internationally.

CHAPTER ONE

The Business Model Canvas

1.1 Business Model as a Concept

Recently, the topic of business models has been given a lot of consideration by journalists, business people, consultants, and academics. The reason for this stems from the rapid changes the world is experiencing today. However, in literature, business models are not discussed to any depth and frequently without any true understanding of their roots, role and potential. In fact, according to Christoph Zott and Raphael Amit, the term 'business model' is analysed without explicitly defining the concept. In their review of 103 business model publications between January 1975 and December 2009, they found that more than one-third (37%) of publications do not define the concept at all, thus assuming the meaning as taken for granted. Less than half (44%) of publications conceptualize the business model, while the remaining 19% refer to the work of other academics. Existing definitions only partially overlap, offering a multitude of possible interpretations [Zott & Amit, 2010].

1.1.1 Economic theory

Economic theory does not help in conceptualizing the design of business models. According to Teece [2010] the idea of this model does not have theoretical foundation in economics and business studies. He discusses how in economic theory the business model is not even considered. He also argues that economic theory has been built around tangible and physical products. In this way, it is quite easy to capture value because it is embedded in the products or services sold to established markets. The theory assumes that if value were delivered, the buyers would always pay at the competitive market prices available. In fact, in economic theory, there is no worry about the value proposition to a customer because the price system will resolve it and

therefore the business model design issue simply does not exist or is insignificant. However, this argument is a misrepresentation of the real world, which is made of intangible products and two-sided markets. Customers' satisfaction lies no longer in just products themselves, but rather on the solutions to their perceived needs.

This lack of consistency in economic theory represents a potential source of confusion, leading to obstacles in the natural development and research process of business models. According to Amit and Zott, the business model has tried to explain or address mainly three phenomena:

- Use of Information Technology and e-business in organisations;
- Value creation, competitive advantage and company performance;
- Innovation and technology management.

The first point has gained the greatest attention, as it is clear that the Internet is a principal driver in the discussion about business models. E-business means, “doing business electronically” [Zott & Amit, 2010]. Academics have accounted it for various new business models including supply chain configuration (dis-intermediation or re-integration), subscription cost, advertising, sponsoring and commission, and transaction fees.

1.1.2 Origin

To identify the origins of the business model debate, the work of Osterwalder, Pigneur and Tucci [2005] on clarifying the business model concept is a key starting point. Essentially they applied a method successfully used by Abrahamson, whereby they traced the word string “Business Model” in a large number of journals to study its evolution (Table 1).

It demonstrated that the Business Model concept is a relatively young phenomenon. The research showed that the term “business model” appeared only in an academic article in 1957 and in the title and abstract of a paper in 1960 [Osterwalder & Pigneur & Tucci, 2005]. As Table 1 shows, it rose to prominence only towards the end of the 1990s, exactly when the advent of Internet and the steep growth of NASDAQ occurred.

Looking at Table 1 in depth, the use of term “business model” increased year by year, showing a tendency by both academics and practitioners to publish papers in which the notion of a business is addressed.

It should be strongly emphasized that also Zott and Amit agreed that the emergence of this concept became predominant with the advent of the Internet in the mid 1990s, as they present in their research of the work of Ghaziani and Ventresca [2005]. This duo made the same study as Osterwalder, Pigneur and Tucci, examining 1,729 publications and identifying that only 166 of these were published between 1975-1995. While the remaining 1,563 were published between 1995-2000, displaying an intense use of the term.

Table 1. The String "Business Model" in Scholarly Reviewed Journals

Year	in title	in abstract	in keywords	in full text
2003	30	159	10	667
2002	22	109	2	617
2001	11	100	7	609
2000	16	67	1	491
1999	3	42	1	262
1998	1	19	0	128
1997	1	14	0	66
1996	0	14	0	57
1995	0	4	0	36
1994	0	2	0	18
1993	0	5	0	18
1992	0	2	0	15
1991	0	1	0	10
1990	0	4	0	7

Source: Osterwalder & Pigneur & Tucci, 2005

1.1.3 Transactional Approach

Transactional cost analysis has received a lot of attention in recent years. It started with the early work of Ronald Coase, who was awarded the Nobel Prize for Economics for his work on Transaction Costs [Coase, 1937]. Today it continues with Williamson who reintroduced the concept in modern organisational economics [Williamson, 1985]. His theory considers transactions as a unit of analysis. In contrast to Neoclassical Theory, the transactions are not free; markets are not perfect and interacting with organisations produces costs. In strategic management this theory has been applied to a “make or buy”

situation. In describing the choices when a company is diversifying, it suggests options including “buying out” an alternative manufacturer, “buying in” the required activity, or outsourcing production assets. In all these cases the goal was focused on minimizing the cost of each transaction. Clearly the aim of any organisation is to attain the maximum amount of profits with zero transaction costs or at least keeping those costs to an absolute minimum. Two factors influenced Williamson’s transaction costs model: asset specificity, and frequency. Naturally, the more frequent and asset specific a transaction is, the greater its cost is. Nonetheless, in modern economies all organisations are embedded in relationships with other parties. Specialisation has allowed companies to reach higher performance targets, and according to Williamson, a higher degree of specialisation cannot be achieved without a greater cost. Transaction costs, in fact, increase with increases in asset specificity.

This paper however will show how companies specifically operating in today’s digitalised society, where they no longer have a fully integrated system of production, minimise the cost of transactions as well as maximise their value in an asset-specific context.

1.1.4 Customer-Centric Perspective

New communications and computing technology have changed the traditional way of doing business. Customers in these new, open global trading systems have greater choices and more opportunities to easily fulfil their needs. On the other hand suppliers have additional means to create transparent alternatives. Businesses have become more customer-centric especially since technology has allowed for the gathering of personal information and supplying customer solutions at a lower cost. These changes have demanded that many businesses and industries re-evaluate their value proposition.

“Each value proposition consists of a selected bundle of products and/or services that caters to the requirements of a specific customer segment. In this sense, the Value Proposition is an aggregation, or bundle, of benefits that a company offers customers” [Osterwalder & Pigneur, 2010].

As has been demonstrated in many sectors, this new context has encouraged companies to change, and the former activities under the logic of the industrial era are no longer

viable. Indeed before the advent of Internet most of these companies were focused on a product-centric business, where the value proposition lay on the process of design itself. Today, the challenge is not only how to find solutions to satisfy customer needs but also how to capture value through new products and services. According to David J. Teece

“Without a well-developed business model, innovators will fail to either deliver – or to capture – value from their innovations”.

This is especially true as he says of Internet companies, where the revenue streams depend principally on the company’s ability to match the customer expectations that the basic services should be free of charge [Teece, 2010].

1.1.5 Internet Era

The Internet has forever changed the image of business. The theme is progressively shifting towards new architectures, new structures, and logics that demonstrate how a business creates and delivers value to customers. This value is not embedded in the product itself, but is a sum of different building blocks where the product is just one of these. Each building block contributes to the architecture of a business model, where revenues, costs, and profits are only related to how the firm is creating and delivering its value proposition.

In short, still according to Teece, a well-designed business model does not stem from product innovation alone, but also from each building block that shapes the model. Through a deep understanding of how to properly connect these building blocks, as well as customer needs and technological patterns a solid business model is formed. Therefore, whereas in the past the product was the prime way of capturing value, now the product is just one of a range of different components that form the cohesive, dynamic entity.

Therefore, when looking at the economy today, it is very different from the industrial era where economies of scale were essential for production and the value proposition was simple and predictable. In fact, capturing value lay entirely within the product, sold together with its technology and intellectual property.

The ascension of the Internet has created a new transparent way of doing business: on one hand allowing individuals and businesses alike to easily access significant amounts

of information and data, while on the other hand providing customers with much more power throughout the shopping process. Nonetheless, the Internet is not just a source of accessible information that is much easier and faster to obtain, but also a new channel of distribution where companies are re-evaluating their distribution strategies and furthermore their entire business models. In some industries, for example, the recording industry, illegal digital downloads over the Internet have challenged traditional established music channels, making the whole music recording industry entirely rethink its business model.

However, although the Internet has devastated many industries such as music recording, news and telephone, the Internet companies themselves have struggled to create a successful business model. During the dot.com bubble of 2000, for instance, many companies with low revenues obtained financial capital from public markets before they had devised a highly profitable business model [Teece, 2010].

The rapid environmental changes that companies face today make it essential that they develop a constant business model where all the building blocks have to work together. Superior products and services are unlikely to be produced through sustainable profitability if the model is not aligned to the competitive environment. Where the framework for revenues and costs are so critical to a firm's success, keeping the model viable is a continuous process.

In conclusion, the origins of the term "business model", its evolution and process over time have been well presented. Thus showing how the Internet has changed the nature of competition in this new environment. Additionally, the lack of a business model theory has been showed to affect the research process, which now is characterised by a high level of debate and discussion. To clarify the business model concept this paper will now undertake a practical and interactive journey, defining what exactly a business model is and addressing how managers and business people alike are able to create and capture value from it.

1.2 Business Model Definition

The starting point of this paper is focused on studying the nature of any business model, its dynamics and innovation techniques. The challenge that managers, consultants, and academics are facing today is which position firms are taking within a hypercompetitive

scenario and how they are fostering change on their own business model design. Business model should be a concept easily shared and understood by everybody: simple and relevant that enables debate and description.

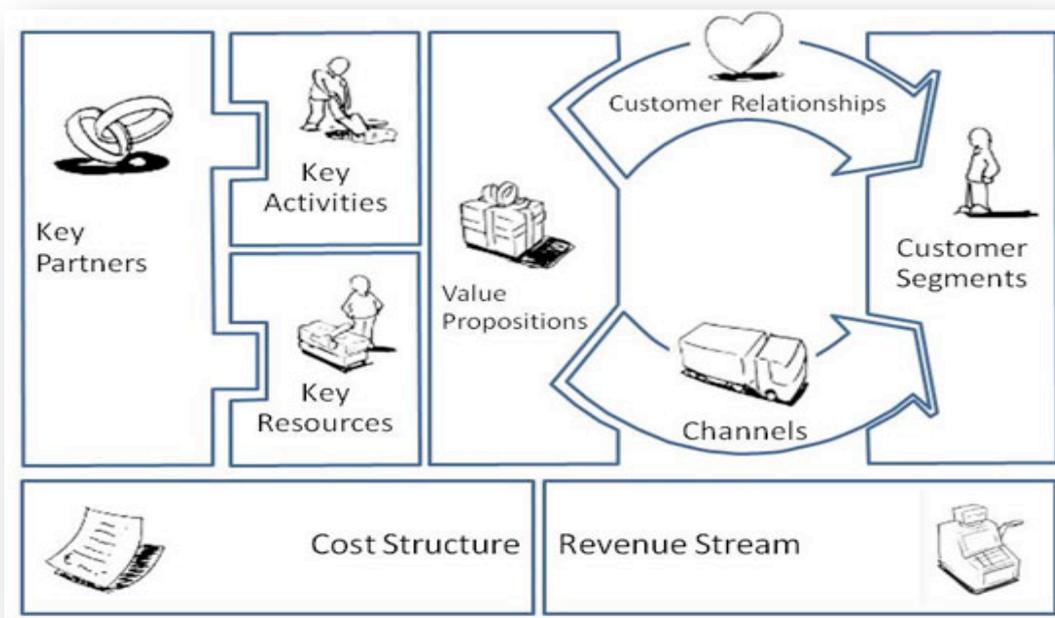
To define it this paper considers the definition used by Osterwalder and Pigneur:

“A business model describes the rationale of how an organization creates, delivers and captures value” [Osterwalder & Pigneur, 2010].

The Internet has raised fundamental questions about how businesses deliver value to customers, and how they capture value through information services that in many cases are free of charge.

Accordingly, companies need a structure or framework to follow during the process of designing an efficient and effective business model over an Internet-based approach. Osterwalder & Pigneur argued that a business model could be best described through nine basic building blocks, which better demonstrate the logic behind an organisation’s profits. These nine building blocks embrace four main areas including *customers, offer, infrastructure, and financial viability*.

Figure 1. The Business Model Canvas



Source: Osterwalder & Pigneur, 2010

Figure 1 depicts the Business Model Canvas that shows Customer Segments, Value Propositions, Channels, Customer Relationships, Revenue Streams, Key Resources, Key Activities, Key Partnerships, and Cost Structure as building blocks.

This model is not only a useful tool, but also a practical guide that stimulates creativity and fosters understanding, discussion, and analysis. It presents a different economic theory altogether, while from a particular perspective: simple and effective.

Indeed, the business model study is an interdisciplinary issue that despite its evident importance has been neglected thus far by academics. On the other hand, the Business Model Canvas is a practical model that has been applied and tested in many different important organisations around the world.

This new concept would bring managers and/or business people to use a shared language that would allow them to easily describe, visualise, and assess the changing strategic alternatives by designing business model solutions.

1.2.1 Customer Segments

The customer segments building block is focused on how companies reach and serve different group of people or organizations. Certainly customers represent the core of any business model, without customers firms would not be able to survive over time. This idea illustrates the definition of the different groups of people that a company would like to reach in order to satisfy their customer requirements. Basically, by dividing customers into different groups with common needs, behaviours or other attributes, it allows a company to serve them better and faster. However, firms have to focus on one segment at a time because in this manner they can design a business model around a deep understanding of specific customer needs. Questions that a manager must ask are: for which segment is the organisation creating value? Who are the customers of my business?

Here are some examples.

Mass Market - It is the largest segment to reach but also the most difficult. The market is considered as a whole and no distinction is made among segments. Value propositions, distribution channels, and customer relationships are all focused on this mass group. Companies put all their efforts on this large group of customers with common needs and behaviours.

Niche Market - The aim is to define specific, detailed customer segments. The niche market has value propositions, distribution channels, and customer relationships all tailored to each customer segment. For example, consumer clustering allows a company to plan more targeted and effective marketing activities or find appropriate price points for different customer groups.

Segmented - Business models consider customer segments with slightly different needs and behaviours. This allows companies to completely rethink their business model for each segment. For example, a bank may classify people in order of assets owned. If customers possess more assets, a bank may consider to slightly altering its value propositions, distribution channels, and customer relationships to better serve the customer needs and problems.

Diversified - Business models serve at least two different customer segments with very different needs and behaviours. Different from segmented customers, as the organisation decides to reach two unrelated needs and problems and therefore totally diversifying its value propositions, distribution channels and customer relationships. For instance, Amazon.com known primarily for selling goods, diversified its business by selling “cloud computing” services and started to focus on a new B2B segment.

Multi-Sided Platforms - Companies serve two or more customer segments that are interdependent on each other. Basically, business models need a large amount of buyers and sellers to be effective. For example, Metro free newspaper required a large base of readers to attract advertisers. On the other hand, advertising is needed to fund the production and distribution. Therefore, both segments are required to make the business model work.

1.2.2 Value Propositions

As mentioned before, the value proposition is a building block that describes how a company delivers value to its customers. Essentially, it refers to a mix of products and services that create value for a specific customer segment. The value lies in the difference between benefits and costs (risk is included). Sometimes the value proposition can be innovative, which is in some cases the reason why customers decide

to switch from one company to another. However, a lot of elements affect a business model value proposition. Osterwalder & Pigneur have named several:

Newness - Value proposition is served to satisfy entirely new needs. The companies offer a new mix of products and services that match the demand in a manner it was not offered before. This happens because customers do not know what they want. When a new breakthrough product or service comes out, they perceive a need and feel fulfilled. For example, Facebook created a new way of communication through the Web when other formats already existed.

Performance - Value propositions create value by simply improving product or service performance. For example, in the PC sector manufacturers are consistently improving the product offered year in year out to attract new and existing customers.

Customization - The value is embedded with the ability of the company to tailor products and services to specific customer needs. The company will adopt the offer to each particular segment they want to serve; customer co-design and co-creation are examples.

Brand - The brand is a powerful tool of value creation. Brand is more than just a product; it is a status, a way of living. Driving a Ferrari means more than just driving a normal car, it is a status of wealth, luxury and prosperity. Customers may find value just by wearing, using or displaying the product. Ducati and Roll Royce are other examples of brand value.

Price - The value proposition lies on offering the same product or service, but at a lower price. This solution allows satisfying customer segments that are price-sensitive. Obviously, business models with low-price value proposition change the entire architecture of companies from the key activities to the customer relationships. No frills companies such as Ryanair and EasyJet are examples of low cost air travel.

Cost Reduction - The firms help customers to reduce their costs. The value creation is embedded within the ability to find useful solutions at a lower cost for each customer segment. For instance, hosting CRM (Customer Relationship Management) software

may help buyers to manage their application more easily than buy, install and cope with it themselves.

Risk Reduction - Customers are guaranteed this when they buy a new product or service. The way of creating value occurs when customers reduce their risk during the shopping process. For example, many products include a one-year service agreement with purchase. This reduces the risk of post-purchase breakdowns and repairs.

Accessibility - Another way to create value is based on providing access to other customer segments, giving them access to certain products or services previously not available. For example, lending companies have started to lend money to even those customers who had financial problems.

Usability - Value propositions lie on making products or services easy to use. PayPal, for example, allows customers to easily pay over the Internet, which is convenient, fast and secure. Instead, Apple offers new legal way to search, listen and download the music, making the experience quick and easy.

1.2.3 Channels

The channels building block is focused on how companies reach their customers and how companies are able to communicate their value proposition. This important building block includes communication, distribution, and sales channels. It is also the interface by which the customers and the firms show their ability to communicate, distribute, and deliver their mix of products and services. Channels put customers in touch with the company value proposition, playing an important role in the customer experience. Besides this, channels help companies to provide post-purchase support, raise awareness about products/services, and sell customised products.

Osterwalder & Pigneur distinguished between direct and indirect channels as well as between owned and partner channels. Moreover, channels have distinct phases such as *awareness, evaluation, purchase, delivery, and after sales*; and each channel can cover some of them. The issue in this building block lies on finding the right mix of channels that match the customer perceived needs. So, companies might pay attention to channels when they bring a value proposition to the market. For instance, an in-house sales force and a web site are examples of a direct and owned channel, while an owned store is an

example of an indirect owned channel. Partner channels, instead, are indirect such as partner stores or websites as well as wholesale distribution. Another channel, which is developing quickly today, is the Twitter and Facebook social network channels. Those direct and owned channels have created new ways of value creation and brand awareness in the society. Concisely, the challenge that every company has to cope with during the process of both customer satisfaction and profitable growth is to find the right combination of channels.

For example, Traveltura.com Ltd is an online booking company, based in Kent, South East England, and member of the Federation of Small Businesses. It is a direct competitor of companies such as Tripadvisor.com, Booking.com and Lastminute.com but in a smaller scale. The Traveltura.com statement describes it better:

“Traveltura.com provides over 25,000 hotels in over 2,000 destinations worldwide. With hundreds of exclusive deals around the world and attraction tickets, airport transfers and theatre tickets you can package your ideal city break anywhere around the world.¹”

Traveltura.com has experienced different channels phases. To raise *awareness* to customers, the company owns a website where it shows its accommodation, theatre and tour offerings. To allow the website to make more impressions (how many users display the website) and increasing visibility, Traveltura.com utilizes SEO (Search Engine Optimization) techniques to rank higher on Google’s page rank. Essentially, through repeating keywords and quality content, the company has been trying to reach the first position in SERP (Search Engine Results Pages). In addition, Traveltura.com has started utilizing social networks as well. The booking company owns a Facebook business page and a Twitter account on travel-related topics and has links with partner websites to communicate related content with different customer segments.

To *evaluate* the value proposition, Traveltura.com has a call centre open 7 days a week and 24 hours a day, helping customers to choose the right product or service. Also, through social network channels the company offers special prices, cost reduction and convenient opportunities. The website, instead, displays the thousands of hotels available worldwide with hundreds of special deals and manages the process of

¹ Source: www.traveltura.com

purchasing as well. In fact, whenever users want to buy a product or service offered by Traveutura.com, they can just do it online via the website checkout. For example, if users are in a partner website, by clicking on the checkout button they will be redirected to the Traveutura.com paying process. In this manner the *delivery* service is instant. Customers have two choices: either complete the purchasing process through the website after checking the availability of hotels and tickets or calling the call centre to obtain the information they need and receive help to deal with hotel availability and prices. *After Sales* - the call centre provide all the information needed to manage cancellations, human error, or formal issues, and the Twitter account or Facebook page helps customers to be in touch with the company and build loyalty through an interdependent social communication.

As showed, Traveutura.com used both direct and indirect channels to offer its value proposition and connect with customers even if each phase has a diverse approach.

1.2.4 Customer Relationships

As the word suggests, the customer relationships building block explains the type of relationship a company builds with its customers. It means defining which type of relationship a company wants to establish. An organisation can arrange several relationships from personal to automated. In this manner, the value proposition may be driven by different reasons such as customer acquisition, customer retention, or upselling – the strategy where the seller will provide opportunities to buy related products or services to make larger sales during the purchasing process. The hamburger-fries meal is an example of upselling in the fast-food industry. However, the customer relationships building block is necessary to leverage the overall customer experience.

Osterwalder & Pigneur distinguished three customer relationship categories: *personal, automated, and community*.

Personal and dedicated personal assistance are two examples of relationships based on human interaction. The former deals with the sales and after-sales process through call centres, email or social networks, while the latter is when a company is directly dealing with a customer. Dedicated personal assistance is obviously more personal and frequently develops into long-term relationships. For example, key customers have individual relationships with account managers in private banking services.

On the other hand, *automated and self-service relationships* are based on no direct human interaction with customers and the process from beginning to end is provided automatically. In the automated relationships, personal online profiles allow customers to obtain access to different services. Moreover, automated services can recognize customer profiles and offer products or services with related information. Amazon.com is one example: after the purchasing process, the customer obtains different recommendations to a selected range of related product or services.

Community and co-creation relationships are more of an interdependent category, where companies are focused mostly on customer centric perspective and facilitating communication among people. Communities are another shared platform, where members exchange their knowledge to solve each other's problems. Besides this, they help companies to develop new ideas and solutions more in line with the customer's needs. Co-creation, instead, is a relationship where customers and companies work together to solve problems or create new products and services. Amazon.com solicits customers to write reviews about books, creating value for the other book readers.

1.2.5 Revenue Streams

The revenue streams building block describes how a company can make money. Essentially, it defines the capital generated from each customer segment. This building block is rather important, as it has seen the value proposition offered and delivered to customers through different channels and types of relationships that in turn, create value. This value is what customers are willing to pay for and companies are willing to capture. The prominent idea here is to generate different revenue streams for each customer segment; in this manner companies are able to efficiently provide their value proposition to customers.

According to Osterwalder & Pigneur, business models distinguish two types of revenue stream: *transaction revenues* and *recurring revenues*.

Transaction revenues are one-time payments made when customers pay for solely the product or service needed; there is no post-purchase support. Buying clothes in an apparel store is an example of a one-time transaction. Recurring revenues are ongoing payments where customers obtain a continuous value proposition delivery as well as a

constant post-purchase support. In this case, a membership at the Virgin Active gym requires a monthly payment to obtain the services offered.

Each company has to find the correct method to generate revenues. Here are some examples:

Asset Sale - The basic source of revenue streams for companies is selling their own products and services. They sell their ownership rights (incorporated in the product or service) to customers. Amazon.com sells many products such as books, clothes, electronics and games on the Internet.

Usage Fee - The revenue streams are based on the use of the product or service. The usage of a particular service or product influences how much the customer has to pay. For example, cell phone companies charge the customer by how many minutes they consume on the phone, and car rental companies charge customers according to the miles driven.

Subscription Fee - The customers are charged by a continuous access to a particular product or service. In this case, customers pay a subscription fee to use the service, which generate the revenue stream of the company. Online newspaper and magazines offer the opportunity to read particular online content, and gyms charge membership fees in exchange for access to their exercise facilities.

Lending or Renting Fee - Customers pay a fee to use the product or the service exclusively for a fixed period of time. The advantage for lenders in this case stems from recurring revenues. By repeatedly lending the same asset, it bears the cost of production and distribution. Conversely, the advantage for renters lies in the decreased expenses of the property, diminishing the full costs of ownership. Renting DVDs, cars, and apartments are some common examples.

Licensing - The licence is a permission given to customers to allow use of products or services covered by protected intellectual property laws. Licensing fees generate the revenue streams. The licensors, after being granted a licence by Intellectual Property law, may generate revenues exclusively by licensing their property without any manufacturing or commercialising process. Copying software or using a patented technology for instance, can be used in return for a licence fee.

Commissions - The revenue streams are generated by intermediation and the service is offered on behalf of third parties. It is a brokerage activity by which a company facilitates the buying and selling process between two or more parties. Credit card payments, real estate agents, as well as travel agencies are some examples of commission revenue streams.

Advertising - Advertising fees create revenues streams for companies. To advertise a particular product or service in a certain location, customers have to pay a fee. Online business models have started relying heavily on revenue from advertising, in particular the Facebook business model that is free to join.

Company revenue streams may change by price mechanisms, which are price strategies that companies adopt to generate additional revenue. Companies may adopt fixed prices based on a set of static variables such as quantity, quality, or customer segment type. Dynamic prices are negotiated between two or more parties based on market conditions. Yield Management and auctions are examples of dynamic price mechanisms. The former depends on strategic control of inventory, selling the company's product or service to the right customer at the right time for the right price (i.e. hotels and airline companies). The latter, instead, depends on competitive bidding between buyers (i.e. EBay).

1.2.6 Key Resources

Key resources what makes a business model function. They are the most important assets required. Without these resources a company cannot generate nor offer a value proposition desired to satisfy customer needs. Each building block in the Business Model Canvas is reliant on the others. Key resources determine how a business enters the market and develops its relationship with customers, earning revenues. Key resources can vary depending on industry, sector, as well as products or services delivered. Moreover, companies may own or lease key resources or acquire them from partners. Each company may use several types resources to develop its business: physical, financial, human or intellectual resources.

Physical resources are resources available for running the day-to-day operations of a business organisation. They include physical assets such as buildings, machineries, vehicles, manufacturing facilities and distribution network. Physical resources are often capital-intensive. Wal-Mart and Amazon.com are two examples of businesses that require a vast amount of physical resources.

Intellectual resources are an important part of any business model. Brand, patents, copyrights, proprietary knowledge, and partnership are some examples of intellectual resources. These resources are very difficult to create and develop successfully, but when a company does so successfully it generates and captures considerable value. Microsoft, SAP and Nike rely heavily on intellectual key resources.

Human resources are individuals that work for a company. They are assets of an organization, whose value is enhanced by training and developing skills over time. In some cases, human resources are crucial for the success of businesses. Focusing on people as assets or resources means that human beings are not "commodities", but are creative and social beings in a productive organization. In fact, successful companies optimize human resources in knowledge-intensive and creative industries.

Financial Resources are resources that companies utilize to be financed. Bank loans, mortgages, cash, and stock options are examples of financial resources.

1.2.7 Key Activities

The key activities building block defines the number of activities a company must accomplish to create value. For a business model to be successful companies have to focus on key activities. Without these key activities companies cannot generate their value proposition and customer relationships or reach markets and earn revenues. In addition, it is necessary to tailor key activities for any particular business model. For example, Microsoft includes software development, while Dell includes supply chain management as key activity.

Other examples can be summarized according to the sector or industry a business model is placed in, such as production, problem solving, and platform activities.

Production activities relate to the superior process of design, manufacturing, and delivering products to customers. These activities show the ability of a company to generate value, offering products and/or services in large quantities or superior qualities. This process involves mostly manufacturing firms (i.e. Siemens and General Motors).

Problem solving activities focus on improved performance, competitive advantage, innovation, integration and continuous training of the organization. These activities help to solve customers' problems. Companies that generate problem-solving activities are always coming up with new solutions over time. Hospitals and consulting companies such as the Boston Consulting Group are some examples.

Platform activities are related to the process of planning and equipping a network of activities to allow the company to provide new services to users. These activities also generate platform management and promotion. Networks, matchmaking platforms, and brands are some examples. EBay needs to consistently develop and support its web site platform (www.eBay.com), whereas Apple's business model instead uses its iTunes platform to continuously improve the music infrastructure.

1.2.8 Key Partnerships

Key partners are essential to any business model. This building block represents a bundle of suppliers and partners that help a company to deliver its value. Basically, it describes how a network of partners makes business models work. Presently, partnerships are crucial to survive in today's market. Often, it has been shown how fully integrated organizations did not create value, but conversely they dispersed it along the way. In fact, most organisations must focus on their core capabilities and competences better fulfil the customers' needs. Alliances are necessary solutions in order to capture more value, optimize the business model, and reduce risk or acquiring new resources. As it has been pointed out, sharing is the key motivator for most alliances, however, Johnson, Whittington and Scholes [2010] identified four general rationales: Scale, Access, Collusive, and Complementary alliances.

Scale Alliances are alliance organisations that join to achieve fundamental scale. The capabilities of each partner may be relatively comparable between non-competitors or buyer-supplier relationships. By aligning, partners can achieve greater advantages than

on their own. Strategic alliances optimize the allocation of resources and activities. Together, organisations can achieve economies of scale both in terms of output (products and services) and input (raw materials), therefore reducing costs. Moreover, scale alliances allow companies to share risks. Outsourcing or sharing infrastructure helps each partner to avoid relying on so many resources of its own that could bring it to failure.

Access Alliances require frequent access to the capabilities of another organisation. The partnership is required in order to sell products and services. For example, a company that wants to sell its products or services abroad may need a local distributor in order to access the new market. Thus, the local distributor is crucial to the company's success to sell products to the new market. On the contrary, a local distributor may look for a licensing alliance to increase the local distribution with new brands or technologies of the company. Here the company is crucial to the local distributor's success. This beneficial alliance may not only be about tangible resources, but also about intangible ones.

Complementary Alliances are alliances between partners to combine their distinctive resources or competencies. They help each other's partner to overcome any particular gap or weakness. These may be seen as a form of access alliance, but instead are more complementary: the strengths of an organisation exactly match the other organisation's weaknesses. By partnering, each company obtains new complementary resources and competencies that foster them to avoid any individual limitation. An example is the General Motors – Toyota alliance: The former obtains access to the manufacturing expertise of Toyota, while the latter relies on gaining local marketing knowledge from General Motors. These alliances exist because very few companies own all the necessary activities to perform well. Rather, firms rely on other organisations to perform certain activities, acquire knowledge, obtain licences, or access the customers instead of taking on all activities themselves.

Collusive Alliances occasionally generate secret agreements between two or more partners in order to increase their market power. For example, two organisations may decide to collude together into cartels for reducing competition in the marketplace. This causes higher prices for the customers and lower prices for suppliers. Landline and

mobile companies have often been accused of collusive behaviour during the past few years. Nonetheless, this ally is illegal and thus banned.

1.2.9 Cost Structure

The cost structure building block defines all the costs sustained to make a business model work. In other words, the company expenses that must be taken into account when manufacturing a product or delivering a service. All business models require dealing with a cost structure. Creating an effective value proposition, delivering and capturing value to manage customer relationships, and effectively controlling channels support costs. Once having defined, the key activities, key resources, and key partners it becomes easy to implement a cost structure. However, some organisations are more cost-driven than others, focusing more on cost reductions.

Certainly, the scope of an organisation should be to reduce costs as much as possible without compromising its ability to create value. According to Osterwalder & Pigneur business models depend on two opposite extremes: cost-driven and value-driven.

Cost-driven approach focuses on minimizing costs and maintaining the leanest cost structure possible. Companies have to follow a cost-driven strategy where each building block, wherever possible, must reduce costs. For example, offering a low price value proposition, automating every activity as much as possible or focusing extensively on outsourcing. In this approach, key activities are minimized and addressed on core competencies, while key resources are shared or are outsourced with key partners.

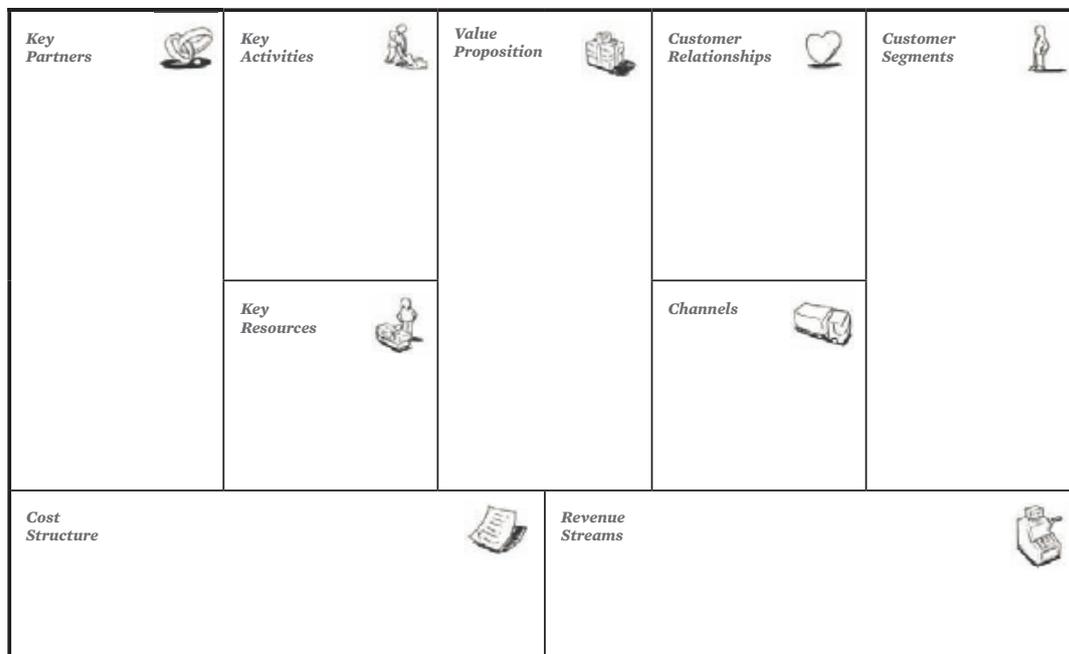
No frills airlines such as EasyJet and Ryanair rely heavily on cost-driven business models.

Value-driven approach focuses more on the way to create value in a particular business model. Companies do not really pay attention to minimizing costs, and instead are more focused on the value created by the business model design. Cost implications are a natural consequence of offering a premium value proposition. To design a value-driven business model requires focusing on capturing and delivering value at no matter what cost. This approach usually offers a high-level of customised products or services to customers who pay a higher price to obtain them. Luxury hotels in the most important cities are examples of a value-driven business model. St Regis Grand Hotel in Rome offers luxurious amenities (banquets & meetings, fine dining, fitness centre, high

speed internet, and Spa facility) and extraordinarily comfortable beds to make the guest's stay unforgettable.

The Osterwalder & Pigneur business model has been a successful approach in several industries and sectors, but it has also been criticised by many practitioners as well. According to Mark von Rosing, Managing Director at Value Team ApS, the Business Model Canvas lacks some important points such as responsibility and corporate structure, key performance indicators, measurements and outcomes, as well as issues about goal settings and business model management [Rosing, 2011].

Figure 2. A Large Representation of the Business Model Canvas



Source: Osterwalder & Pigneur, 2010

Finally, according to Mark Van Rosing's analysis, the Osterwalder & Pigneur approach has no holistic perspective because the model is too simplistic. He says the business model canvas is a useful tool for innovation or to measure a part of the business, but is not well suited to manage and control the entire business structure. Throughout this paper, the model will be used as a blueprint to support understanding and creativity as well as a practical tool to describe, assess, and change any technology-integrated business models.

1.3 Case Study: Apple Inc.

To make the Business Model Canvas work, Osterwalder & Pigneur displayed the successful iPod – iTunes Apple example. Apple introduced the iPod, a portable digital music player, for the first time on 23 October 2001.

The first iPod incorporated features such as LED technology, easy-to-use interface, and 5 GB memory drive holding roughly 1,000 songs [Apple, 2001]. In addition, the new features added to the iPod included: leaner design, AAC compatibility, 160 GB capacity drive, photos selection and car or home connectivity. This new technology was enormously large compared to the 20 or 30 songs capability of Flash-based players.

The portable digital music player works in combination with iTunes, which is software that enables users to connect the iPod to the computer. iTunes easily allows users to transfer music or other content directly to their devices. Moreover, Apple's online store is connected to the software so users can simply purchase and download music and other content.

The iTunes store has transformed the computer and music industry. The success stems from the decision to join the music download service by the five major record companies. Besides this, the price is very competitive as well: unlike other fee-based music services iTunes Store charges smaller fees (0.79€ per song or 7.99€ per album). Moreover, once downloaded, the purchased songs could be burned to CDs (with a maximum of seven times) or transferred onto an iPod.

The iTunes Store offers a one-time customer payment, unlike other online music services where users are charged subscription fees to get access to musical content (even if they obtain a larger volume of music per subscription).

After its launch in 2003, Apple hit 2 million downloads in sixteen days [Apple, 2003].

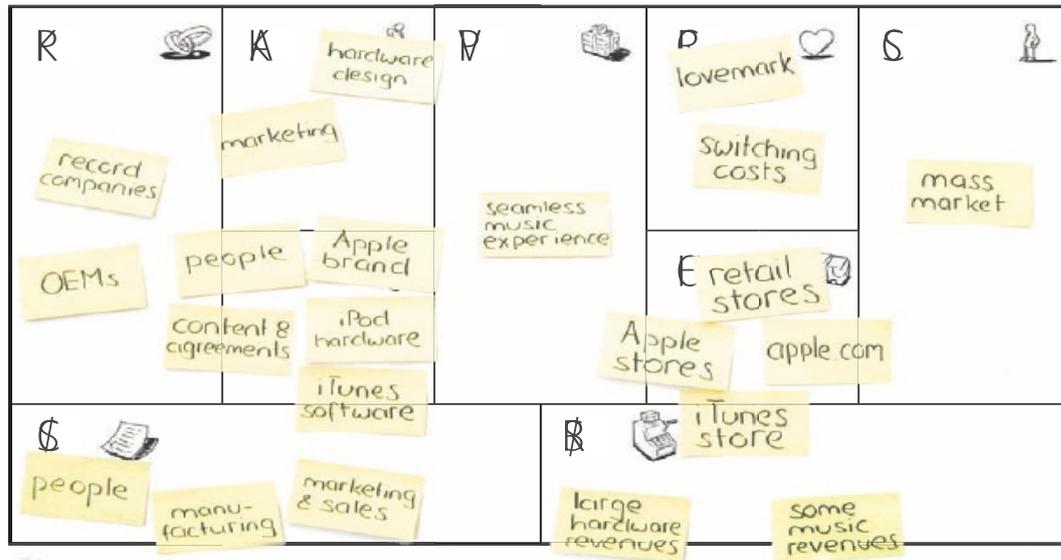
As it has been discussed, the Apple business model success has been the compelling combination of device (iPod), software (iTunes) and online store (iTunes Store).

This mixture has given Apple a dominant market position in the music industry.

Nonetheless, Apple was not the first company to sell MP3 players in the market, but its capability and competences allowed the organization to thrive and rapidly gain market share within the industry.

Looking at Figure 3, Apple has created and captured value through a seamless online music experience where customers can easily search and buy digital music.

Figure 3. The iPod-iTunes's Business Model Canvas



Source: Osterwalder & Pigneur, 2010

The agreements with five major record companies (iTunes) and OEMs manufacturing process (iPod) are two of the key partners to Apple's value proposition business model. In fact, Apple's costs come from recruiting innovative and talented people, manufacturing and design of the product, and the marketing and sales expenditure's campaign. These costs are the result of key activities and resources such as marketing and iPod design, as well as music content portability, record company agreements and compelling brand awareness. On the other hand the revenues are the combination of iTunes Store music downloads and iPod sales. Certainly, most of the revenues that Apple earned are from iPod sales, while downloads are entry barriers to protect the company from competitors. This is the result of a mass-market experience where customers consider Apple as a highly loved brand, with high switching costs. Apple stores, retail stores and apple.com are channels that make the customer experience unforgettable. The loop between value proposition, customer relationships, channels, and customers is on going, and the value is emotionally embedded with the brand awareness generated by Apple. All the building blocks together create the value that makes the Apple business model sustainable over time.

CHAPTER TWO

The Business Model Patterns

2.1 Business Model Patterns

This chapter describes and analyses business models with the same features. Osterwalder & Pigneur [2010] recognise various business models as being prototypical. These models are based off of criteria that they have called business models patterns. These patterns are representations that can be reused.

Teece [2010], indeed, considers firms as organisations that create, deliver and capture value. They then use business model to design or architecture this value. Business opportunities are available, but selecting, designing and improving a business model solution is a complex process and requires much skill and talent. The process of designing a good business model is very situational. Uncertainty and risk can undermine the business model design process, requiring interactive learning and a willingness to adjust. Business models are dynamic and they change structure very quickly in order to adapt to environmental and societal challenges.

The aim of this chapter is to clarify the business model patterns that have been developed over time to help define and conceptualize ideas, so that they may stimulate original solutions and innovative business model designs.

2.2 Overview

In his analysis, Teece distinguished between traditional and over the Internet business models. In many industries he studied different successful business models such as *hub and spoke model*, *razor-razor blade model*, *sponsorship model*, and *multiple revenues model*. These are some examples of business model designs that have been applied over the years in specific and/or general industries.

The *hub and spoke* model is a system that simplifies a network of routes and makes transportation much more efficient. The model combines a strong central hub with

several different spokes. In this way, all the airline traffic goes through one big central hub, which makes the overall system more efficient. By centralizing control and reducing aircraft turn around, Southwest Airline has obtained a higher level of employees and more aircraft productivity at a lower cost (standardized Boeing 737 aircrafts has created flexibility and efficiency on operations). The model also provides direct sales. Tickets, interlining of passengers, and luggage services are not sold by third party travel agencies.

Another traditional business model is the *razor-razor blade model*, which is characterized by pricing razors inexpensively, thus encouraging aggressive future purchase of other related mark-up products and services (i.e. Gillette razor blades). The model is also known as the “loss leader”, by which companies decide to offer products or services at a lower price (even losing money on prices), with the purpose of generating profits from the following purchases. For example, Sony decided to sell its PlayStation 3 platforms for far less than its production costs to rapidly extend the diffusion of the product. The company aimed to cover only the production costs and earn profits with the game royalties later on. It results that this strategy was not profitable because the platform did not reach a sufficient installed-customer base and the game royalties were far less than the amount Sony expected.

The razor-razor blades model is derived from Gillette, which was the first company to commercialize the disposable razor blades system. Gillette sells its razor handles at a lower price and then relies on other products in order to create an installed-customers base. Subsequently, the organisation produces profits by its follow-up disposable razor blades, by which the company earned a high margin.

In the Gillette business model patents have been crucial, as they were needed to block competitors from replicating the disposable razor blades for Gillette razor handles at a cheaper price [Teece, 2010]. The lock-in solution utilized by Gillette has allowed the company to provide its disposable razor blades as a market leader in shaving products.

Mobile telecommunication companies also offer a similar model, providing smartphones to their customers. For instance, they allow customers to choose a handset for free and then the customer pays monthly service subscription fees. As noted in the Sony case, mobile network operators are initially losing money, but the monthly service fees paid by each customer easily cover the costs of the handset. When purchasing a

smartphone on a contract, the customer does not need to pay the full amount upfront and instead, the cost of the phone is integrated into the cost of the services. This in fact causes the customer to pay more for the phone over time than they would if they bought the phone separately, but because they do not pay a large sum initially they feel a greater sense of satisfaction. In this way, customers obtain their smartphone instantly, and on the other hand service providers earn money through the service subscriptions.

Sponsorship is a key element of the sports apparel business models. Companies such as Nike, Adidas, Reebok, and Puma are implementing this business model strategy today. Essentially, this model is built on the ability of an organisation to sponsor sport clubs, teams, and players. These companies provide teams and players with sport kits and sponsorship dollars in exchange for the ability to sell replica products based on the image of the specific team or player. This gives the companies an opportunity to promote their related or unrelated products to the public.

Besides this, organisations create an essential condition for brand awareness and authenticity. The model is easily imitable. Thereby companies have to leverage their sponsorships accurately. Sport apparel firms must manage the relationships with clubs, teams, and players to have the correct mix of sponsorships necessary to succeed.

For example, Nike started lot of sponsorships with football players and the success of this campaign will depend on the performance of those top players. In fact, the possibility of a player's drop in performance or if a public image mishap were to occur, would reflect poorly on the brand authenticity and brand value that Nike was able to deliver to customers' mind.

The *multiple revenues model* reflects the fact that there are several different business opportunities available on the market to reach success. This model is suitable mostly with performing artists, who for instance, might earn money from a combination of live performance, CDs, DVDs, movies or online music sales through platforms such as concerts or Apple Music Store. In addition, soundtracks to video games or movies have gained recent prominence as a revenue stream for many artists.

In short, many business opportunities are available, and the particular business model chosen depends on the marketplace, the artist's talent, as well as quality of copyright protection provided by recording music companies.

Madonna is an example of multiple revenues model, as a world's highest earning female artist, and one of the best-known women on the planet.

“Madonna, Louise Ciccone, began her music career in 1983 with the hit single ‘Holiday’ and in 2005–2006 once again enjoyed chart success for her album ‘Confessions on a Dance Floor’”. In the meantime she had consistent chart success with her singles and albums, multiple sell-out world tours, major roles in six films, picked up 18 music awards, been the style icon behind a range of products from Pepsi and Max Factor to the Gap and H&M, and became a worldwide best-selling children’s author. The foundation of Madonna’s business success was her ability to sustain her reign as the ‘queen of pop’ since 1983” [G. Johnson, K. Scholes & R. Whittington, 2010].

The Madonna example shows how artists can generate profits from multiple revenue streams. She was able to change her persona and music genre over time and achieved incomparable success with her music record sales. According to J. Anderson and M. Kupp, Madonna’s strategy can be summarized in five key elements: vision, customer and industry insight, leveraging competences and weaknesses, consistent implementation, and a continuous renewal [J. Anderson & M. Kupp, 2007].

The Internet has rendered communications today much easier and it has changed the way industries face innovation. In this new scenario, the challenge is often linked to information flows. A multitude of information is flowing very quickly through the web and users increasingly obtain certain information free of charge. How to make money is a key element of any Internet-based company that aims to create, deliver and capture value.

The Internet has challenged several traditional industries such as DVDs, and bike and car rentals, disrupting their business models entirely. Blockbuster provides movie and video game rental services through its rental shops. Netflix.com, instead, adopted a totally different approach, focusing on online rental services. Customers easily order DVDs online (<http://www.netflix.com>) that are delivered by the postal service. Netflix charges users by monthly subscription fees. This has created a completely more convenient way to exchange and watch DVDs.

Music-recording companies have changed their business models as well:

“MySpace Music (<http://music.myspace.com>) enables users to listen to songs from Universal, Sony BMG and Warner Music, and provides free advertising-supported streaming, with easy access to Amazon.com for music purchases. Another example is the Nokia ‘Comes with Music’ (CWM) handset that comes with ‘free’, unlimited music downloads for a year, with Nokia passing on a fee to the recording companies” [Teece, 2010].

Illegal downloads have brought the music industry to totally rethinking its business model. The industry is moving towards royalties for broadcasting musical content and targeted advertising revenues.

Another design of an Internet-based business model worth mentioning is Flickr.com. Flickr is a photo-sharing platform that allows users to share, store, as well as index and tag photos. The online company is an example of the “freemium” model. This term was invented by Jarid Lukin and publicized by Fred Wilson on his blog. It is a business model, predominantly web-based, where a basic account is provided for free with the voluntary option to add paid premium services. Flickr subscribers obtain a basic account for free where they can upload and share their personal photos, but the basic account has limited storage space and a restricted number of uploads per month. Therefore, if the user wishes to be more active they must pay for the extra services. Flickr makes money from multiple streams such as subscription fees, contextual advertising, sponsorships and partnerships. Other companies like Adobe PDF reader and Skype have replicated this model with greatly success. This business model is sustainable despite the limited number of premium service subscribers, because the marginal cost of a new additional free subscriber is low. In short, the premium users, even if a small base, can sustain the free users and the model as well.

On the other hand Osterwalder and Pigneur considered the Unbundling, the Long Tail, Multi-Sided Platforms, Free and Open as other business model patterns built on fundamental concepts of business literature. Nonetheless, as they pointed out, an organization can integrate several patterns in its business model at once.

The unbundling business model is a pattern built on three different types of businesses. Each business has different type of imperatives. The company is likely to thrive if it splits into constituent businesses in order to avoid disagreements amongst departments.

The long tail business model takes advantage of the niche market and aggregates large numbers of ‘non-hit’ items that can be as profitable as ‘hit’ items based on traditional models. The multi-sided platforms business model is a pattern that connects together two or more different groups of people. These platforms create value as mediators of these two opposite sides. The free business model depends on at least one paying customer segment while the other segments are subsidised with a free of charge product or service. The open business model is a pattern that creates and delivers value by systematically working together with third parties.

2.3 Unbundling Business Model

In this section, business models may be unbundled into different types of businesses. Organizations normally embrace three types of businesses: customer relationship management, product innovation, and infrastructure management, with the last two being commonly considered together [Hagel & Singer, 1999]. However, each type of business has different economic, competitive, and cultural priorities so they are most likely unbundled into single units to avoid divergences and disagreements, and increase efficiency in productivity [Osterwalder & Pigneur, 2010].

According to J. Hagel and M. Singer, industries have faced a power shift leading companies with economies of scale and large customer-installed bases to be no longer sustainable. The advantages of size, reputation, and integration began to weaken, while creativity, speed and flexibility began to arise. Many new companies have obtained success through specialized products and services. Interaction costs are time and money consuming costs by which people or organisations exchange goods or services that are crucial for the company to develop. In short, interaction costs are very important because they establish how companies manage operations and generate long-term relationships with third parties.

“When the interaction costs of performing an activity internally are lower than the costs of performing it externally, a company will tend to incorporate that activity into its own organization rather than contract with an outside party to perform it. All else being equal, a company will organize in whatever way minimizes overall interaction costs” [J. Hagel & M. Singer, 1999].

As pointed out, reduction in interaction costs may make companies think about either being vertically integrated or focusing on specialized activities with key partners.

Figure 4. Three Core Business Types

	Product Innovation	Customer Relationship Management	Infrastructure Management
Economics	Early market entry enables charging premium prices and acquiring large market share; speed is key	High cost of customer acquisition makes it imperative to gain large wallet share; economies of scope are key	High fixed costs make large volumes essential to achieve low unit costs; economies of scale are key
Culture	Battle for talent; low barriers to entry; many small players thrive	Battle for scope; rapid consolidation; a few big players dominate	Battle for scale; rapid consolidation; a few big players dominate
Competition	Employee centered; coddling the creative stars	Highly service oriented; customer-comes-first mentality	Cost focused; stresses standardization, predictability, and efficiency

Source: Hagel and Singer, 1999

J. Hagel and M. Singer argue that the three types of business: customer relationship management, product innovation, and infrastructure management are very different, but organizationally intertwined. Customer relationship management is described as an opportunity to find and acquire new customers, building loyal relationships with them. Product innovation is defined as developing new and attractive products and services, while infrastructure management considers building and managing platforms for high volume and repetitive tasks.

Each business plays a unique role. The scope is to isolate these businesses and focus on only one internally at once, because each business is driven by different components that can conflict with the others (Figure 4), undermining the entire development of the business model, and produce undesirable results.

2.3.1 Mobile Telco

Mobile telephone companies have begun unbundling their business. In fact, traditionally the telephone service providers competed on network quality. Nowadays they are sharing networks with competitors and outsourcing network operations with equipment manufacturers. Mobile telephone companies have understood that the core business is no longer focused on the network infrastructure, but rather on brand awareness and relationships with customers. For example, Vodafone UK has chosen Ericsson to provide maintenance and operational support on its network². As the statement says on Ericsson's site [2009]:

“Through economies of scale, best practice tools, methods, processes and efficient resource allocation, Ericsson’s Managed Services supports its partners to improve network performance and end-user experience whilst reducing operational costs”.

Vodafone started to unbundle the infrastructure management, which allows it to run its network with better quality with lower costs. Ericsson on the other hand took advantage of unbundling by a more efficient allocation of resources and by its specialisation in Managed Services Support.

In this way, just like other companies, Vodafone now focuses its core business on customer relationships. While at the same time other telephone service providers, like Ericsson, have chosen to specialise in offering network services to satisfy customer needs. This strategy created and delivered more value, but also increased the buyer's willingness to pay. By outsourcing operations and maintenance to Ericsson, Vodafone was able to shift its core business capabilities and competencies on building a sustainable business model. Essentially, Vodafone increases subscription with customers, leveraging the investments the company made to acquire and maintain users over the years.

Accordingly, product innovation businesses may turn on smaller, more creative firms and require partnerships with third parties. These organizations are leaner and more dynamic. They typically do a better and faster job of assuring a substantial supply of new technologies, services, and media content such as mapping, games, videos, and

² Press Release, 18 March, 2009: www.ericsson.com/news

music. Speed is an important element in product innovation where faster moves create more business opportunities in the market and obtain higher market share.

2.4 The Long Tail Business Model

The concept has been developed by Chris Anderson to describe a new business model approach over the Internet, which is focused on offering a substantial number of niche products, even if each of them sell relatively infrequently.

Osterwalder & Pigneur show that the motto for Long Tail business models is “selling less of more”. The focus is on selling a large variety of products each at a low volume.

This business describes how aggregate sales from “non-hit” products are equally profitable and effective than sales from small numbers of “hit” products. However, low inventory costs and powerful platforms are required to make the business model work and to easily match the customer requirements.

Figure 5 shows in the horizontal axis the number of products the company holds, while in the vertical axis their popularity, how many times each product is purchased, is displayed.

Figure 5. The Long Tail Curve



Source: Anderson, 2006

The red zone defines the “hit” products area, where products, approximately 20% of the total sales, sell in very high volumes. On the other hand, the orange zone shows the long tail products area, where each product is sold at lower volumes but is still successful.

During an interview by Rita Koselka [2006], Chris Anderson explains the concept well,

“... I was interviewing a guy named Robbie Vann-Adibé, who ran a digital jukebox company called eCast. ... He was asking me what percentage of the top 10,000 titles I thought sold at least once a month. First of all, that a jukebox could have 10,000 titles blew me away, but you might assume that the answer to his question would be 20 percent, because of the 80/20 rule. I assumed digital was different; so I went out on a limb and said 50 percent of the top 10,000 titles sell at least once a month. The answer turned out to be 98 percent. When you get something that wrong, you just sort of say, “Whoa.” Everything they put out there sells at least a little. When I heard that, I knew something here was different. Then they went to 20,000 titles and 98 percent of them still sold. They went to 40,000 titles and 98 percent of them sold. I checked with Netflix and Amazon and in every instance the same was true: everything sells, sometimes just once a month, sometimes just twice, but if the marginal costs of manufacture and distribution are essentially zero, then all those ones and twos add up. When you graph it out you get a “power law” shape, just like a Pareto. As in traditional markets, you still have hits and non-hits, but what’s different is that the sale of non-hit titles doesn’t go to zero. And because the tail is so long, the area under that non-zero line, which is sometimes two orders of magnitude longer than the head, really adds up. It becomes 30 or 40 percent of the market. It’s just the statistical recognition that when the tail is long enough, all those low-selling items can, in aggregate, amount to a big market—the economics of large numbers...”

Anderson focuses his research principally on the media industry. He studied Netflix video rental company and its ability to license high volumes of niche movies. Even if Netflix rented each movie relatively infrequently, the high volume of aggregate revenues of niche movies made the company highly profitable in comparison to the rival Blockbuster, which was selling a small number of bestsellers movies.

However, Anderson underlined how this business model may be applied in other industries as well. Lulu.com is a successful case of an online book-publishing site

whereby high volumes of writers are submitting and selling small quantities of “non-hit” items.

2.4.1 *The Book Publishing Industry*

For years a traditional business model has supported the book publishing industry where new writers generally submit letters or proposals directly to publishing houses. Submissions to publishing houses were referred to as unsolicited submissions and most of them come from previously unpublished writers. The process of selection starts when the publishing house screens many authors and their unsolicited manuscripts, then the publisher selects those manuscripts that are most likely to reach profitable or revenue growth. Afterwards, the process goes to editorial staff and the manuscript assessment depends on the size of the publishing company. However, in this traditional business model, unsolicited submissions often do not succeed. There is a very low rate of acceptance because it would not be profitable for publishing houses to copyedit, print and promote a mass amount of books where a large percentage could end up selling poorly. Some sources estimate that publishing houses at the end of the selecting process choose about three out of every ten thousand unsolicited manuscripts [Harper, 2004]. In short, publishers are interested in selling books in large quantities to large audiences (Figure 6).

Figure 6. The traditional Book Publishing Industry



Source: Osterwalder & Pigneur, 2010

The rise of the Internet has changed the book publishing industry and new business models have emerged. Lulu.com is an online book publishing company, which allows users to submit their books, periodicals, and other contents themselves with complete editorial and copyright control. With nearly two million registered members, Lulu.com is having a great success and is giving assistance to niche and amateur authors to convey their creativity. Authors do not need to send an unsolicited submission to publishing companies with the low opportunity of having their manuscripts selected and published when they can just give them to Lulu.com and have a higher chance of seeing their work published in the market.

Lulu.com is an example of Long Tail user-generated niche content. Users can craft, print, and promote their book directly online, eliminating all the traditional barriers to market-entry from traditional publishing houses. Lulu.com eliminated the process of selection and created a new accessible platform for everyone. In this way, Lulu.com attracts more writers, who are then converted into new customers and increase the revenue stream. For less than two hundred dollars authors can have their book published and listed online. Once published, the book will be available worldwide so that everyone interested can see it. Lulu.com prints copies in small batches and the inventory is reloaded on demand; the books are printed in response to user orders.

Figure 7. The Lulu.com's Business Model Canvas



Source: Osterwalder & Pigneur, 2010

Many authors are now choosing this new model because it is convenient and easy-to-use. Eighty percent of book profits go directly to authors, compared to fifteen per cent in the traditional book publishing companies. In today's world anyone can write a book and authors do not depend on publishing houses anymore. In addition, writers can write as many books for any reason they desire without the hassle of being profitable. In conclusion, Lulu.com does not mind if a particular book does not sell well, because the marginal costs of such a failure are close to zero.

2.5 Multi-Sided Platforms Business Model

Multi-sided platforms are important business models that have developed very quickly with the birth of Internet and Information Technology. Companies such as Visa Card, EBay, Google, Microsoft Windows, Financial Times, and Facebook are several examples of multi-sided platforms. Fundamentally, those platforms tie together two different, but interdependent groups of users and facilitate the transactions between them. The typical example of a multi-sided platform is EBay, an online site that facilitates the buying and selling of goods between users. In some cases, platforms rely on physical products while others rely on services. Credit cards are physical products that link merchants to cardholders. Monster.com, instead, is a service that connects buyers and sellers through its web site.

However, the question raised is how would multi-sided business models create value?

Eisenmann, Parker and Van Alstyne explain [2006]:

“The two groups are attracted to each other— a phenomenon that economists call the network effect. With two-sided network effects, the platform's value to any given user largely depends on the number of users on the network's other side. Value grows as the platform matches demand from both sides”.

It is clear how both side of the platform are equally important; the value is found by facilitating the interactions between the two groups of people. The multi-sided platforms capture value only if both the sides are simultaneously present. In short, one group of users depend largely on the platform's other side of users.

Multi-sided platforms issues are related to understanding which side should be subsidised to properly promote the growth rate of each side. Normally, two-sided

networks consist of a “subsidy side” and a “money side”. The “money side” is attracted to the network for the ability to have access to the “subsidy side” that in-turn is willing to pay for services offered by the said “money-side”; this is known as the “cross-side” network effect.

“... Because the number of subsidy-side users is crucial to developing strong network effect, the platform provider sets prices for that side below the level it would charge if it viewed the subsidy side as an independent market. Conversely, the money side pays more than it would if it were viewed as an independent market. The goal is to generate “cross-side” network effects: If the platform provider can attract enough subsidy-side users, money-side users will pay handsomely to reach them” [Eisenmann, Parker and Van Alstyne, 2006].

Table 2. Examples of Two-Sided Platforms

NETWORKED MARKET	SIDE 1	SIDE 2	PLATFORM PROVIDERS
			<i>Rival Providers of Proprietary Platforms</i>
PC operating systems	Consumers	Application developers*	Windows, Macintosh
Online recruitment	Job seekers*	Employers	Monster, CareerBuilder
Miami Yellow Pages	Consumers*	Advertisers	BellSouth, Verizon
Web search	Searchers*	Advertisers	Google, Yahoo
HMOs	Patients*	Doctors	Kaiser, WellPoint
Video games	Players*	Developers	PlayStation, Xbox
Minneapolis shopping malls	Shoppers*	Retailers	Mall of America, Southdale Center
			<i>Rival Providers of Shared Platforms</i>
Linux application servers	Enterprises	Application developers	IBM, Hewlett-Packard, Dell
Wi-Fi equipment	Laptop users	Access points	Linksys, Cisco, Dell
DVD	Consumers	Studios	Sony, Toshiba, Samsung
Phoenix Realtors Association	Home buyers*	Home sellers	100+ real estate brokerage firms
Gasoline-powered engines	Auto owners	Fueling stations	GM, Toyota, Exxon, Shell
Universal Product Code	Product suppliers	Retailers	NCR, Symbol Technologies

*Denotes network's subsidy side

Source: Eisenmann, Parker and Van Alstyne, 2006.

However, the difficulty of two-sided platforms is understanding which side needs to be subsidised and how to price it correctly to encourage users to pay.

One great example of a multi-sided platform is the Metro newspaper. Today, this free daily newspaper, originating in Stockholm, is present worldwide, reaching almost all large cities. It was launched in 1995 and had great success because it was distributed for

free in train and bus stations. It immediately reached a large audience that allowed attracting advertisers very easy. By subsidising the cost of the newspaper to urban commuters, Metro was able to quickly reach a high volume of customers that attracted advertising companies and made the daily newspaper company profitable.

2.5.1 Google Inc.

Google is the most powerful search engine company in the world. As its statement says, “*Google’s mission is to organize the world’s information and make it universally accessible and useful*”³. In fact, the Google business model is built principally on three simple steps:

- Targeted Advertising;
- Free use of Google Search Engine;
- Paid content.

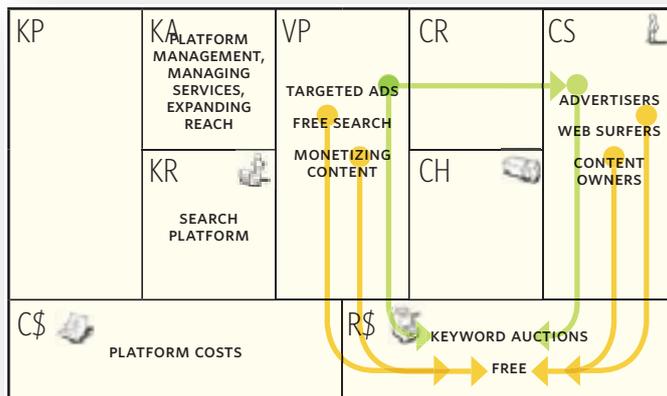
Through Google AdWords, Google provides very targeted text advertising online. Advertisers who want to promote their websites, shops or stores, as well as products and services can publish advertisements and sponsored links on Google’s search pages. Every time users interact with the Google search engine the ads are displayed beside search result pages. Google is supported by a particular algorithm that ensures high quality content and optimizes searching the Web.

The services offered by Google are very attractive to advertisers because they may customize their marketing campaigns to specific keywords and content related to particular users in certain areas. Two things that Google considers relevant to score higher on its SERP (Search Engine Results Pages) are Bid and Content. These factors explain how much money advertisers are willing to invest in their link for a ‘pay per click’ advertisement (PPC campaign). Who offers more PPC obtains a higher position on the Google SERP. On the other hand, content is important as well. A Quality Score is shown for each keyword related to the content of the company, and then this Quality Score influences advertisers cost-per-click (CPC). A higher Quality Score means lower CPC and a better advertising position on the SERP.

³ Source: www.google.com

This business model only works if users utilise Google frequently as a search engine. In turn the greater amount of users reached generates and implies extra ads displayed and greater value for advertisers. The value for advertisers lies on the number of users that use Google search engine. Google subsidizes users allowing them to use its free search engine in order to obtain an attractive platform for advertisers [VTT, 2007].

Figure 8. The Google's Business Model Canvas



Source: Osterwalder & Pigneur, 2010.

Google integrated its powerful search engine with a growing number of tools such as Web based e-mail (Gmail), Google Maps, Blogger, and Google Docs. Besides this, third parties may show Google ads on their own sites as well. The Google AdSense service ensures that Google only shows relevant ads to its users. AdSense displays only relevant text, image or video ads to users based on their search. In this way Google enables third parties to earn money from their content.

These three distinct sectors of advertisers, Web surfers, and content creators are all intertwined. Together they generate the revenue streams necessary to be sustainable over time. As noted above, Google represents an example of a multi-sided platform whereby it makes money from advertisers, while it provides free subsidies to Web surfers and content creators. This is logical because it becomes a cycle of value creation. An increased number of Web surfers, in turn generate more ads on SERP and greater earnings for Google.

Google does not sell actual space on its web site, instead only allows advertisers to bid on ad-related keywords associated with their content. The more a keyword is popular the more advertisers have to pay for it. This revenue stream allows Google to continually sustain the development and growth of search engine and AdSense users.

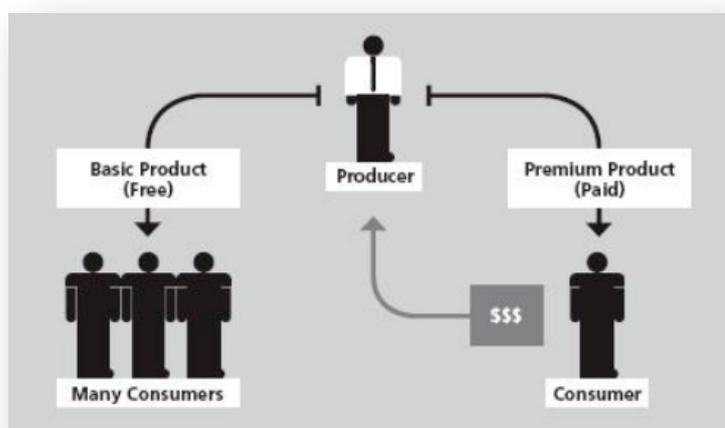
Google's wide IT infrastructure supports Google.com, AdWords and AdSense as main services based on a highly complex proprietary search and matchmaking algorithm. Google must continue to improve these key activities, retaining its platform to be sustainable in the future.

2.6 Free as a Business Model

Free is a business model where one substantial customer segment takes advantage of a free of charge offer. Successful free business models are not easy to build. Companies that provide their products free of charge struggle to be profitable. Monetary benefits require a shift from the basic interaction between two parties to a broader sense of an ecosystem where a third party helps to generate profit. All parties are necessary for the network to function, even if only a selected few are profitable.

During the current Internet Era companies have found new ways to sustain products or services while still lowering costs. Anderson identifies six broad categories of free business models that have developed over the years: *freemium*, *advertising*, *cross-subsidies*, *zero marginal cost*, and *labour exchange and gift economy*.

Figure 9. The Freemium Business Model



Source: Chris Anderson, 2008

The term “freemium” was coined by venture capitalist Fred Wilson and today is one of the most common business models. Freemium means “*Anything That’s Matched with a Premium Paid Version*” [Chris Anderson, 2008]. Basically, free is intended for basic users. These users benefit from products or services free of charge. Different types of patterns may make the freemium business model work such as access to new content or “pro” premium versions at a low price.

Figure 10. Freemium examples

FREE 3: FREEMIUM (SOME CUSTOMERS SUBSIDIZE THE OTHERS)

- Give away basic information, sell richer information in easier-to-use form (BoxOfficeMojo)
- Give away generic management advice, sell customized management advice (McKinsey and the McKinsey Journal)
- Give away federal tax software, sell state (TurboTax)
- Give away low-quality MP3s, sell high-quality box sets (Radiohead)
- Give away Web content, sell printed content (everything from magazines to books)
- Charge buyers to shop in a store with lower prices; infrequent shoppers subsidize frequent ones (membership chains such as Costco)
- Give away online games, charge a subscription to do more in the game (Club Penguin)
- Give away business directory listings, charge businesses to “claim” and enhance their own listings (Brownbook)
- Give away demo software, charge for the full version (most video games, which will allow you to play the first few levels to see if it’s for you)
- Give away computer-to-computer calls, sell computer-to-phone calls (Skype)
- Give away free photo-sharing services, charge for additional storage space (Flickr)
- Give away basic software, sell more features (Apple QuickTime)
- Give away ad-supported service, sell the ability to remove the ads (Ning)
- Give away “snippets,” sell books (publishers who use Google Book Search)
- Give away virtual tourism, sell virtual land (Second Life)
- Give away a music game, sell music tracks (Tap Tap Revolution)

Source: Chris Anderson, 2008

The “premium side” sustains the “free side” and allows the business model to be successful. How would it be possible? In an article found in Wired Magazine, Chris Anderson explains the concept:

“The traditional free sample is the promotional candy bar handout or the diapers mailed to a new mother. Since these samples have real costs, the manufacturer gives away only a tiny quantity—hoping to hook consumers and stimulate demand for many more. But

for digital products, this ratio of free to paid is reversed. A typical online site follows the 1 Percent Rule—1 percent of users support all the rest. In the freemium model, that means for every user who pays for the premium version of the site, 99 others use the basic free version. The reason this works is that the cost of serving the 99 percent is close enough to zero to call it nothing” [2008].

C. Anderson shows that as this model is being driven by new technologies empowered by the Web, the cost of doing business online is close to zero. As Moore’s law says, there would be a half reduction in price every eighteen months for each unit of processing power. Bandwidth and storage prices are dropping even faster. This means the Web is scalable. Most online businesses focus on finding new ways to attract customers in order to spread technological costs over a larger audience. Year after year, it would bring the marginal cost of technology for each additional customer close to zero.

Advertising is a model that considers a multi-sided platform structure. As noted in the Google case study, advertisers are attracted to the users that utilise Google search engine. These advertisers are then willing to buy PPC text ads to reach this large audience. The same circumstances occur with Facebook. The social network gains the majority of profits by advertising on the Web site. All these approaches work because of the free services offered that allow advertisers to obtain specific information about users (expressed interests/hobbies), which then creates a better service through targeted advertising.

Cross-subsidy businesses are products or services that are given for free with the intention to push users to pay for something else. For example, loss leaders, such as Wall-Mart, may sell lower priced products such as DVDs because it lures you into the store giving way to the opportunity to buy something else like a washing machine.

Zero marginal costs are models that consider product or service distribution costs close to zero. Everyone may access them at no cost. Digital music describes this model well because it applies a very low cost of music distribution. Artists may easily give their music away online for free to spread awareness and instead earn profits from advertising, concerts and merchandise.

Labour exchange and *gift economy* are two examples of the non-monetary market where users can select the non-monetary resources they want exchange. Wikipedia is an

example of a gift economy that offers information to users without any cost. Users are able to upload information themselves, but can also obtain instant access to the collection of information without having contributed anything.

Labour exchange, instead, is a service that creates value for someone else. For example, by using the Google search engine, users are helping the company to improve its ad-targeting algorithm. This is useful to all other parties in the network and gives users the opportunity to obtain access to search results for free.

At this point the analysis will turn to Skype and its successful freemium business model.

2.6.1 Skype

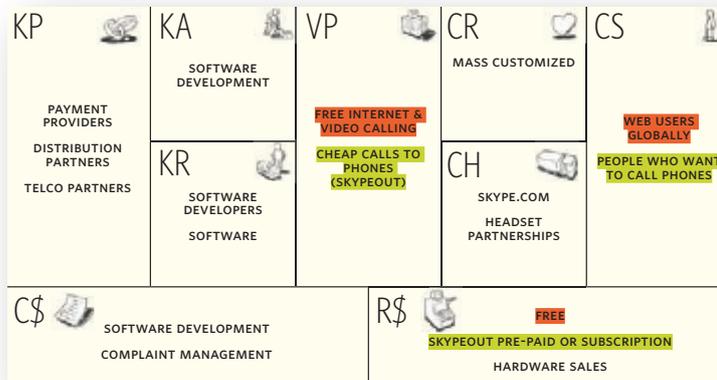
Niklas Zennström and Janus Friis established Skype in 2003 (now owned by Microsoft since 2011), which has since become the predominant player in the Voice over Internet Protocol (VoIP) telephone market. The Skype service is an example of a freemium model that disrupted alternative landline and mobile telephone providers by enabling users to call free of charge via the Internet. The Skype software, when installed on computers or smartphones, allows users to use the Internet to make Skype calls from one device to another all over the world. After just two years (2005) Skype gained 60 million users. Free calls are routed through customer computers and peer-to-peer technology that make the network work. This technology enables Skype to have much lower network costs than traditional telecommunication companies as users download the software off the Internet. In fact, the marginal cost to acquire an additional customer is quite close to zero for Skype. It requires only backend software and hosting user accounts as communications infrastructure.

Besides this, Skype has no telephone help-desk and no marketing costs. Zennström said to Business Week:

“When you’re a phone company, you have marketing and customer-acquisition costs. When you have a customer, you have an operational cost of running the network. Then you have a cost for billing systems. That’s an operator business model. The business model of Skype is completely different. Skype has a software business model. We don’t have any distribution or marketing costs for each user – our software is spread virally. And when we have a new user, we have zero cost for serving that user because they’re using P2P (peer-to-peer) software and their own bandwidth. So we have zero costs of

getting new users and zero costs of running traffic. Our costs are only business development and software development’ [R. Whittington, K. Scholes, 2010].

Figure 11. The Skype’s Business Model Canvas



Source: Osterwalder & Pigneur, 2010

Skype makes money through a premium service called SkypeOut that allows users to call traditional landlines and mobile phones for a very small fee. For example, only 10 per cent of users are paying for calling, while the other 90 per cent of registered Skype users are subscribed to the free service. Compared to traditional telephone companies the Skype business model is very competitive. IBasis and Level 3 are Skype network traffics that provide low termination costs and this overturns the traditional landline and mobile business model. Traditional telephone providers generate high marketing and network costs, charging customers according to distance and by the minute. Skype has disrupted this old business model and helped drive communication costs close to zero. Skype claims over 400 million registered users, more than 100 billion free calls, and revenues of 550 million dollars in 2008 [Osterwalder & Pigneur, 2010]. This makes Skype the world’s largest provider of cross-border voice communication services.

2.7 Open Business Model

Open innovation and open business model are two terms promoted by Henry Chesbrough. Open innovation greatly use external ideas and technologies, while letting other companies use their own unexploited ideas. This requires an open business model

whereby external knowledge flows in from the outside and allows that additional internal ideas and technology flow to the outside. Open business models create and capture value by methodically collaborating with partners in the network. This flow of knowledge is mutual. It is an endless outside-in and inside-out approach for companies by exploiting external useful ideas and providing internal idle assets. According to Chesbrough, the benefits of open innovation lie in lower costs, faster time to get to the market, and the chance to share risks with partners.

He argues that open innovation makes sense in a world of broadly distributed knowledge and emerging mediating platforms [Chesbrough, 2006]. Markets for knowledge have already existed, but have been highly inefficient. Information Technology and the advent of the Internet have reduced this gap, allowing companies to perform effectively in this field. In the past, research and development (R&D) was considered a critical strategic asset, even able to protect companies from competitors in many sectors.

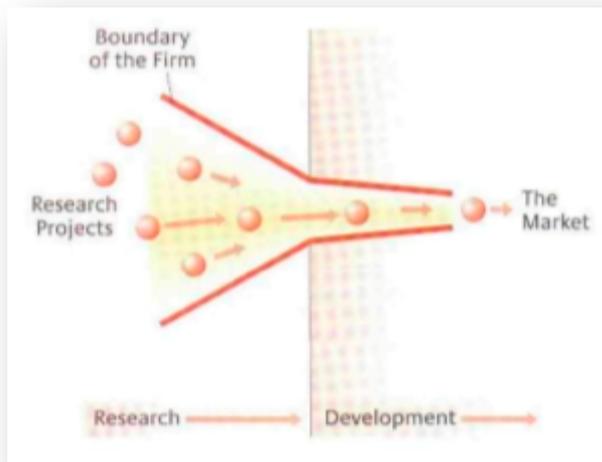
Today start-up companies conduct very little or no research on their own, but instead produce new ideas to market with a totally different approach. Cisco is an example of an organisation with a very different strategy. The technology needed to sustain its business is acquired from outside the company itself by partnering or investing in compelling newcomers. In this way, Cisco maintains its R&D results without supporting all the cost of doing it on its own. The question raised is, is internal R&D still a strategic asset? This question brings to the discussion between open and closed innovation.

“In the old model of closed innovation, firms adhered to the following philosophy: Successful innovation requires control. In other words, companies must generate their own ideas that they would then develop, manufacture, market, distribute and service themselves (see "The Closed Innovation Model"). This approach calls for self-reliance: If you want something done right, you've got to do it yourself” [Chesbrough, 2003].

For most of the 20th century this model worked and very well at that. Companies that had invested more heavily in internal R&D generally discovered a larger amount of high quality ideas, which therefore allowed them to be the first-movers in the market. Protected by their intellectual property (IP), companies were able to gain most of the

profits that in turn were simply reinvested in R&D. This allowed for discovering even more new ideas, creating a cycle of closed innovation. In this way, a company generates, develops, and commercializes its own protected ideas. This philosophy has dominated the innovation process of many leading industries (Figure 12).

Figure 12. The Closed Innovation Model



Source: Chesbrough, 2003

Toward the end of 20th century, the scenario changed and companies were no longer able to control their ideas. Many factors undermined the old model such as the increasing amount of knowledge, workers, and the growing availability of private venture capital. In this new scenario, new ideas and knowledge became the product of multiple heterogeneous people resulting from the collaboration of a network of members (partners, universities or research institutes). Each member within the individual company is a source of innovation (knowledge and skill to utilize) that encourages the innovative process characterized by growth and knowledge sharing.

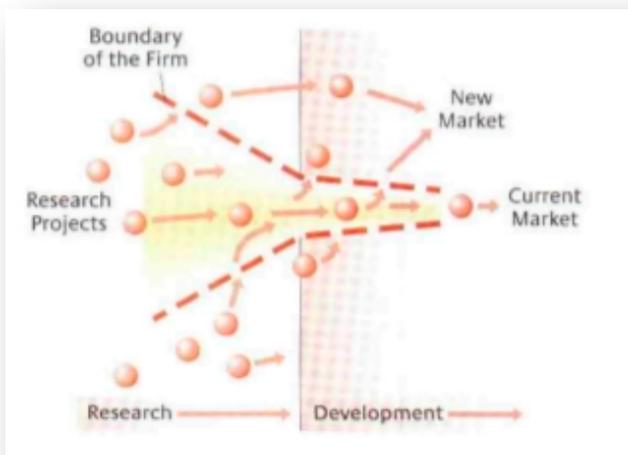
A company for instance should not focus on protecting its IP because in this environment control over resources is not the key. Instead, strategic moves are finding new alternative ways of doing business from how others use those technologies. Chesbrough argues that,

“In this new model of open innovation, firms commercialize external (as well as internal) ideas by deploying outside (as well as in-house) pathways to the market. Specifically, companies can commercialize internal ideas through channels outside of

their current businesses in order to generate value for the organization. Some vehicles for accomplishing this include startup companies (which might be financed and staffed with some of the company's own personnel) and licensing agreements. In addition, ideas can also originate outside the firm's own labs and be brought inside for commercialization. In other words, the boundary between a firm and its surrounding environment is more porous, enabling innovation to move easily between the two (see "The Open Innovation Model")" [Chesbrough, 2003].

In this new world, the way of creating and capturing value is embedded within the integration of outside knowledge, products, and intellectual property into the innovation process. However, the internal resources create value as well because knowledge, technologies, or products within an organisation may be made available to third parties through licensing, joint ventures, or other arrangements (Figure 13).

Figure 13. The Open Innovation Model



Source: Chesbrough, 2003

Logically, not all industries have shifted from closed to open innovation. At this point, several business models may be located along a continuum from totally closed to essentially open. For example, Procter & Gamble (P&G) has renewed its business model through a new program called "Connect and Develop" (case study).

Figure 14. The Principles of Innovation

Closed	Open
The smart people in our field work for us.	We need to work with smart people both inside and outside our company.
To profit from research and development (R&D), we must discover it, develop it, and ship it ourselves.	External R&D can create significant value; internal R&D is needed to claim some portion of that value.
If we conduct most of the best research in the industry, we will win.	We don't have to originate the research to benefit from it.
If we create the most or the best ideas in the industry, we will win.	If we make the best use of internal and external ideas, we will win.
We should control our innovation process, so that competitors don't profit from our ideas.	We should profit from others' use of our innovations, and we should buy others' intellectual property (IP) whenever it advances our own interests.

Source: Osterwalder & Pigneur, 2010

2.7.1 Procter & Gamble

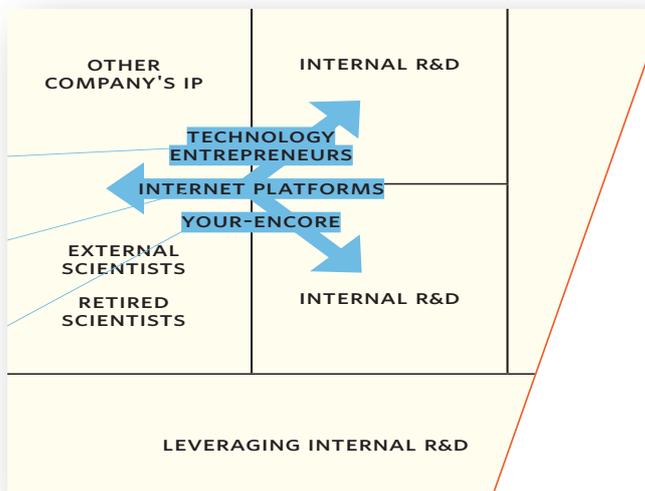
Procter & Gamble is an American multinational corporation and one of the most successful companies in the world today. It manufactures and produces a wide range of consumer goods [Boston, 2009]. The company provides not only high quality products, but also practicality and value for money. This case study is an example of outside-in innovation.

William Procter, a candle maker, and James Gamble, a soap maker founded Procter & Gamble in 1837. Now, Procter & Gamble (P&G) sells more than 300 brands, delivering products to over 160 countries worldwide. In addition, the corporation employs more than 129,000 employees all over the world. In 2011 P&G gained 82.6 billion dollars in

sales⁴. P&G's global business units are divided into six sections including beauty, grooming, health care, snacks and pet care, fabric care and home care, and baby care and family care. The fabric and home care division is the most profitable division with a total of 24.8 billion net sales in 2011.

However, in 2000 when the competition increased, the value of P&G shares started to slip. This forced the company to rethink its business model, implementing changes in terms of culture, production, work processes, and operations. Accordingly, A.G. Lafley became the new CEO of P&G with the goal of rejuvenation. Instead of increasing R&D spending, he focused on a totally different approach. Lafley structured a new innovative culture in order to create a R&D open process. The CEO implemented "Connect & Develop" (C&D) as the key element of his strategy. C&D is a strategy that allowed P&G to exploit internal research through outside partnerships. P&G employed new ideas and knowledge from outside its own R&D, manufacturing, and marketing capabilities. This strategy was a lot closer to customer needs and created better, cheaper products at a faster rate.

Figure 15. The P&G Outside-In model



Source: Osterwalder & Pigneur, 2010

⁴ Source: P&G Annual Report 2011, www.pg.com

Today, more than 50% of new products offered by P&G have elements that originated externally. In the early 2000s the percentage was closer to 15%. Through Connect & Develop, R&D productivity has increased by nearly 85 percent. The innovation rate boosted, while the cost of innovation had decreased. P&G's Connect & Develop strategy is in more than 1,000 active agreements with third parties.

Bruce Brown, Chief Technology Officer (CTO) of P&G stated:

“It's our version of open innovation: the practice of accessing externally developed intellectual property in your own business and allowing your internally developed assets and know-how to be used by others⁵”.

According to Osterwalder and Pigneur, in order to link internal R&D activities and external partnerships, P&G built three steps into its business model to succeed: technology entrepreneurs, Internet platforms, and retirees.

Technology entrepreneurs are senior experts from P&G who constantly develop relationships with partners such as universities and other companies. They also look for new solutions from the outside to bring them into the internal culture of P&G.

Internet platforms, instead, are the mean to connect P&G with expert problem-solvers all over the world. Internet Platforms allow P&G to address some of its research problems to external partners (scientists or researchers), who earn cash for developing new innovative solutions.

P&G solicits retirees to use their knowledge through YourEncore.com. This platform is an example of open innovation, launched by P&G explicitly to connect itself with the outside world, seeking out unique solutions and outstanding results.

⁵ Source: www.pg.com

CHAPTER THREE

Sharing as a Modality of Social Production

3.1 Assigning a New Meaning to the Business Models

The business exists to create and exploit opportunities and stems from a specific need. The origin of any business is related to the ability of satisfying customers. A good is functional and beneficial when it is produced and used to satisfy a specific demand.

In a diversified world, capitalist production offers a system of social security and wealth. In this situation the market is defined as the perfect match between supply and demand. In perfect circumstances, price and hierarchy mechanisms will always find individuals that are willing to pay for every good produced.

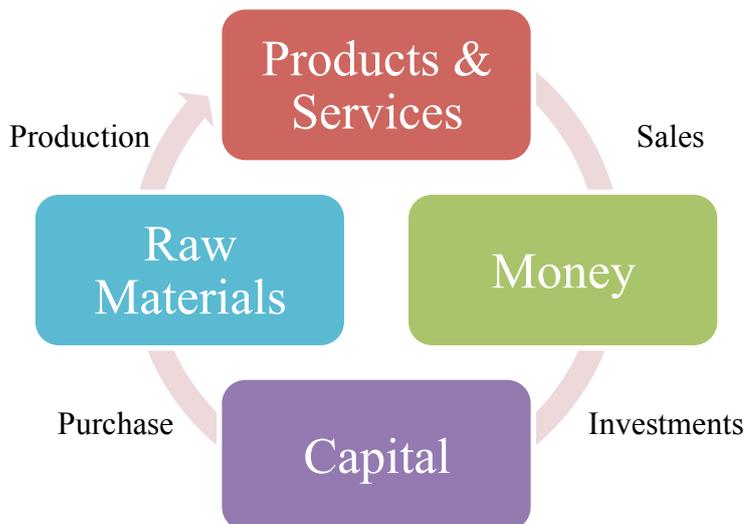
The traditional business models that were developed during the industrial era showed an endless and intense use of capital. These companies built long-term production plans to return the initial large amount of capital invested. They assumed that the traditional models of production would make back the funds needed to cover the initial investments made. Having activated a capital-intensive program, the business created wealth and value for the society where economies of scale and scope were substantial.

Economic growth in many developing countries such as Brazil, China, India, and Russia has expanded the demand side and the requests for goods and services. This growth has hidden the problem of distribution. For now these companies continue to benefit from economies of scale, but the problem will need to be addressed in the future. Growing markets and decentralised activities have created an overproduction of goods and services that struggle to be sold quickly. In the Industrial Production Model (IPM), economies of scale can lower the costs if people are willing to pay for the goods made. The economic crisis demonstrated how many investments in certain assets did not return capital at the rate expected. Individuals were reluctant to buy and this indicated less rotation in current goods and a lower ability to return on capital over short periods. The economy therefore suffered the large differences that were created between supply

and demand in the market. Company produced goods at a rate that exceeded the potential demand.

For example, car manufacturers in the traditional model are only efficient⁶ if they produce cars at the volume necessary to match their potential demand. This model maximizes revenues and minimizes costs in an economy created by perfect circumstances, but in the real economy there are various factors that influence the system. Competition and uncertainty, for instance, make efficient production hard to determine. If car manufacturers over produce and do not sell at the necessary volume every day, a lot of products remain unsold and therefore increase inventories and warehouse storage costs. In addition, without being able to sell the product efficiently, the large amount of capital invested is lost over time as the value of the product decreases. In this scenario, capital is stuck in a slow circulation where products are stored in warehouses and production is therefore ineffective.

Figure 16. The Industrial Production Model



The solution adopted in the 20th century was focused on reducing the product life cycle. The goal was to make products less used and less secure and resistant so that people could easily throw the old product away and buy a new one. This idea that products are designed to have a short life and be replaced is called planned obsolescence.

⁶ “Efficiency is an important attribute because all inputs are scarce. Time, money and raw materials are limited, so it makes sense to try to conserve them while maintaining an acceptable level of output or a general production level”. Source: www.investopedia.com.

Organisations had realised that durable and safe products were a bad business idea because the aim of any business had to force people to buy products frequently. The reduced product life cycle created an impulse for buying more frequently even if customer needs were already met.

Besides this, other forces such as advertising and credit manipulated the endless “hyper-consumerism”. According to Rushkoff an average person sees more than three thousand advertisements per day [Rushkoff, 2009]. People have become addicted to the ‘new’ and they have embraced the impulse of always buying more. Moreover, using credit cards over cash leave individuals with less money in the end and bring them to spend more. Experiments have shown that because using credit cards is faster and easier, card consumers tend to spend more than their financial capable of [Prelec & Simester, 2001]. Botsman and Rogers in “*What’s mine is yours*” [2010] describe that society in the last 50 years has allowed individuals to live far beyond their financial and ecological means. In this scenario companies no longer build their business model on the number of products sold every day. They need to find alternative ways to use and exploit resources, goods and capital.

Today, the economic situation has made people more aware about their preferences and how to access to them. Business models have developed new approaches where no initial investments are required. The value for society is activated through repetitive and effective transactions enabled by users. These models make monetary circulation faster, instant, and successful. They use the existing capital available on the market and transform it into value through many interactions. Robert Putman, professor at Harvard University defines *social capital* as the trust, norms, and networks that can improve the efficiency of society by facilitating coordinated actions [Brewer, 2003]. Generalised norms and trust foster reciprocity among people and create new ways of interaction: fast, easy and efficient.

Individuals’ interactions facilitate companies to exploit significant business opportunities to form deep-seated relationships with customers and manage their warehouses more efficiently. In addition, these new models are based on units of usage instead of the amount of units sold, and one product can be used by numerous individuals without the need to produce it many times.

The 21st century presents a function or service economy [Stahel, 1997], where new business models redefine their architecture from being product sellers to being service providers. The core business is focused on selling the function their products provide. In this new context company responsibility does not end when the good is assembled or sold, but instead it is responsible for the entire life cycle. Anderson in one of his TED talks called this system *cyclical capitalism*. He explained how companies that offer products with extended life cycles can build additional services and communicate closer with their customers, making the business model profitable [Anderson, 2009].

Botsman and Rogers called this trend *Collaborative Consumption*, which is reinforced by reputation, community, and shared access. Axelrod, professor at the University of Michigan, indicates that individuals cooperate for the promise of retaining a long-term relationship that could last endlessly, called *the shadow of the future*. Reputation is fundamental in designing a system that encourages trust and responsibility. Reputation systems are becoming common: iTunes and Netflix use star rating, while TripAdvisor and Amazon operate with writer reviews. These systems help users to be honest and loyal with the tendency to create good behaviour in the present.

Figure 17. Collaborative Consumption



Source: Botsman & Rogers, 2010

Moreover, the Internet eliminates world inefficiencies by enabling different distribution parties to connect instantly on a global scale. Zopa is a social lending company, which allows individuals to lend and borrow money they do not need at the moment. It is an

example of a community where members organise endless web-based relationships to exchange currencies made on shared interests.

Collaborative consumption gives direct access to goods without the hassle of owning them. Sharing is more convenient, easy and more secure than ownership. Car sharing services provide instant access to vehicles and their digital platforms allow members to obtain cars when they need them without the inconvenience of availability and long distances.

These new online models operate with transactions. Transactions are the unit of analysis of any Internet-based network. They help to deeply understand how much economic value circulates and how fast it moves in an adopted model. In the traditional production model this circulation is far less developed. Highly capital-intensive investments make for a “stuck” economy and unsold products. New business models, instead, use the capital already available in the market in order to better utilize resources and goods, paying back investments more efficiently.

Transactions are the tools that make the business model work. Supply and demand will match themselves through instantaneous mass synchronization and money will circulate more quickly and in turn they will remunerate the capital more efficiently.

3.2 Social Production

The idea behind Social Production (SP) is that some things are better utilized if shared. The term social production has been used by Yochai Benkler [2005] to describe a model that is built more on social relations and the principles of sharing than prices, firms and bureaucracies to mobilize and allocate resources. Benkler argued that social sharing is a crucial mode of economic production in this new context grounded in the Internet and Communication Technology. It allows for lower capital investments and decentralized production based on social relations instead of markets or hierarchies. This new technological society is now developing innovative activities exploited under individual control that enable people to search for opportunities more easily.

The movement “makers” refers to individuals, who want to make their own products through sharing platforms. In a TED talk, Massimo Banzi, co-founder of Arduino, an open source hardware and software, explained how “makers” are spreading across the globe. Technology allows people to more easily express their creativity; they are freer

and more independent than ever before. He claims that this is the reason why people are drawn to using Arduino. At this point anyone could create his or her own product [Banzi, 2012]. He showed, for instance, how to create a satellite in less than 8 months.

In this way also SP may be addressed as a potential source of welfare. All that is needed is to recognize how social practises can be efficient and more viable substitutes for markets, firms, and bureaucracies. The solution may recognize the relative importance of sharing as a significant economic approach. In fact, the economy today is facing a great challenge: systems that are built on price-based and hierarchy-based platforms are undermining productivity as well as economies and societies. If it is true that these old, traditional systems can no longer be sustainable in a changed era where information and technological communications reign supreme, the social sharing mode of production may be the answer to systematically resolve failing policy choices.

Today traditional models are highly unlikely to be sustainable. Recession and slow growth have increased competition and decreased the potential demand for goods and services. IPM investments are not yet repaid, economies of scale are not working as expected, and capital is flowing slowly due to capital-intensive plans. In this situation, the market is not matching potential demand timely.

The problem was partially overcome by manufacturing products less resilient. The focus of this business model was simply selling to greater amount of products. A laptop computer or television will become obsolete and disposable faster so that customers are willing to buy a new one. The common trend is well-described by Lisa Gansky as “planned obsolescence” or throw-away culture:

“—Products designed with the expectation that they will have a short life and be replaced—has ruled the day” [Gansky, 2010].

This culture was reinforced by a change in the preferences and needs of individuals. In the past people were entirely satisfied with standardized products such as a black car with identical features (Ford T). Since then people have changed; they want to be more different, want to leave their mark, own personalized things and distinguish themselves from the mass. This concept has brought products to be thrown away more quickly and has enabled shorter product life cycles to maintain production systems efficient.

Yochai Benkler argues that “shareable goods” with inherent excess of capacity (i.e. cars, bikes, and rooms) might be better consumed through social practises than secondary price-based markets. He declares that “shareable goods” are necessary in order to adequately make social sharing and the exchange of material goods feasible in the overall blend of production and economy. Social sharing and exchange are becoming a common mode of production. Information, culture, education, computation, and communication sectors are examples of the most advanced economies where the concept of sharing has been addressed.

“I suggest that the highly distributed capital structure of contemporary communications and computation systems is largely responsible for the increased salience of social sharing as a modality of economic production in those environments” [Y. Benkler, 2010].

In social production the investments are small, capital is initially low and circulates faster through many users’ transactions.

Capital is still necessary to optimise day-to day operations, and the usage of the product or service made by users enables the business to run safe and steady. SP models enable multiple transactions and interactions with customers.

Capital is flowing faster because each transaction runs many times within the network. In addition, with social production the product life cycle is longer because companies can design products and services that are more durable, efficient, functional, and attractive. Social production requires products that can support repeated use and that are easy to use and functional.

In this new business model, products are simply shared and the information about them flows consistently. The logic of buying a new product when the old one is not functioning any longer has totally changed. Lisa Gansky called this sharing business “the Mesh”, which she defined as an interlaced structure in which customers have more choices, tools, information, and power for making choices [Gansky, 2010].

Mesh design completely reversed the throwaway culture. This dynamic has already been developed in some so-called “green designs”, and in few economic and policy reforms that encourage to resolve obsolescence and waste problems. The challenge at

this stage is how to regain value from all the different types of waste, such as cars, laptops, and clothes that go unused.

In the traditional industrial production model, value unused is equal to waste, whereas in the social production model waste or products unused are considered value. Repairing, upgrading, and “up-cycling” products at the end of their life, is beneficial in social production. The Mesh design offers durable, secure, and longer lasting products that can also be personalized, while encouraging a culture of repair and reuse. This also generates a sustainable culture where the design itself reduces the destruction and exploitation of natural resources, while decreasing costs and improving the efficiency of the overall business model structure.

Durable, functional, and efficient products are less likely to break or fail because building safe products help to maintain strong customer relationships based on trust and loyalty. In addition, the cost of any shared good is split over transactions and people; so better designed products are always a competitive advantage for any business model in the mesh context.

Table 3. Industrial Production vs. Social Production

	Industrial Production (IP)	Social Production (SP)
Capital (C)	High-intensive investments Long term prospective	Low-intensive investments Real time prospective
Working Capital (WC)	Low (capital is working slowly)	High (many transactions make capital working faster)
Product Life Cycle (PLC)	Low (throwaway products)	High (durable and safe products)

Mesh businesses collect information from contributing consumers, so they may know which products are resilient and function well in the sharing system. Also, they are

likely to anticipate and evaluate potential problems that could occur during the product life cycle.

Zipcar collects important information through its web platform, knowing exactly how many miles and for how long the consumer drove, as well as which directions they took. This information is useful to address and solve potential problems that may occur to the car during the journey. Through mobile devices, GPS, and the Web, Zipcar is able to track vehicles and know in real time what if something has happened and if immediate maintenance is required.

3.3 The New Era of Business is Sharing

The dominant mind-set of complete ownership has constrained business ideas for quite some time. Individuals, today work harder to acquire more goods, but they feel unsatisfied because there are new and better things emerging faster than ever before.

In the 20th century, the principles of ownership shaped people into the *more we have more we want* motto. Criticising economic growth, Mishan, an English economist, coined the phrase *margin of discontent* to explain the distance between what individuals have and what individuals want [Mishan, 1967].

Nonetheless, particularly in the United States people have started seeing collaborative consumption and sharing as common things. Bikes, cars, and taxis as well as hotel rooms and apartments are going to be commonly shared in the very near future if they are not already. Businesses such as Netflix or Zipcar have already understood the importance of providing goods that can be shared to customers. The convenient access to shareable goods allows these companies to easily built trust and loyalty with their customers while maintaining profits at a maximum.

A new era of sharing-based platforms has just begun. These new share-based businesses are supported and sustained by social media and information technologies. Using mobile networks and the Web, new businesses can immediately provide relevant and customized content to costumers with ease. Booking a hotel room, searching for the location of a nearby restaurant, or sitting in the lobby comparing prices and reading reviews all with one, small handheld device is now realistic. Moreover, individuals can make reservations or negotiate deals using their mobile phones from the comfort of their own home.

Web 2.0 transformed users into creators of content. Internet-based platforms have changed the traditional ways of making business connections, social networking, and community building. As the Internet will surely become the absolute fundamental economic instrument in the world, all active devices will be participants in the future providing personalized content and preferred goods to individuals. Services will be ubiquitous and seamless connectivity over multiple devices will be the norm.

For example, a family who likes pizza can order it directly on their mobile devices. The family might send an instant message to the selected restaurant and ask to receive the food they have ordered exactly at the time when they all arrive home. This will save them time. On the other hand the pizza restaurant will receive the order on their platform and deliver the family's pizza exactly at the time desired, checking the location through a GPS system. Furthermore, Internet-based platforms can use information about customer locations and preferences to offer particular discounts or promotions for products or services that are relevant to that specific family/household. Examples include family reductions to local attractions or movie rental flyers, both directly downloaded to the mobile devices. A hotel's mobile application may offer customers a bar code that provides discounts for related relevant content such as free drinks, rental movies or apparel sales. This mobile revolution called Web 3.0 may cause different sectors and industries such as publishing, banking, music, and movies to rapidly face a massive change. GPS-enabled mobile phones can connect people to the things they want exactly where and when they want them.

These interlaced businesses are based on sharing networks rather than ownership: the central strategy is focused on selling the same product multiple times (repairing, upgrading, and recycling it). In this way no waste is embedded in the economy, products are durable, safe, efficient and functional, and companies are making profits while building trust and loyalty [Gansky, 2010]. This trust is translated into multiple opportunities for additional sales, spreading brand awareness or for deepening relationship with customers. The sharing-based businesses do not sell products to one owner with only one transaction at a time; conversely they are offering products that are shared many times between customers and various transactions. Sharing introduces two essential changes for the consumer: an incredible improvement in services and a decrease in personal costs.

The so-called Mesh business is having a great success. The growth of the Internet, social media, and mobile networks has enabled new businesses to use data for delivering products and services at the right time and location, conveniently when people desire them. According to Lisa Gansky Mesh businesses have four features in common:

1. The central offering is based on products or services that can be **shared**;
2. The use of **Web infrastructure and mobile data networks** to track goods and utilize product information;
3. The attention is driven on **physical goods** so that when you share them over and over, you are making them valued and relevant;
4. **Social network services** help companies to quickly transmit news, offerings or recommendations that spread more easily than word of mouth.

In this network, there is no hub and spoke connection. All nodes are connected to each other in any direction within the system. The entire system will drop if one node is inaccurate because each part is moving together in the network. A new era of information-based services has emerged by which people are connected in endless ways. Companies are creating connections to new costumers, third parties via social media to facilitate access and share information.

The Web has disrupted thousands of industries, sectors, and businesses changing the course of events and many companies have been forced to adapt or die. Many traditional industries and brands are struggling to find a solid foundation in being sustainable in this ever-changing world. On the other hand companies like Amazon, Google, and Facebook have thrived during these changes and have become the biggest online platforms, taking over millions of users and subscribers. Further examples of technological products altering traditional businesses are the Kindle and the iPod, having disrupted the book publishing industry and totally changing the music industry respectively.

New share-based businesses have no ownership rights and instead of buying physical goods, assets or raw materials they merely exchange them with someone else they do

not know directly. This enables repetitive interactions with various users on a global scale, making each product valuable and relevant.

However, these businesses require an effective business model based on users and transactions that will be sustainable and furthermore, profitable over time. Bike sharing, carpooling, home exchanges, and fashion swaps are all innovative business models, but are these ideas economically profitable if adequately shared?

Available infrastructures such as telecommunication, mobile data network, social network and the Web itself are sources of value for the society. Thus, information, products, and services shared through these systems and many transactions may increase exponentially the value of the network. Moreover, opportunities exploited increase the number of users and employ resources more efficiently than before.

Frequently people have at their disposal things they never or occasionally use. They have entire ownership of the good, but use it only in rare situations. How much waste in money, time and space can be found in a second car that sits in the drive or in a wedding dress that stays hung in the closet?

In many sectors the importance of ownership is diminishing and sharing is becoming much more easy-to-use, instant, safe and convenient. Moreover, businesses are taking advantage of this system too, because they may exploit idle capacity or excess of resources to make money. With integrated technology-based platforms physical products are shared among the automated coordination of users.

A common example of idle capacity is transportation, in particular car sharing. Vehicles on average are unused for twenty-three hours of the day [Botsman & Rogers, 2010] and sometimes the car is even inefficiently used. Through a car-sharing service like Zipcar, Americans are saving on average 400-600 dollars monthly on insurance, maintenance, and fuels. In addition statistics show a decrease of driving down 47% after joining carpooling services and a save of approximately 20,000 pounds of carbon dioxide emissions every day [Gansky, 2010]. However beneficial sharing may be, not everything has yet the opportunity to be shared.

In the new context, there are principally five global drivers that encouraged the development of share-based businesses:

1. **Global recession** – the current economic crisis has created distrust in old models, brands and awareness around purchasing decisions forcing people to reconsider their attitudes and preferences. Thus giving more attention to new products and brands.
2. **Community** – people are making a discussion about their lives and what is valuable to them, encouraging other forms of interactions that are more practical than solely consumerist.
3. **Environmental concerns** – the global population is expanding while on the other hand natural resources such as water and oil are shrinking. The world will eventually exploit all the resources it has and people will have to do a more efficient job at sharing what they have.
4. **Urban density** – the concentration of urban populations has allowed many businesses to offer a greater variety of products and services such as bike or car sharing where people nearby can take advantage of them.
5. **Technology** – Web and mobile networks play a critical role in connecting people around the world and offer them better, convenient and customized services.

The Zipcar case study in chapter four will introduce how its business model works by using available resources efficiently and how it creates a community driven by environmental and social business practises.

3.4 Network Effect through Transactions

The 20th century was characterised by physical products, individual ownership, and self-identity [Botsman & Rogers, 2010]. Individuals fulfilled their needs and preferences through unrestrained shopping and always collecting more and more goods. Hyper-consumption was driven by two factors: the belief that money and accumulation of products would create happiness and that this system was the common result of modern life.

Certainly, the purpose of ownership is not merely having the possession of goods, but it is also what those goods represent. In 1950 individuals acquired a certain status or symbol by owning products that demonstrated their social standing in society. Certain

goods were associated with wealth, fashion, smartness and beauty, while sharing was considered foolish, irrelevant, and for poor people [Gansky, 2010].

Today, the ownership model is facing a radical evolution. Global recession and scarcity of resources have brought individuals to being more practical and starting to share products and services.

The cost of each product is spread over many transactions and individuals. This enables people to benefit from the usage of the product without sustaining its overall cost. This also allows for higher quality products to be purchased, because the purchase price does not need to be covered by only one individual. For many people maintaining and repairing their vehicles is inconvenient and consumes too much money, time and space. Zipcar maintenance and repair service is arranged once every week and helps members to be rid of that inconvenience.

Furthermore, sharing allows the use of abundant information to personalize products and services. A mobile application programmed through a wireless connection may open shared cars and adjust members' car settings. Radio station, seats, GPS navigation routes and air conditioning may be modified according to their selected preferences.

The crisis has changed people's attitudes and has forced many of them to think about what is really important to them in their life. [According to the Kauffman Foundation, approximately half of the companies on Inc. magazine's 2008 list of fastest-growing companies were founded in a recession. Many people responded to this re-evaluating their ownerships such as bikes, cars, clothes and houses... Something is not clear here] A study by Kelton Research shows that 56 per cent of Americans see recession as an opportunity to live a less materialistic life [Gansky, 2010].

Individuals are now more open to sharing and the psychology and culture of ownership are in transition. For example in a recent study from the U.S. Department of Transportation, the attitudes of young people toward car ownership are changing considerably. Certainly ownership will not become entirely outdated in the near future, but many people may decide to skip the option of possession in favour of the potential to use better quality goods if they are easily and conveniently accessible.

Another reason in favour of sharing refers to climate change. Throwaway economy contributes dramatically to climate change. The overproduction is creating waste and pollution that the world is no longer able to sustain. One solution may be to

manufacture goods closer to home, but the primary choice should simply be to produce less, more attentively designed products and use them efficiently.

The economic crisis of 2008 has brought many people to distrust old companies, which many of them, for example, dishonestly underlined their assets and covered the liabilities. Lehman Brothers, Merrill Lynch, and Goldman Sachs are some examples of companies that mislead customers and paid executives huge bonuses instead of helping people to overcome the crisis. This has created a huge gap between individuals and old, traditional companies. It has also encouraged people to reconsider their needs such as the brands they purchase and their overall lifestyle choices.

Moreover, ownership requires possession and exclusivity of products and services. Interaction with customers is a one-to-one relationship that ends in the instant of acquisition. In the ownership model transactions are one-time with no post-relationship support and further transactions are not necessary until customers buy a new product or service.

On the other hand, sharing models offers no exclusivity of goods; instead they provide instant access to goods and individuals can simply exchange them. Interactions with customers are ongoing. Users, who access the shared product or service, continually generate transactions. In the sharing model transactions are recurring, with post-relationship support and endless value proposition delivery.

However, sharing does not exclude uniqueness. In the car sharing business Zipcar creates a membership community called “Zipsters” where customers are driving and having the same experience as if they owned the vehicle. Zipcar built foundational relationship with customers, aiming to always keep them satisfied with their experience. Developing a trustworthy platform is essential for any sharing business to be successful and increase membership.

Certainly not every single product can be shared. It is much easier to share products that are expensive and occasionally used. For example a Rolex or a Ferrari are much more likely to be shared than a toothbrush or razorblade.

The amount of transactions easily exchanged for each product allows companies to exploit information and data more than ever before. This new information and network infrastructure is now changing communication: no one is moving around the world

without mobile coverage and people are becoming very comfortable with the idea of always having mobile device on and being connected to the Web.

The greater number of transactions produced enable more precise information and data for all parties. The velocity and quantity of transactions generated require a sharing platform and an information infrastructure that takes advantage of all networks: mobile, Web, and social. Each transaction is an opportunity to obtain essential information about customers. The advantage of sharing platforms is that they constantly generate superior products, experiences, and partnerships.

Every time customers are satisfied with the product or service delivered, businesses create more opportunities to gather essential information to adapt and personalize their offers. These collections of information allow companies to better serve customers, offering them more relevant and appropriate solutions. By linking Web, mobile and social networks the offers can be tailored for each customer and delivered in real time.

Zipcar, the carpooling service company, collects information such as routes taken, miles driven, and destinations chosen to help them provide a better car experience. A member who is using Zipcar to bring his children to school stops at the bakery to buy bread every morning. This knowledge provides Zipcar with essential information to build partnerships with the bakery and customize an offer to the customer.

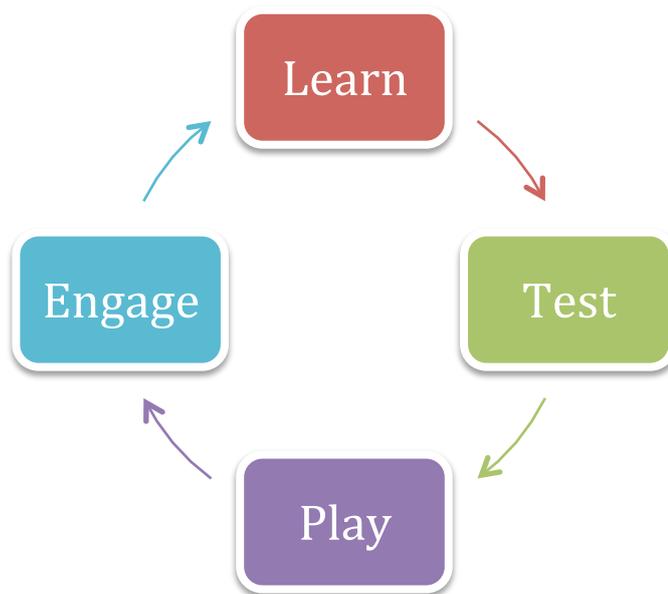
With the transactions that Zipcar is able to gather over time the service becomes enhanced and loyalty increases with members.

A car manufacturer has a short time to interact with customers. Normally the relationship is developed around the purchase of the car and then they may not see the customer again until its time to buy a new car. Whereas in a car-sharing service each transaction is an opportunity to continually develop superior relationships with customers. The number of transactions over time will be many times greater in comparison to car manufacturers. Zipcar offers different cars located in different part of the city. Its Web site helps members to choose a favourite car remotely and provides related offers or promotions during low-use periods.

Shared businesses can better understand how to satisfy customer needs and enhance their life experiences. Lisa Gansky called this the “virtuous circle of trust” where trust in the brand helps companies to increase their partners and expand their reach to customers. In turn, businesses are able to rapidly and repeatedly interact with customers

and their network of friends and families. They can learn more about people, their preferences, needs, and actions while offering customized products or services and delivering them timely. When an offer is added to an existing range of products, new customers can test it before buying, becoming early adopters of a company's market product lines.

Figure 18. The Virtuous Cycle of Trust



Source: Lisa Gansky, 2010

This network effect is essential to expand any Internet-based business and disrupt established markets.

James Reinhart and two of his friends Oliver Lubin and Chris Homer launched the Web-based company ThredUP to exchange adult clothes. The idea behind this company was to conveniently swap clothes for people that do not have time to go shopping and buy new items. The value of clothing was precisely defined by brand, size, and current condition. Within a year of launching, the company's membership increased rapidly. Members were satisfied (80 percent of them said that they received better clothes) and after repeated transactions with customers the founders understood that there was a greater opportunity in swapping kids clothing. According to the U.S. Agriculture Department and a ThredUP survey of 412 mothers, the average American by the age of 17 has spent approximately \$14,300 on clothes and utilized about 1,300 items [Winter,

2011]. ThredUP renovated its Web Site and re-launched as a kids swapping service in April 2010. Members package around 15 items in a box and then list the contents online by size, brand, gender, and style. Other members can purchase the box for only \$5, plus the cost of shipping [Moran, 2011]. Furthermore for \$30 a year they can also become premium members with advanced access to newly posted boxes. Reinhart valued that users approximately save \$50 per box by exchanging rather than buying second-hand clothes.

Today about 200,000 American mothers have joined ThredUP. The company obtained a second round of funding and have international expansion plans in mind [Winter, 2011].

CHAPTER FOUR

The Zipcar Inc. Case Study

4.1 Zipcar Inc.

This last chapter analyses the case study of Zipcar Inc. The car sharing company is the market leader in the carpooling industry, concentrated in North America and Europe as its main markets. The Business Model Canvas and the Business Model Patterns will be used in order to understand the rationale behind the successful Zipcar formula. Accordingly, the balance sheet and income statement of 2011 will be presented to highlight some indicators and give insight into the success of its business model.

The Zipcar company is based in Boston, Massachusetts, USA and was founded by Robin Chase and Antje Danielson in 2000. The idea behind Zipcar is seemingly sophisticated, but has proven to rather simple and highly innovative. In September 1999 after a trip to Germany, Danielson returned to the U.S. impressed by a car-sharing concept that seemed to be successful across Europe. The European concept delivered short term, on-demand use of cars that were strategically located and easily accessible to members. The founders of Zipcar believed this business could be equally successful in urban areas in the United States [Hart, 2005].

Today Zipcar offers a car sharing service to over 732,000 members and it is the world's leading carpooling company in the market. Providing "wheels when you want them" and operating in 17 major urban areas and on 250 college campuses found across the United States, Canada, the United Kingdom, and Spain. Each member, called a Zipster, has access to the self-service car sharing system. Cars can be reserved by the hour or on a daily rate and are strategically located across the cities, found in neighbourhood parking lots and close to popular central locations. The cost of membership includes access to reserve a vehicle, gas, insurance, and other maintenance fees. [Mortimer, 2010]. The business is working in four steps:

Join – Users who decide to join the company have to sign up at zipcar.com and choose from several subscription offers. The new member will receive a Zipcard within few days.

Reserve – Members are able to make a reservation by going online or calling over the phone. A Zipster chooses a specific car at the most convenient location for them and reserves it for a particular period of time. When the reservation is made a signal is sent to the selected vehicle by a wireless connection.

Unlock – The technological Zipcard that each member owns enables him or her to unlock the doors of their reserved car from the selected location. The member's unique card recognizes the reservation and unlocks doors. No keys are needed because they are attached in the car.

Drive – Members drive their Zipcar as needed and at the end of the trip they return the vehicles to the designated parking lot, locking the doors with their Zipcard.

Figure 19. The Zipcar Brand



4.2 Overview

Zipcar offers a simple and convenient service setting the stage for a new world of urban mobility and is building momentum toward a smart transportation system that is far from the idea of car ownership that exists today. This deliberate shift will dramatically reduce transportation spending, making urban life smarter and more environmentally sustainable. Car ownership is no longer necessary nor sustainable or economic for drivers. Cars are unused 90% of the time, taking up space and wasting money.

According to Zipcar the estimated annual approximate cost that goes into car ownership is \$10,000, which is equal to 19% of an average household income [Zipcar, 2011]. Furthermore, according to the United Nations, more and more people are moving into urban areas: over 50 percent of the world's population lived in cities in 2010 and the percentage is growing, estimated to reach 59 percent within the next 20 years.

Regulators and Governments have understood that the world is changing and that they need to provide alternatives in order to build an effective transportation system for residents. They should also have the goal of making urban living easier and more affordable while saving the environment by utilizing left over resources. According to the Federal Highway Commission, a trend was confirmed that drivers drive less than in the past (12 per cent fewer miles in 2009 than in 1995) and in 2008 only 46 per cent of potential drivers had licences to drive compared to 64 per cent only 10 years before.

In short, Zipcar's value proposition offers an easy-to-use car sharing service where members have immediate access to a broad network of vehicles without supporting the costs of ownership. In addition Zipcar estimated members' savings to around 575 dollars per month [Hart, 2005].

Zipcars uses a proprietary technology platform that is able to manage complex interactions in real time as well as control location-based activities due to large-scale operations. This new technology platform supports a fully integrated set of activities such as applications, consumptions, reservations, wireless access, fleet management, and member management allowing Zipcar to collect and analyse a large amount of information in order to provide members an enhanced experience. Furthermore, the company offers the opportunity to reserve a Zipcar by mobile devices (iPhone or Android) or through the Facebook application. In addition to making reservations the Web site can be used to update, change or extend members' reservations. In 2011, 13 million reservations were made through the Zipcar technology system [Zipcar, 2011].

In the early stages the operations were located in three main area: Boston, New York and Washington D.C. Afterward, the company developed and grew into other car sharing markets such as San Francisco, Los Angeles, Chicago, Baltimore, Providence, Toronto, Vancouver, and London. A merger with Flexcar in 2007 expanded the geographic area to include Seattle, Portland, Atlanta, Philadelphia, and Pittsburgh.

With the acquisition of Streetcar in April 2010, Zipcar also expanded its operations in the United Kingdom, making London its European centre of operations and management. In February 2012, the company also bought a majority interest in Avancar, the largest car sharing service in Spain.

Today Zipcar is activated in 17 major metropolitan areas and is still growing. The company continues to extend the car-sharing concept and increase awareness and approval over international markets.

The company estimated that over 10 million people working or living in urban areas are of driving age. This encourages Zipcar to believe that members who join the service are likely to increase in the future. At the end of 2011 Zipcar achieved an astounding 673,000 members, 13 million reservations, 100 million hours and 600 million miles driven [Zipcar, 2011]. The customer target is focused on enhancing current member relationships, but is also focused on expanding partnerships with university campuses, business organizations, and governments.

4.3 The Zipcar's Building Blocks

The Zipcar business model provides members with self-service access to vehicles. The business model structure is built with different basic building blocks. The combination of all the blocks shows the rationale behind the company's profitable and effective business model over an Internet-based perspective.

4.3.1 Customer Segments

Car sharing services are challenging the entire concept of ownership: instead of buying cars individuals share vehicles when they need them without supporting all costs and expenses related to possession. Toyota and Ford have already started taking the opportunity to work with Zipcar and testing new vehicles explicitly designed for shared markets.

Bill Ford, Ford's executive chairman, said:

“The future of transportation will be a blend of things like Zipcar, public transportation, and private car ownership... Not only do I not fear that, but I think it's a great

opportunity for us to participate in the changing nature of car ownership.” [Keegan, 2009]

Zipcar is targeting four main segments in urban areas: residents who do not own cars, residents who own cars, college and university students, faculty and other community residents or businesses and government agencies.

Residents who do not own a car rely on public transportation systems. This implies that the more efficient the public infrastructure is, the more satisfied the city dwellers would be. Nonetheless, public transportation does not address all residents’ needs. For example, the desired destination may not be nearby the scheduled route of a bus or tube and often emergencies do not match appropriately with the timetables of public transportation, raising unexpected delays and problems. Sometimes errands require heavy cargo and shipment (i.e. buying furniture or going to the grocery store) that are not suitable with taxis or buses. Local public transport is not always functional for trips to the beach or holidays with friends and family. Traditional rental car services may satisfy these needs, but this requires time-consuming procedures and rental commitment (people who rent a car daily or weekly have to return the car back to the same place, which could be inconveniently located).

Zipcar provides a service in order to address all these challenges that public transportation, taxis, or car rental companies were not able to solve. Members can easily take their selected car from the neighbourhood lot, unlock the doors with a magnetic card and drive away up to 180 miles with fuel, insurance, and maintenance included.

Residents who own cars face many expenses. The cost of owning a car within cities is expensive, approximately around \$8,000 annually including fuel, taxes, insurance, parking, and maintenance [Keegan, 2009]. Furthermore, a car is sitting idle for the majority of the time and in urban areas car owners can often struggle to find parking garages located near their apartments. When possible, residents seek to park their cars on streets. This generally requires a permit or a daily parking ticket. In addition, the seasonal problems (i.e. rain or snow) can cause damage and cars left unattended are vulnerable to theft, making parking cars on the street insecure and inconvenient. Moreover, just because you own a car, does make it appropriate for the needs that users

have. For example, a large truck would be useful to move furniture from one location to another and thus adding an additional expense on top of owning a car.

Zipcar faces all these challenges offering a “wheels when you want them” service. Cars are located in well-situated parking lots and members take them when they are needed without paying any additional fees. In addition, members reserve specific car models based on the availability in the selected location. A BMW may be reserved for a romantic dinner, while a Toyota Prius may be selected for a long distance trip to the mountains.

College and university students encounter various challenges during the ride to school. Public spaces in campus areas are very limited and university communities discourage students from parking cars on campus because they increase congestion even if transportation alternatives are often restricted.

Zipcar is located on over 250 college and university campuses, providing an important service for students, faculty, staff and local residents. In some cases Zipcar is the only transportation system available due to the age restrictions policy that car rental companies have.

Businesses and government agencies located in urban areas need to provide a service to their employees for transportation alternatives such as meetings or conferences. Public transportation is not appropriate for this purpose and car ownership is too expensive. In addition, the costs of insurance, parking, fuels, maintenance and cleaning are inconvenient and impractical for companies and governments.

Zipcar offers special programs to these parties, matching their needs and saving them money with solutions that are environmentally sustainable and reduce requests for parking spaces. Zipcar provides low-price membership fees and weekday driving rates to employees, businesses, federal agencies and local governments that support the company and its ideas.

Zipcar also offers organisations a fleet management solution called FastFleet. Through this service Zipcar licences its technology and software to other companies for managing their fleets of vehicles.

In this way organisations better control and manage their fleets efficiently and reduce the costs of monitoring and administering.

4.3.2 Value Propositions

In a world of urban mobility, Zipcar is the future of sharing where the rate of members that share cars overcomes the rate of car ownerships in major cities around the planet [Zipcar, 2011]. To achieve this challenge, Zipcar must customize their offerings to growing new markets with convenient and simple solutions that provide economical and affordable vehicle availability.

Zipcar offers its compelling “wheels when you want them” value proposition, which provides on-demand, self-serve instant access to an arrangement of vehicles without supporting the costs of ownership. In addition, joining Zipcar saves members an average of \$575 per month with significant environmental benefits.

According to European studies every Zipcar would eliminate the need for approximately 20 individually owned vehicles in the marketplace [Keegan, 2009]. Members report that they reduced their miles travelled by 44 percent by making smart transportation choices. According to Susan Shaheen of the University of California at Berkeley, CO₂ emissions dropped by up to 50 per cent per user. This relies on a mix of solutions including Zipcar, walking, taxis, biking, and buses. The Zipcar business model has to face competition between different sectors: car ownership, rental car companies, and other car sharing service providers. A car-sharing company offers a very different service from rental car companies. Rental companies are generally focused on daily and weekly transactions for occasional travellers or short-term substitutions of cars during repairs of owned vehicles, while car-sharing companies are only concerned with the frequent short-term usage by registered members.

Hertz, Enterprise, and UHaul known best as rental car companies, have also integrated car-sharing services into their businesses. This has given them more complete offer than Zipcar, but there are still areas where they lack. Although rental car companies have entered in the car-sharing business, they do not provide a car-sharing network that includes a technology-integrated platform in order to optimize member experience, minimise costs, and leverage efficiencies. Zipcar addresses responsible urban living, financially smart consumption, and environmentally sustainable transportation.

Pricing is a critical element of precisely defining a business model. The company chose to develop an up-front annual fee and per usage fee that includes hourly or daily trips up to 180 miles.

Chase and Danielson looked at many different factors when they searched for existing business models around the world and what they learned was that many car-sharing companies have significant initiation fees (\$300-\$500). Since then, Chase also realized to compare sharing prices to rental cars prices, which are roughly \$45 a day [Hart, 2005]. Zipcar’s price structure has changed over the years due to the economic crisis, increasing gas, insurance, and maintenance expenditures. The model offers a \$25 application fee, \$50-\$70 annual fee, and \$6-\$9 per hour rates depending on the country and city that members drive in⁷. This implied an average savings of around \$575 per month (Table 4).

Table 4. The Costs of Ownership

Monthly Expenditures	Monthly Costs
Vehicle depreciation/Lease	\$270
Insurance	99
Parking	125
Gas	45
Maintenance	36
Total	\$575

Source: Hart, 2005

4.3.3 Channels

Zipcar uses a mix of different channels that are fundamentally critical to reach and retain customers and communicate its value proposition accurately. Those channels play an important role in the customer experience, raising awareness about responsible urban living, smart transportation, and environmental sustainability.

Zipcar uses a web site for reservations where members choose the vehicle they want in order to satisfy their preferences. The company system also makes it possible to reserve vehicles by iPhone, Android, and “Reserve a Zipcar” Facebook applications providing new technology solutions through which members can make, extend or change reservations. Today nearly half of reservations are made by mobile applications [Zipcar, 2011].

⁷ Source: www.zipcar.com

One of the most important channels in the Zipcar community is word of mouth. The company has established an extensive, varied and functional membership base over 732,000 people. Surveys indicate that a substantial amount of new members are recruited from existing members. The network effect is inexpensive and attractive, providing a competitive advantage over competitors.

Social media is another significant channel to provide brand awareness online. Zipcar has over 97,000 Facebook fans and over 32,000 followers on Twitter⁸. Zipcar employees log into the accounts on a daily basis and keep up to date with the social media network to monitor and manage the status of users who are posting and asking questions.

4.3.4 Customer Relationships

Customer relationships are critical to Zipcar's success. Zipcar has established a community of members where each of them feels like an important part of a big group. They principally share benefits, interests, and desires. Being a Zipster is much more than utilising an economic transportation solution: it is a sensational experience. By joining and participating in a community individuals are more economically awake, socially responsible, and committed to urban sustainable living.

Feedback from members is a cornerstone to better understand and satisfy their needs. The enhanced platform creates greater interactions and more effective relationships. For example, Zipcar has started running specific programs that allow members to reserve cars overnight or select them for an adventurous trip.

Moreover, the company has implemented a new database for established customer segments. They are aiming to develop more personalized strategies in order to maintain an accurate pricing structure, increase vehicle locations, while continuing to invest in profitable growth. The network strives to offers a wide range of products and services with customized and localized mobility solutions to increase the standard of urban and university living.

According to Nancy Rosenzweig, marketing vice president of Zipcar from 2002 to 2004, Robin Chase created a hip, urban product that attracted people who were smart and thinking out of the box. She also created Zipcar's fun and enthusiastic image for the

⁸ Source: The Zipcar's Facebook and Twitter account – 15/09/2012.

new generation of targeted drivers. Chase built a lively and cool identity, asking members to suggest cute new names for vehicles and organised community parties [Clifford, 2008].

She designed the Zipcar logo on car doors and the first vehicle was a green Volkswagen Beetle, chosen to communicate the environmentally aware image the company beloved. Over time Chase continued to create this sort of intimate relationship with members:

"Making customers feel like they have an in put and a stake in the game really makes them want you to succeed... It didn't matter if only 25 people showed up to a potluck dinner. It's the 4,000 people who think, how cool—I belong to a company that has potluck dinners" [Clifford, 2008].

In 2003 Griffith took over the company as CEO and maintained the spontaneous, warm and friendly contact with customers. Zipcar has continued to promote its business sending informal e-mails about the company's experience and organized events as the movie night in Chicago called "Drive In, Don't Drive Out," where several members left their cars and donate them to charity [Olsen, 2007].

4.3.5 Revenue Streams

As mentioned in chapter one, revenue streams depend principally on the company's ability to match customer expectations. This is a crucial indicator of how Zipcar makes profits and is sustainable. The value proposition offered by Zipcar is delivered through the Web site, mobile devices, applications, and community networks that create value.

Zipcar provides three different types of revenue streams: annual and monthly fees, usage fees, and FastFleet solutions.

Potential members apply online with an initial application form. They are charged \$25 for checking driving records and credit card information provided. This fee is a one-time, non-refundable transaction.

Annual fees are accepted and renewed over the one-year period of membership at the rate of 50-70 dollars per year depending on the cities people are driving in. In addition, Zipcar estimated the retention rate of each member to be five years [Zipcar, 2011].

Usage fees are deferred at rates approximately \$6-\$9 per hour or \$60-\$90 per day. During the early stages, the price structure was built at \$1.50 per hour and \$0.40 per

mile, but the increased costs of fleet management, gas, insurance, and maintenance have raised the usage vehicle pricing structure [Hart, 2005].

In 2008, Zipcar started to offer a fleet management solution called FastFleet. FastFleet is a service that helps organisations such as independent and corporate businesses and local, state and federal government agencies to manage their own fleet of vehicles. Zipcar charges a monthly fee to customers to have access to their on-demand Fleet Management technology.

Table 5. The Zipcar's Revenue Streams

	Years Ended December 31,			2011 Change		2010 Change	
	2011	2010	2009	\$	%	\$	%
	(amounts in thousands)						
Vehicle usage revenue	\$207,231	\$163,797	\$117,553	\$43,434	26.5%	\$46,244	39.3%
Fee revenue	34,176	22,085	13,503	12,091	54.7%	8,582	63.6%
Other revenue	242	219	126	23	10.5%	93	73.8%
Total	\$241,649	\$186,101	\$131,182	\$55,548	29.8%	\$54,919	41.9%

Source: Zipcar Annual Report 2011

Table 5 shows the revenue streams of Zipcar for vehicle usage revenue (usage fee), fee revenue (annual fee) and other revenue (fleet management solution – FastFleet). From 2010 to 2011 total revenues increased by 29.8 per cent, while in 2009 to 2010 total revenues increased by 41.9 per cent that included a 17.8% increase of Streetcar acquisition.

Vehicle usage revenues increased due to two factors: an increase in Zipcar reservations and acquisition of new members.

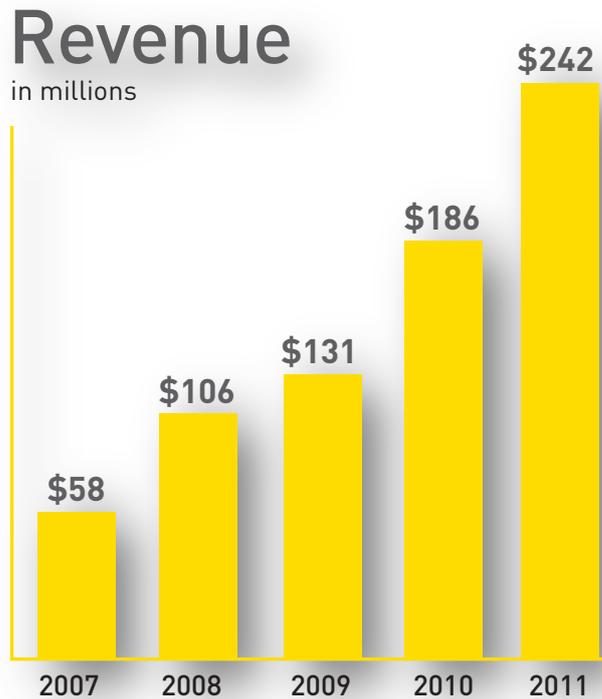
In addition, a higher pricing structure and the purchase of Streetcar in April 2010 influenced the increased revenues as well.

Fee revenue is the result of annual membership, applications and damage waiver fees⁹. In two years fee revenues increased due to a higher average membership base with higher fees and a solid contract in damage waiver solutions.

Other revenues were largely raised by Saas-based FastFleet fleet management solution.

⁹ Damage waiver is collision, theft or other damage that may occur to the car during the vehicle usage. Without optional damage coverage these costs are charged by users.

Figure 20. The Zipcar's Revenues



Source: Zipcar Annual Report 2011

Revenue per member decreased from \$429 in 2009 to \$392 in 2011, principally due to the reduction in vehicle usage revenues per member. This result is the effect of a shifting from reservations per day to reservations per hour [Zipcar, 2011].

4.3.6 Key Resources

Key resources are the resources by which the Zipcar business model works. They are the most important assets required in any business model structure. Key resources are fundamental to reach the car-sharing global market (around \$5 billion to \$10 billion) and develop compatible relationships with customers, therefore earning revenues [Kell, 2012].

Vehicles are the obvious first resource needed to develop a car sharing business. Zipcar offers a broadly located self-service fleet of vehicles and it is making significant investments in renewing, developing, and improving operations and fleet management systems. Vehicles are strategically distributed around cities; Zipcar stipulates agreements with local parking providers and municipalities. The company owns a

selection of cars such as BMW, Toyota, Volkswagen, and Ford. Every trip is a different opportunity that may require a different vehicle. From going out with friends to bringing the kids to school, or buying new furniture and bring home the groceries – there is an appropriate Zipcar for all occasions.

Table 6 shows the number of Zipcar vehicles owned, held in capital leases and in operating leases.

Table 6. The number of Vehicles held by Zipcar.

	For the Three Months Ended							
	Dec. 31, 2011	Sept. 30, 2011	June 30, 2011	March 31, 2011	Dec. 31, 2010	Sept. 30, 2010	June 30, 2010	March 31, 2010
Owned vehicles	4,429	4,592	3,684	2,424	2,011	1,692	545	113
Capital lease vehicles	1,517	1,608	1,621	1,509	1,700	1,632	1,703	586
Operating lease vehicles	2,958	3,289	4,175	4,283	4,539	5,217	6,612	5,386
Ending vehicles	8,904	9,489	9,480	8,216	8,250	8,541	8,860	6,085

Source: Zipcar Annual Report 2011

From 2010 to 2011 the Zipcar owned vehicles increased due to a new series of funding that helped the company to purchase new vehicles, while the mix of vehicles under capital lease is principally due to UK operations.

The Zipcar brand is another key resources for the company’s mission, representing the attempt to provide simple and responsible urban living. As any business, the car sharing industry relies on the important element of trust and loyalty associated with the Zipcar brand name. Zipsters, as brand ambassadors, are the advocates of the company’s success and Zipcar has won several awards as a powerful brand with a good reputation. The action as a first-mover has lead the company to be considered a smart lifestyle brand, helping people to fulfil their personal needs with pay-per-use mobility and smart consumption. Zipcar has registered “Zipcar”, “wheels when you want them” and “FastFleet” as trademarks in the United States and in other countries. Each trademark has 10 to 15 years duration, depending on country’s legislation and registration date. However, Zipcar also has a combination of trademark, trade secret, and copyright laws as well as contractual provisions with employees and third parties to protect their intellectual property rights.

Another important key resource in the car-sharing business is people. At the end of December 31, 2011, Zipcar had 496 full-time employees, which included 255 employees in fleet operations and support, 127 in sales and marketing, 46 in engineering and 68 in general and administrative operations [Zipcar, 2011]. After twelve years of car sharing business experience Zipcar obtained a mix of experts in areas such as member acquisition, member support, fleet mix, vehicle location, and key metrics management that enable the company to have a greater competitive advantage than car rental companies. The accumulation of precise car sharing data through member interactions and vehicle reservations has proven to very helpful over the years.

One of the key advantages of Zipcar is its integrated technology platform. The fully integrated platform manages reservations, new member applications and interactions, fleet operations, the financial sector as well as key metrics to optimize solutions and minimize costs.

Zipcar is predominantly an information business that collects data from its members: how and when is the car being used, where is it being driven and who is driving it. This data collection makes the business model successful and generates many valuable transactions. The vast amount of members enable Zipcar to collect useful information to better satisfy customer needs. Defined by their demographics and location, Zipcar is able to extend additional opportunities from other industries related to car sharing to their members.

From its data collection platform Zipcar is able to offer services that develop partnerships or special agreements with restaurants, hotels, fitness centres as well as stores and local businesses located nearby urban areas. These services may include different options for Zipcar members: reservations at the restaurant, admission to the gym or a special offer at the sport shop. This creates a stronger sense of community and generates opportunities of growth with outside business partners. Each interaction in this “ecosystem” allows the network of businesses to deliver better solutions with more personalized services. The Zipcar technology platform includes reservation system software (built on open source applications) that enables members to reserve their cars. All crucial transactions are managed online so members have complete access to the availability of vehicles in real time. These transactions are useful for tracking and

analysing member vehicle usage to improve the overall service from vehicle locations to the customer's experience.

The fleet administration system software and hardware are useful tools to optimize the Zipcar fleet of vehicles. Each Zipcar is furnished with a telematics control unit. This hardware, together with developed embedded firmware and vehicle server software, allows secure access to vehicles from data centers. The global financial system software (built by Oracle) is also integrated into the technology platform.

This software is able to manage payments and billing in multiple currencies providing efficient and accurate real time access to financial information.

Zipcar has two data centers, one located in Massachusetts and a secondary data center located in the United Kingdom. Data centers store all the information inside the Zipcar database and host its website. Developed applications are used to manage the entire integrated technology platform. During 2011, Zipcar processed over four million reservations and yet the reservation system remained available 99.99% of the time [Zipcar, 2011].

4.3.7 Key Activities

The value creation of Zipcar stems from a various number of activities and its business model only works if the key activities are well designed and implemented. Key Activities are the most important building block for creating value and having success in any company. Zipcar cannot generate their value proposition and maintain customer relationships without key activities.

Sales and marketing are key activities for the car-sharing business that wants to embrace a global environmentally aware and responsible lifestyle brand. The strategy includes local events, advertising, sponsorships, public relations, and social media activities to communicate the Zipcar value and its mission to satisfy individuals through a smart transportation system.

Zipcar uses an advertising program to maximise customer lifetime value and communicate its value proposition. Many advertisements are placed in tubes and buses nearby potential customer areas.

Operations and fleet management are crucial elements in delivering greater value to customers, improving the individual urban living experience. Zipcar operations are

designed to reach scalability through the distribution of self-serve fleets of vehicles. They are a key advantage within the Zipcar network.

Each urban area that Zipcar is working in has a fleet manager who is accountable for planning and coordinating the fleet and location of vehicles. This fleet manager has a team of fleet associates, who execute preventative maintenance and check-ups on a daily basis by the Zipcar fleet administration system and ad-hoc processes. The system is also designed to respond to service issues such as accidents, technical car problems or repairs. Naturally, the fleet manager engages and controls a network of third parties to efficiently manage fleet maintenance and operations. The fleet administration system includes vehicle usage data and daily operation feedback that generates information for vendors or technicians who have to work on vehicles. In the case of a broken vehicle the information system may indicate another vehicle available nearby. The system enables managers to compare and check results and data usage from different vehicles types, vendors, and fleet teams.

The Zipcar planning process is focused on providing the exact number of vehicles within cities in order to meet the expected demand based on seasonality. Fleet managers forecast vehicle requirements every month. Generally during the spring and summer season the car requests are higher than during autumn and winter months. Managers are also flexible and are able to satisfy unplanned increases in demand in metropolitan areas. Shifting vehicles located in the proximity of university or college campuses to large cities that have a higher demand. Vehicle usage data are useful to track historical usage trends and continuously define and renovate the fleet capacity by market operations. Vehicles purchased are investments made in order to achieve the Zipcar business plan based on seasonal demand and model mix.

Finally, Zipcar is constantly developing its integrated technology platform. The commitment in technology development is designed with the purpose of offering the best car sharing service possible. It also includes the development in reservations and fleet administration software to provide a simple and easy-to-use customer experience.

4.3.8 Key Partnerships

In a car-sharing business partners are fundamental to effectively offer and deliver a value proposition. Zipcar has created many relationships with several manufacturers,

retailers, lifestyle brands, and parking authorities. The company has also made agreements with insurance, gas, and maintenance organizations.

Zipcar negotiates the majority of its vehicle purchases directly from manufacturers and the remaining purchases from other retail partners. Vehicles removed from the Zipcar service re-enter the market either through auction or directly to dealers. All Zipcars are insured to cover accidents that members may be responsible for, even if Zipcar does not carry third-party insurance for collision.

The mission statement, “Smart consumption through environmental and responsible lifestyle” brings many partnerships into account. In 2011, a Low-Car Diet challenge was launched. The event gained more than 30 participants from North America. These participants decided to rid themselves of their personally owned vehicles and instead use alternative transportation for 30 days [Zipcar, 2011]. The winners received special edition New Balance shoes, a Jabra gift-pack with hands-free devices, and a one-year supply of snacks and beverages from Honest Tea and Zevia All Natural Soda. Moreover, Zipcar obtained partnerships with the Leukemia & Lymphoma Society, New England Shelter for Homeless Veterans, the Pan Mass Challenge, Alameda County Community Food Bank, and Meals on Wheels. These partnerships are important for developing a car-sharing network that can relate to the adjacent businesses far beyond the Zipcar community.

Zipcar has built loyal relationships with universities as well. Zipcar aimed to acquire and retain young students who had just started driving and would then become familiar with the benefits of car sharing from the beginning of their car driving experience. This strategy relies on the idea that after graduation many of these young students would move to urban areas where Zipcar is also located. This offers an opportunity to keep the relationship with students after their scholarship and reaches out to the additional network of people they will work or live with.

Zipcar believes that new mobility models and technologies will be largely interdependent with the car sharing business. Zipcar has seen this as an opportunity to exploit the network effect and business synergies of car sharing and broader mobility growth in order to reach a unique competitive position in the market.

Zipcar plans to expand its fleet of vehicles internationally. In 2007 it acquired Flexcar allowing control of the entire area of North America and in 2010 the purchase of

Streetcar allowed for expansion in Europe. In 2009, as an action of the constant growth strategy, Zipcar entered the Spanish market buying a majority stake in Avancar [Zipcar, 2011].

4.3.9 Cost Structure

The Zipcar cost structure defines all the costs sustained by its business model, including the costs that Zipcar offers when delivering its on-demand technology and self-service access to vehicles. Any business model requires dealing with a cost structure and Zipcar has to monitor and manage it effectively.

Vehicle costs are directly associated with fleet operation costs such as lease expense, depreciation, parking, fuel, insurance, gain or loss on disposal of vehicles, accidents, repairs and maintenance as well as employee-related costs.

Zipcar must change its price structure accordingly to these variations, preserving its value proposition. The company estimates that fleet operation costs would increase as the number of vehicles expands and a larger membership base is formed [Zipcar, 2011]. However, these costs may decrease when Zipcar will reach more operations and fleet management efficiency by market opportunity and usage per vehicle.

Member services and fulfilment are outsourced. Contact-centre costs including personnel expenses related to member support teams and credit card processing fees are also estimated to increase as members increase.

Research and development costs include labour-related expenses in the ongoing process of coding, testing, modifying, and maintaining the Zipcar integrated technology platform. Zipcar has continually focused on research and development for improving its platform associated with the functionality of its reservation, fleet administration, and global financial software.

General and administrative costs include labour-related expenses: sales and marketing, administrative, human resources, internal information technology support, legal, finance and accounting personnel, online search and advertising, trade shows, marketing agency fees, public relations and other promotional expenses, professional fees, insurance, and other corporate expenses.

Online search and advertising costs consist of banner ads and pay-per-click payments to search engines. Sales and marketing are activities focused on increasing the number of

members and creating brand awareness. These costs are expected to increase as Zipcar adds personnel and other business-related costs to support its business growth.

Table 7 shows the operating expenses incurred by Zipcar during the last three years. From 2010 to 2011 fleet operation expenses increased 29.8% due to an increase in the number of vehicles. Cost per vehicle increased 13.5% principally as a result of higher fuel prices and lower profits on vehicle sales. Fleet operation expenses as a percentage of revenue remained constant at 65.9%.

From 2009 to 2010 fleet operation expenses increased 31.3%, including 16.5% due to purchasing Streetcar and an increase in the Zipcar fleet. Cost per vehicle persisted stably. Fleet operation expenses as a percentage of revenue decreased 5.3% as the result of more usage per vehicle.

Table 7. The Zipcar's Operating Costs

	Years Ended December 31,			2011 Change		2010 Change	
	2011	2010	2009	\$	%	\$	%
	(amounts in thousands)						
Fleet Operations	\$159,185	\$122,634	\$ 93,367	\$36,551	29.8%	\$29,267	31.3%
Member services and fulfillment	19,460	15,114	10,414	4,346	28.8%	4,700	45.1%
Research and development	3,948	3,170	2,314	778	24.5%	856	37.0%
Selling, general and administrative	57,117	49,172	29,973	7,945	16.2%	19,199	64.1%
Amortization of acquired intangible assets	3,892	3,414	990	478	14.0%	2,424	244.8%
Total	\$243,602	\$193,504	\$137,058	\$50,098	25.9%	\$56,446	41.2%

Source: Zipcar Annual Report 2011

From 2010 to 2011 member services and fulfillment costs increased 28.8% as the result of an increase in membership base of roughly 154,000, while it remains constant as a percentage of revenue at 8.1%.

From 2009 to 2010 member services and fulfillment costs increased 45.1%, including 20.0% due to the Streetcar acquisition and primarily as the result of an increase in membership base of roughly 156,000, while it increased as percentage of revenue to 0.2%.

From 2010 to 2011 research and development costs increased 24.5% and increased 37.0% from 2009 to 2010. The increases are primarily due to persistent investments in the development and maintenance of its integrated technology platform.

Research and development expenses as a percentage of revenue decreased 0.1% from 2010 to 2011.

From 2010 to 2011 selling, general and administrative expenses increased 16.2% and from 2009 to 2010 the expenses increased 64.1%.

The great difference in expenses is attributed to the Streetcar acquisition (18.5%) and an increase in the labour and labour-related expenses. These costs include stock compensation, marketing programs, and advertising as well as other general and administrative related expenses.

Selling, general, and administrative costs as a percentage of revenue decreased by 2.8% in 2011 as the result of revenue growth and reduced legal and professional fees associated with the acquisition of Streetcar, while in 2010 the costs had increased by 3.6%.

Amortizations of acquired intangible assets are costs associated with the Flexcar and Streetcar acquisitions. These expenses include member relationships, parking spaces, non-compete agreements, trade names, and reservation systems are amortized over their estimated useful lives based on how the economic benefits of the intangible assets are distributed.

Figure 21. The Zipcar Business Canvas - Left Part

	Key Activities	
	Sales and Marketing	
Key Partnership	Operations and Fleet Management	
Manufactures	Technology and software development	Value Proposition
Lifestyle brands	Key Resources	"wheels when you want them"
Organizations	Vehicles	self-service access to vehicles
Parking authorities	Zipcar Brand	No cost of ownership
	People	smart consumption
	Integrated technology platform	pay-per-use mobility
	Cost structure	
	Vehicles	
	Member services and fulfillment	
	Research & Development	
	Selling, general and administrative	

Figure 22. The Zipcar Business Canvas - Right Part

Customer Relationship	
Social Community	
Zipsters	Customer Segment
	Urban residents who do not own cars
Channels	Urban residents who own cars
Website	College and university students, faculty and other community residents
Mobile devices	Business and government agencies located in cities
Social Networks	
Word of Mouth	
Revenue Stream	
Vehicle usage fee	
Revenue fee	
FastFleet	

4.4 The Zipcar's Business Model Pattern

Zipcar currently has a leadership position in the car sharing market based on its first-mover strategy by developing its business across urban areas with 732,000 members and over 11,000 vehicles [Zipcar, 2011]. Members' experiences help the company to benefit from economies of scale and decrease the cost structure. The investments made can scale along with a wide membership-base and fleet of vehicles network.

As mentioned in chapter two business models have developed various patterns built on fundamental concepts of literature. An organization can easily integrate several patterns into its business model.

Zipcar integrated a mix of known business model patterns including multi-sided platforms, open business model, and razor-and-blade model as well as adding its own process of creating, selecting, implementing and developing the business model.

Zipcar has built its formula, as many Internet-based companies do, on subscription fees. This model includes a subscription price paid monthly or annually to have access to the service. In addition, Zipcar charges customers by usage due to the miles driven. The subscription fees formula that is often used by many online businesses was first utilized by magazine and newspaper businesses. This model sells products and services periodically and transactions are standardised over specific periods of time. Individuals become recurring buyers and they build brand loyalty and trust, reducing new acquisition costs and allowing marketing opportunities.

Subscriptions assure a steady and certain sum of exchanges throughout the duration of the agreement, which is the minimum number of transactions necessary to sustain the business. This process depends on the new acquisition rate of the network's membership base, reducing uncertainty and risk related to the car-sharing business. It also guarantees payments in advance and customers are free to use the service with its functionality whenever they want without the inconvenient of possession.

Tracing members throughout their service experience is used to enhance the information networks. Zipcar has built its own integrated technology platform system that allows both administrating fleet allocation of vehicles and monitoring member and vehicle usage. The car-sharing network optimises the collection of data by using and codifying critical information that includes locations, miles, number of trips, and size and type of vehicles used. These massive amounts of information are extremely important for the car-sharing business, because the information can be shared with other businesses or networks alike.

This solution addresses two main opportunities: enhanced customer experience and improved efficiency of the car-sharing network.

The customer's experience may be enhanced by additional services provided by third-party businesses. For example, Zipcar may offer coupons or special promotions to members through fidelity programs.

Customer satisfaction may be improved through mobile devices and technology-integrated platforms. Members, for instance, may order food, book trips, or swap clothes directly on their smartphone. On the other hand restaurants, agencies, and stores might receive user's orders in real time, organising their business accordingly.

Using information-based systems creates opportunities that help the network to grow virally and attract other networks as well.

A combination of self-serve, on-demand, and pay-per-use methods as well as an increased use of online and mobile services has allowed instant access to goods and services from anywhere at anytime.

Zipcar's first-mover position in the car-sharing market provides a service synonymous with pay-per-use mobility and smart consumption. This model facilitates marketing and business analysis. Through the information platform Zipcar knows various levels of data: customers interested in the service to sign up (registration), customers who effectively use the service that have paid for it (activation), customers who were active and would engage with the service over time (retention) and engaged customers who tell their friends about the service (referral). The subscription fee model indicates to some extent which member is active or lately churned [Ries, 2011].

This model embraces a longer customer lifetime value (CLV). Members are more dedicated to the service. Opportunities for upselling and cross-selling strategies can be exploited over other products and services more than nonrecurring business models. Nonetheless, the subscription fee model shows greater customer inactivity. Zipcar keeps customers locked in for a certain period of time even if they do not make any active decisions for a brief period.

This model is convenient if users buy the service regularly every period. By using the Zipcar service instead of a traditional car rental company customers avoid travelling long distances to pick up the vehicle, completing paperwork, waiting in line, paying daily or weekly fees and covering the costs of fuel, insurance and maintenance [Keegan, 2009].

In the Zipcar model subscriptions are paid in advance, even if this might actually prevent some users from signing up. In the early years, Zipcar included a \$25 non-refundable application fee, a \$300 fully refundable security deposit, and a \$300 annual subscription fee. This strategy followed initiatives accomplished in Europe by car-sharing organizations, which charge customers \$300 to \$500 upfront [Hart, 2005].

Today, the service is more accessible with only a \$25 non-refundable application fee and a \$50-60 annual subscription fee depending on cities and fuel costs. Customers then pay only they drive, \$6-9 per hour or \$50-70 per day without sustaining the hassle of ownership.

4.5 The Zipcar Business Analysis

As mentioned in chapter three, business models have changed over time. Traditional production of new products and services sold is unlikely sustainable. Collaborative consumption instead provides many users the opportunity to share products or services multiple times. This new business opportunity is built on three important bases: brand, network, and experience [Botsman & Rogers, 2010]. If a company constructs these bases correctly, it is likely to succeed. *Brand* includes reputation, participation, and relevance. Customers have confidence in the brand and they want to be a part of it. They recognize the brand as value and give it a meaning that they can relate to.

Network includes trust, community, and privacy. Customers trust the company and people in it. They are proactive, enthusiastic, and passionate about the company's initiatives. Customers are guaranteed that the company will use their information properly and will protect them.

Experience embraces ease, value, and recommendations. Users want that their experience will be easy-to-use, intuitive, and simple. They desire to have a unique experience and obtain great value from it. The excitement about the product or service is the engine for recommendations, creating a network effect fuelled by shared interests. Is the sharing economy effectively measurable? And how?

The issue that needs to be overcome is to accurately understand if any business in this new modality of production would be more efficient, profitable, and sustainable over the long-term. Theoretically this model is successful: sharing business models use less capital and make it circulate faster through many repetitive transactions in the network.

Transactions are the tools that make the business model work. They exploit resources available in the market and use them efficiently time after time.

Moreover, through technology infrastructure such as the Web and mobile network devices information is spreading faster and consumers are being targeted more accurately [Gansky, 2010]. Sharing business models may use technology to enhance the customer experience and help to better manage information data, providing higher quality products and services. Shared information increases the value of any network, being able to provide more personalized services while being economically sustainable. The Zipcar case study will show if these theoretical hypotheses about social practises and sharing business models may be appropriate for the future generations of businesses over the next years.

4.5.1 Stability of the Zipcar Network over Five Years

The intent of this section is to understand if Zipcar is sustainable over a certain period of time. The Zipcar financial data is analysed between 2007-2011 (2007 is the year the company became traded in public), to examine its ability to grow and produce economic and financial positive results. The income statement from 2007 and 2011 show no net profit attributable to Zipcar Inc. (Table 8).

In the period analysed, Zipcar has gained losses from 14 to 7 millions dollars, despite the fact that the value of net profit is increasing. The Zipcar economic situation is negative, producing critical issues related to the business.

However, net profit is influenced by many factors that may not be directly related to the sustainability of the business.

Zipcar is undertaking a growth strategy that makes the company invest in assets and liabilities. These investments affect the net income negatively. New business models must focus their attention on users and transactions. In fact, users and transactions are the metrics to consider for evaluating any Internet-based business model.

In the Zipcar annual report there are three significant data: revenues, adjusted EBITDA, and members. Adjusted EBITDA is a company's measurement of earnings, which considers net income and non-cash expenses that are not reflected into the income statement.

Table 8. The Zipcar Income Statement

	Year Ended December 31,				
	2011	2010 (2)	2009	2008	2007 (1)
	(in thousands, except share and per share data)				
Revenue	\$ 241,649	\$ 186,101	\$ 131,182	\$ 105,969	\$ 57,818
Cost and expenses					
Fleet operations	159,185	122,634	93,367	84,199	50,033
Member services and fulfillment	19,460	15,114	10,414	7,580	4,379
Research and development	3,948	3,170	2,314	1,549	904
Selling, general, and administrative	57,117	49,172	29,973	25,324	16,204
Amortization of acquired intangible assets	3,892	3,414	990	1,226	219
Total operating expenses	243,602	193,504	137,058	119,878	71,739
Loss from operations	(1,953)	(7,403)	(5,876)	(13,909)	(13,921)
Other income (expense)					
Interest income	128	47	60	429	1,387
Interest expense	(8,634)	(8,185)	(2,457)	(1,603)	(2,070)
Other, net	3,041	1,731	3,690	568	160
Loss before income taxes	(7,418)	(13,810)	(4,583)	(14,515)	(14,444)
(Benefit) provision for income taxes	(270)	311	84	—	—
Net loss	(7,148)	(14,121)	(4,667)	(14,515)	(14,444)
Less: net (income) loss attributable to redeemable noncontrolling interest	(4)	(4)	23	—	—
Net loss attributable to Zipcar, Inc.	\$ (7,152)	\$ (14,125)	\$ (4,644)	\$ (14,515)	\$ (14,444)

Source: Annual Report 2011

Table 9 shows the trends of revenues, adjusted EBITDA, and Zipcar members every year. This information is useful to assess the sustainability and profitability of the Zipcar network.

Figure 23 displays the trend of revenues and adjusted EBITDA per user. The graph shows how much value and profit users are able to generate for the company within the network.

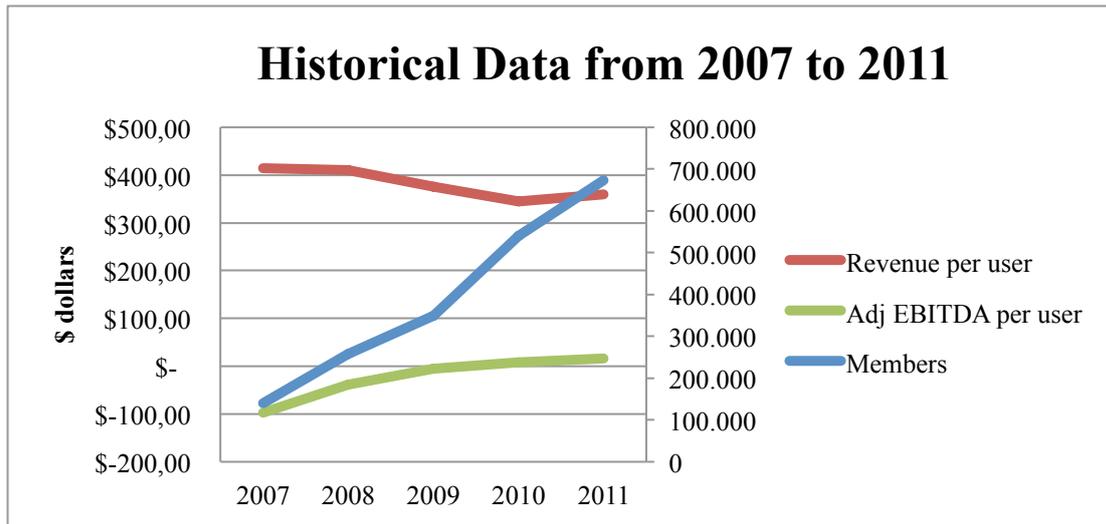
Table 9. The Zipcar's Business Data from 2007-2011

Year	Revenues (\$ml)	Adj EBITDA (\$ml)	Members
2007	58	-13.6	140,000
2008	106	-9.8	258,000
2009	131	-1.6	349,000
2010	186	4.2	540,000
2011	242	10.9	673,000

Source: Zipcar Annual Report 2011

Evidently the numbers of users increases exponentially. On average members grow at the rate of 45% every year. This data indicates that the growth strategy is working well, due to the ability of Zipcar to offer a compelling value proposition that attracts new customers. It implies that the network is well developed and expanding accurately.

Figure 23. Historical Data from 2007 to 2011



Revenue per user decreases from \$413 in 2007 to \$359 in 2011 as the result of lower usage revenues. This is due primarily to the shift in the Zipcar strategy from daily to hourly reservations, partially counterbalanced by higher priced policies [Zipcar, 2011]. However, even if Figure 23 shows a slight decrease in the total revenue per user, the values are approximately constant. This indicates that the revenue per user remain stable. The consistent use of the service by member makes the network function.

The adjusted EBITDA per user increases exponentially from -97 dollars in 2007 to 16 dollars in 2011 as the result of scalability and network growth. Zipcar's strategy exploits economies of scale in order to cover fixed costs and manage the growing amount of users efficiently over time.

Table 10 and Figure 24 show the growth rate and the user value in the Zipcar economic situation.

Members continue to increase every year, but at lower rate. This is common for any steady network that functions well¹⁰. The growth has decreased, but revenues per user

¹⁰ Stability within the network requires a growth rate close to zero. This indicates that the system has achieved its maximum capacity of users. After the maximum capacity is reached, growth abruptly slows.

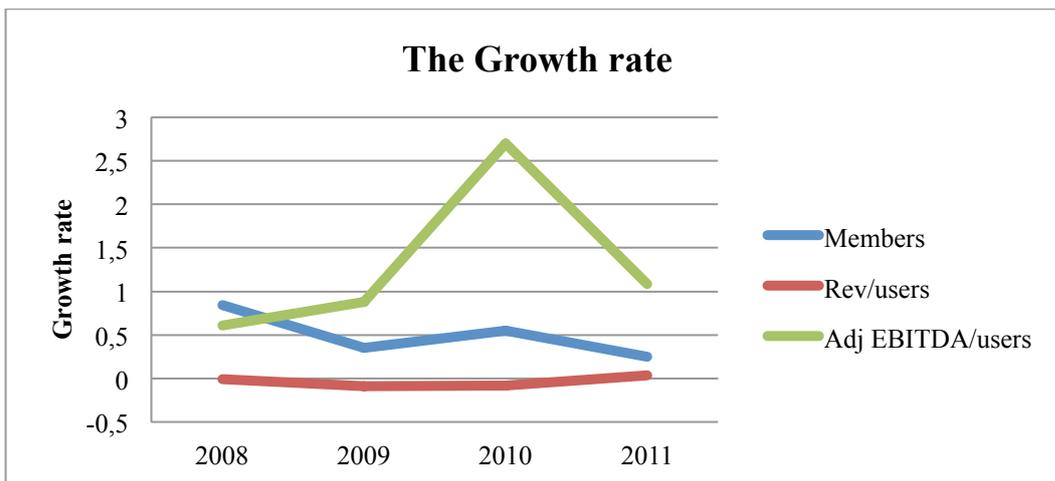
remain constant. Also, revenues per user slightly increased from 2010 to 2011. This indicates that each member uses the car sharing service appropriately because each additional new user contributes to generating the same amount of revenue over time.

Table 10. Revenue and adjusted EBITDA per user from 2007 to 2011

Members	d*	Revenues/Users	d*	Adj EBITDA/Users	d*
140,000	-	\$412.99	-	-97.14	-
258,000	0.84	\$410.73	-0.01	-37.98	0.61
349,000	0.35	\$375.88	-0.08	-4.58	0.87
540,000	0.55	\$344.63	-0.08	7.78	2.85
673,000	0.25	\$359.06	0.04	16.2	0.99

The adjusted EBITDA per user indicates how profitable each user is for Zipcar. The adjusted EBITDA growth rate shows an exponential increase until 2010 (the company increased costs as the result of the acquisition of Streetcar and its fleet of vehicles). In addition, Figure 24 displays how adjusted EBITDA grows more proportionally than revenues. This indicates that each user is more profitable in the network due to the increased number of members and economies of scale.

Figure 24. The Growth rate



The Zipcar business model is heavily reliant on the number of users and its fleet of vehicles. Its income statement showed negative results in net losses and high fleet operation costs. However, the Zipcar business model is likely to be economically

sustainable over a long period because it is able to attract new members and creates value within the network. By this economy of scale, many transactions are generated to efficiently return the capital invested.

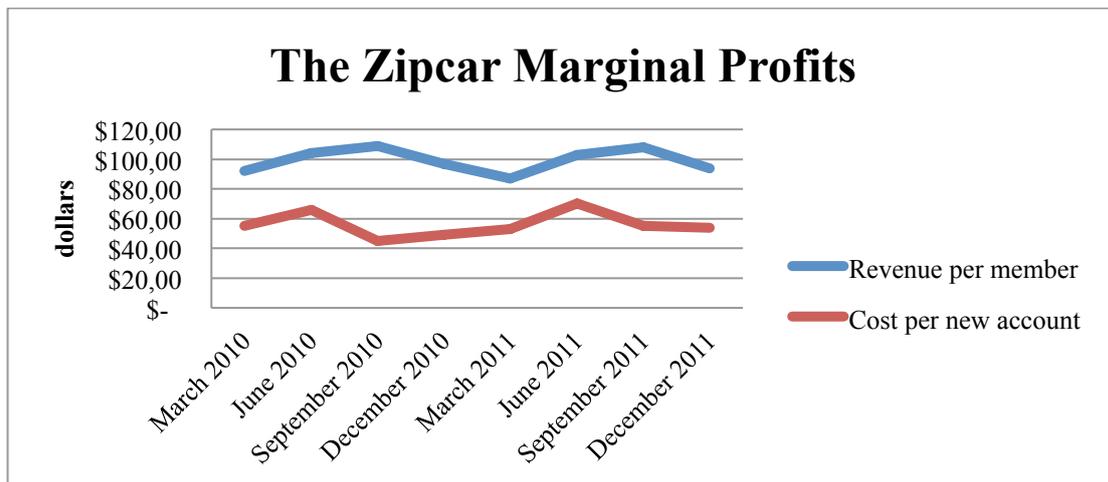
In the next paragraph Zipcar performance from 2010 and 2011 reveals how members generate value and how they work in the network.

4.5.2 The Innovation Accounting

The costs of Zipcar are distributed over many transactions and users. The users are fundamental to understand the reason behind the stability of the network, while transactions explain in what manner the network works.

Despite a growth rate of on average approximately 45% per year, Zipcar did not reach net income profits. Fleet operation costs are too high to reach a certain level of earnings. The Lean Startup written by Eric Ries explains how to use innovation accounting to demonstrate that companies are learning how to grow sustainable businesses [Ries, 2011]. According to Ries a business model is sustainable on account of three aspects: the profitability of each user, the cost of acquiring new users, and the retention rate of existing users. The higher these values are the faster Zipcar will grow and make money.

Figure 25. The Zipcar’s Marginal Profits from 2010 to 2011



The Paid Engine of Growth is the ability of any company to grow through a set of profitable customers in the long-term. Briefly, *The Paid Engine of Growth* compares the revenue that Zipcar makes from each member against the cost the company would pay

to acquire a new customer. The margin between revenue and cost per user defines how fast *The Paid Engine of Growth* will turn. If these values were positive Zipcar would generate marginal profits that can be re-invested in growth.

The Zipcar business model is growing exponentially: the revenue per user is greater than the marginal cost (cost of acquiring a new account) every period. *The Paid Engine of Growth* allows Zipcar to use marginal profits to acquire more customers (Figure 25).

In the Zipcar case study, users and the number of vehicles leverage the network. For example, the car-sharing business may be dangerous if vehicles are not used efficiently. The underutilisation would increase the overall costs and for this reason, managers must monitor and accurately control fleet operations and distribution.

Table 11 shows the number of Zipcar members and vehicles per three-month period. Looking at the data the number of members grows steadily, but each period the percentage decreases as the result of the network stability.

Table 11. The Zipcar's Performance between 2010 and 2011

		Users	d%	Vehicles	d%	\$/user	d%	Cost new Acc.	d%
Mar 2010	1	366,535	-	6,085	-	92	-	55	-
June 2010	2	470,320	28.32%	8,860	45.60%	104	13.04%	66	20.00%
Sept 2010	3	521,035	10.78%	8,541	-3.60%	109	4.81%	45	-31.82%
Dec 2010	4	540,484	3.73%	8,250	-3.41%	97	-11.01%	49	8.89%
Mar 2011	5	576,914	6.74%	8,216	-0.41%	87	-10.31%	53	8.16%
June 2011	6	604,571	4.79%	9,480	15.38%	103	18.39%	70	32.08%
Sept 2011	7	649,627	7.45%	9,489	0.09%	108	4.85%	55	-21.43%
Dec 2011	8	673,257	3.64%	8,904	-6.17%	94	-12.96%	54	-1.82%
Avg.			7.16%		5.59%		0.31%		-0.26%

The fleet of vehicles is generally increasing due to the growth strategy. Zipcar made several investments expanding its business formula internationally and enlarging its presence in new urban areas. In June of 2010 and again in June of 2011, large

investments in vehicles were made as the result of seasonality. During the summer and holidays, individuals increased the usage of vehicles [Zipcar 2011].

On average the number of vehicles increased by 5.59% every year, while the number of users grew by 7.16%. This indicates that if revenues per user (that grew on average by 0.31% every year) and cost per new account¹¹ (-0.26%) are constant, that members are profitable. In conclusion, the Zipcar business model is running well and producing value for its customers.

The *churn rate* instead is an indicator of growth efficiency, which is by definition the rate of customers who leave the company's business in any period [Ries, 2011]. If these numbers are stable, the company is growing faster than it is depleting and is therefore in the safe zone. The formula is:

$$\text{Churn rate} = 1 - \text{retention rate}$$

Table 12. The Churn Rate

Period	Retention Rate	Churn Rate	Rate of new customer acquisition	Rate of compounding
June 2010	97.90%	2.10%	28.32%	26.14%
Sept 2010	97.80%	2.20%	10.78%	8.61%
Dec 2010	97.90%	2.10%	3.73%	1.55%
March 2011	98.20%	1.80%	6.74%	4.56%
June 2011	97.80%	2.20%	4.79%	2.62%
Sept 2011	97.30%	2.70%	7.45%	5.27%
Dec 2011	97.80%	2.20%	3.64%	1.46%
March 2012	98.00%	2.00%	5.37%	3.19%
June 2012	97.70%	2.30%	3.11%	0.93%

Table 12 shows the *churn rate* and retention rate from June 2010 to June 2012. The data indicates a very high retention rate as the result of customers' satisfaction with the service. This also shows a high cost of switching from Zipcar to competitors such as

¹¹ The cost of new account incorporates the cost of vehicles per user.

Hertz or Avis. Moreover, the churn rate is low and stable, which indicates a positive trend over the observed period.

According to Eric Ries the speed of growth of any network is well defined by the rate of compounding. The rate of compounding compares the growth rate to the churn rate [Ries, 2011].

The high retention rate and the very little attrition of the Zipcar business are substantial. They measure the efficiency of the network, which is working accurately through the many transactions generated by users.

4.5.3 The Zipcar Transactions Analysis

In this paragraph the analysis is focused on the number of transactions generated. Transactions are the unit of analysis to see if a company is sustainable, profitable, and efficient over a long-term period.

From the analysis, the Zipcar business model is able to monitor and calculate the number of transactions within the car-sharing network. The questions addressed are: Does the working capital cover the costs and expenses of the Zipcar network? How many transactions Zipcar is able to generate?

Working capital is considered here as the monetary circulation that takes place in any network and expresses the cash flow generated by many transactions.

According to Ronald Coase transaction costs refer to the cost that is incurred with any form of economic exchange or participation in a market [Coase, 1937]. For example, in a car-sharing network if an individual reserves a car, the cost is not just the price of the reservation, but the time, energy, and effort required to search the car, select it, and travel to the nearest location. The total cost is far greater than the dollars paid by the individual for the reservation. The analysis would like to estimate these numbers of transactions in the Zipcar network.

As shown in the previous paragraph, the revenue per user and the cost of a new account are on average constant. This indicates that an additional new user costs and values approximately the same for Zipcar. In this way, the value of transactions may be measured based on the number of users per vehicle. Table 13 and Figure 26 show the actual number of users per vehicle and its trend from March 2010 to December 2011.

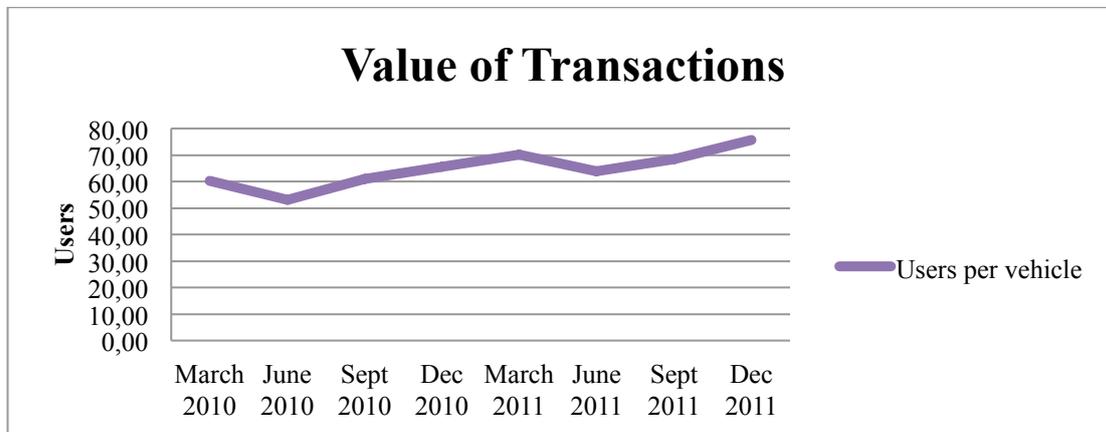
Table 13. Transactions in the Zipcar network

	Users per vehicle	d%
March 2010	60.24	
June 2010	53.08	-11.87%
Sept 2010	61.00	14.92%
Dec 2010	65.51	7.39%
March 2011	70.22	7.18%
June 2011	63.77	-9.18%
Sept 2011	68.46	7.35%
Dec 2011	75.61	10.45%

The data indicates an increase of users per vehicle from 60 in March 2010 to 76 in December 2011 as the result of scalability and growth of the Zipcar business.

However, the trend shows a slight decrease of transactions during June 2010 and June 2011 due to an increase in the fleet of vehicles. As explained before, a large investment in vehicles was made by Zipcar as the demand increased with seasonality.

Figure 26. Value of Transactions



The results show that Zipcar is a car-sharing business economically sustainable for many reasons. The costs of vehicles are well managed and monitored. Acquisitions and investments are consistent with the evolution of the Zipcar business. The value of users is increasing and the working capital is running well through many transactions developed in the network. Despite the increase in fleet of vehicles, the Zipcar business model is functioning and continuing to attract customers.

4.6 Is Zipcar a Business Opportunity?

The Zipcar case study has been analysed by its business model structure, efficiency, profitability, and sustainability over time. This paper considers Zipcar as a source of value creation and assesses sharing as a modality of social production that can be extended to other types of businesses. Sharing business models take advantage of accessible resources and utilise them faster and better among individuals and organisations.

Zipcar is a car sharing business that has developed a model based on the exchange of physical goods (vehicles). Technology-integrated platforms and network infrastructures, such as mobile, web, and social, help Zipcar to capture and deliver value in real time providing a high value proposition to customer.

Information is a key competitive advantage for Zipcar and is fundamental to build a dominant design. The information technology platforms give instant access to a significant amount of information that can be shared among diverse third parties and can create a status quo that disrupts established markets.

Another key advantage of the Zipcar model is not having inventory. No assets are required and the capital used is low and needs small investments. Vehicles circulate in the network through many users and transactions. Users are substantially important because they make the business model work and are how Zipcar creates value. Transactions instead measure the number of exchanges in the network. They explain how resources are utilized. More transactions correspond with a higher value per user. Transactions also demonstrate how the value creation is produced over time.

Zipcar presents a highly negative economic situation with net income losses every year, but they are progressively improving. However, as profit per user increases and the retention rate remains steady, any transaction that runs within the network allows Zipcar to be in a safe and profitable zone.

Nonetheless, the revenue per user is still low at this point. On average Zipsters are using vehicles very infrequently $[(\text{revenue per user})/52 \approx \$8]$. Comparing the total revenue per user on a weekly basis, the cost of each customer is approximately \$8 per week. This amount is exactly the cost of an hourly ride.

Certainly, Zipcar has to find alternative ways to improve its vehicle usage formula to be able to run more transactions through their growth strategy and scalability over time. A

more efficient usage of vehicles would make the entire network function better and would provide less of a cost per user.

Another issue related to the car-sharing business is that it is still a niche market. Zipcar is running its business in very few cities and countries such as the United States, Canada, Britain, and Spain, and its expansion depends on the degree of access to the service. Depending on strategies adopted and market opportunities, the car-sharing business has the potential to develop into two different scenarios.

The first scenario would show Zipcar as a dominant player in the market of transportation. Zipcar may become a global brand. Spreading worldwide and creating a disruptive innovation in the way individuals use and have access to cars. In this projection car sharing would be the dominant design in the mass market based on smart transportation and responsible living. Microsoft is an example of disruptive innovation. Windows and its Office software provided a new platform that was established as the dominant global design.

In the second scenario Zipcar would remain a niche market where individuals do not use it very often. This may obviously compromise the business. The increasing costs that Zipcar is supporting are due to two principles: international expansion strategies and the anticipated demand for cars, which needs substantial investments in vehicles and parking. These require up-front fixed costs. If the market does not grow at the rate estimated, then there would be an unexpected decline in demand and it would cause negative financial and economical results. There would be no more opportunities to achieve economies of scale due to underutilization of vehicles.

CONCLUSION

Business models have taken on a greater importance due to the rapid changes the world is experiencing today. Journalists, business people, consultants and academics have given business models a lot of consideration in recent years. Business models are discussed as the rationale of how an organization creates, delivers, and captures value to customers. In particular, the Internet has created new opportunities for doing business through information services that in many cases are free of charge.

The Internet has changed the entire realm of business, creating new transparent and significant ways to easily access different amounts of information and data. On the other hand it provides customers with more choices and more opportunities to effortlessly fulfil their needs.

In this new context, the architecture of business models is designed as a dynamic entity where each building block is related to how the firm is creating and delivering the value proposition. The Business Model Canvas is an economic tool described by nine basic building blocks to design an efficient and effective business model over any network. This model covers four main areas such as customers, offer, infrastructure, and financial viability and stimulates creativity and understanding that encourages discussion and analysis.

Teece, and Osterwalder and Pigneur distinguish different business model patterns that have been developed from business literature in order to properly exploit business model opportunities. The process of designing the business model undermines uncertainty and risk and requires interactive activities of learning and adjusting alike. Successful business models have been applied to both traditional and over the Internet industries. This paper has analysed several business model patterns such as hub and spoke model, razor-razor blade model, sponsorship model, multiple revenues model, unbundling model, open model, freemium model, multi-sided platforms model, and long tail model. These models that have been developed over time are just some

examples of successfully designed business models that have been utilized by various companies.

Traditional business models generally activate a capital-intensive program where economies of scale and/or scope are vital to making profits. The company's success is measured by its ability to efficiently return the initial capital investments made.

These models that hold the companies capital locked into its products are unlikely to be sustainable over a long-term. Capital needed to pay back investments runs slowly, products are held in inventory, and production becomes inefficient. In the 20th century the solution was “throw the product away and buy a new one”. In turn, this led to a large difference between supply and demand in the market where the goods produced have exceeded the potential demand.

New business models use the existing capital available in the market and transform it into profits, finding new, faster ways of monetary circulation. They have small initial investments and every dollar produced is reinvested in the growth and scalability of the network. Cash flow is running through many users and transactions: when supply and demand match each other at the right time, the profits earned will return the capital invested faster and more efficiently.

Economic recessions, environmental concerns, population growth within urban cities, and community-based mentality have facilitated the diffusion of sharing among products and industries.

Sharing is a modality of social production based on Internet and Communication Technology. The idea behind social production is that some things are utilised better if shared. The new technological era of society is developing innovative activities that can be used by any individual, enabling all people to search for opportunities more easily than ever.

The relativity of sharing may be the solution to systematically resolving mistaken policy choices and other significant economic problems. Fundamentally, traditional businesses are based on the formula that unconsumed goods are equal to waste. Social production instead considers this waste as substantial: repairing, upgrading, and “up-cycling” products at the end of their life cycle to produce further value. Longer lasting products reduce the destruction and exploitation of natural resources, decreasing costs and improving the efficiency of the overall business model structure.

The amount of transactions exchanged over products allows companies to utilise information and data more than ever before, being able to connect different networks at once.

Each transaction is a favourable circumstance to gain essential information from customers. The advantage of sharing platforms is that they continually generate superior products, experiences, and partnerships and create opportunities to adjust and personalize their offerings in order to obtain a better relationship with customers.

In the United States individuals have started seeing shared platforms as common, everyday things. Bikes, cars, and taxis as well as hotel rooms and apartments are going to be shared. Netflix, Zipcar, ThreadUp, and Citizen Space are examples of online platforms that already offer convenient access to shareable goods. The growth of Internet, social media as well as wireless and mobile networks has enabled new businesses to use information data for delivering products and services at the right time and location, conveniently when people need them.

Zipcar Inc. is a car sharing company that is also the market leader in the carpooling industry. The main markets are North America and Europe. Founded in 2000 by Robin Chase and Antje Danielson, the company has since gained a lot of consideration. Zipcar offers the “wheels when you want them” formula: a self-access service to vehicles that are strategically located throughout various urban areas.

The Zipcar business model has been analysed according to the Business Model Canvas. This model shows the logic behind the company’s strategy and how it pursues the process of designing an efficient and effective business model over its technology-integrated platform.

Zipcar has built its model on subscription fees that include an annual or monthly membership fee, software fee, and an hourly vehicle usage fee. The benefits of this revenue model assured a minimum number of transactions throughout a certain period of time, which is the essential point that makes the business model work. This reduces uncertainty and risk related to the car-sharing business and guarantees payments in advance. On the flip side, customers are free to use the service whenever they want without the hassle of car ownership.

The Zipcar analysis considers adjusted EBITDA, revenues, members, and the number of vehicles as key drivers of the business. As a car sharing business Zipcar has gained a

lot of net income losses since its foundation in 2000, but Zipcar believes that they will become a leading company in the car-sharing market and that it will reach its purpose of smart consumption and responsible urban living.

The Zipcar case study analyses if the theoretical hypotheses based on business models and shareable goods could be the future of the next generations of business.

The results showed that the number of revenues per user is constant, while the number of profits per user increases. The marginal value per user is used to grow and attract new customers. Marginal profits grow more proportionally than revenues. This indicates that the value of each customer increases due to economies of scale and transaction costs decrease as the result of the network effect. New users instead are slightly decreasing as the result of network stability.

Measuring the value of transactions as the number of users per vehicle in the Zipcar network, the analysis shows an increase in the value of transactions over two years. This is the result of scalability, having the average revenue and cost per user approximately constant.

The Zipcar business model is currently sustainable economically. Despite a negative income statement, it guarantees a well-developed business structure maintained by many users and transactions. This model continues to create value and attract new customers. The efficiency of the model is also measured by the retention and churn rate of the network. Zipcar shows a very high retention rate that indicates the quality of the service and the commitment to customer relationships.

In conclusion, this paper considers Zipcar a business opportunity that is in touch with the changes the world is experiencing today. Collaborative consumption, sharing, and social production are several opportunities to make the world a better place to live in while companies still have the opportunity to be profitable.

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