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# Procrastination in markets

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# Introduction

One of the most important theories in economics is the one about economic rationality. This assumption states that individuals are maximizing their needs and assumes that consumers are able to classify their choices by preference order. It believes that people always make optimal decisions which are based on a cautious weighting of costs and benefits. Most of the different economic models and theories developed through time have this notion at their heart.

Frank Hahn and Martins Hollis present the following definition of rationality: “Given the set of available actions, the agent chooses rationally if there is no other action available to him the consequences of which he prefers to that of the chosen action.” (Hollis and Hahn, 1979).

The rationality hypothesis has been widely criticized across the years, especially by behavioral economics, who defend the idea that the rationality of consumers does not reflect the reality of individual behavior and choices. Indeed, decisions are not always made based on a complicated calculation. Sometimes choices are induced by impulsive or sentimental reactions, by altruistic reasoning or simply by errors of judgement.

This work will be about discussing an evidence which shows that rationality of consumers is not always verified: the presence of procrastination in markets. The Cambridge Dictionary defines procrastination as “when someone keeps delaying something that must be done, often because it is unpleasant or boring” (The Cambridge Dictionary, 2018).

Rationality theories would assume that individuals would not procrastinate. In fact, the procrastination outcome is not the one that maximizes individual utility. It would be more beneficial to complete the tasks immediately rather than to face the consequences later. This is even more true in the case where consumers have to pay to get access to the action they will postpone.

We will mainly focus our attention in this study on the procrastination situation many fitness members face. Indeed, subscribers pay a monthly fee to be allowed to exercise at the gym, but in matter of fact, rarely show up at the club. Paying for a service without enjoying what one receives in exchange is not a behavior that can be defined as rational.

Our first objective will be to provide an explanation of the reason why people pay but do not exercise. We will address the different answers presented in the literature while focusing essentially on the Behavioral Economics view on the subject.

It is common knowledge that exercising is a good thing for individuals and to a larger extend, for the society. Therefore, one of the goals in this work will be to find solutions that could help consumers to overcome procrastination, and help them take actions that would lead them to sport more regularly.

We will also try to make a summary of other situations where companies take advantage of the procrastination tendency of consumers. In those circumstances, as it is the case for gym subscriptions, companies do their best to extract more money from their consumers by using smart contracts devices.

In order to understand the level of presence of the fitness trend in our society, this work starts with a summary of the main facts on the subject. We will realize that the European market is bigger than the American one, and that the global fitness turnover is valued to around 84 billion dollars, which is enormous. We will also spend some time discussing the situation in Belgium while focusing essentially on Basic-Fit, the low-cost fitness company omnipresent in the country. We will finish the contextualization part by explaining why the number of gym members has highly increased over the last years.

The second part of our work will be about understanding how fitness companies make money. By analyzing their business model, we will explain how these firms take advantage from the procrastination behavior of people. The paramount importance of the month of January will also be discussed.

After that, we will take some time to present what the literature provides us as reasons for the low gyms attendance rate. We will start by showing the excuses given by the gymgoers and by displaying potential explanations that some scientists promote. Nevertheless, in this part, we will mainly discuss what Behavioral Economists tell us on the subject.

In the fourth part, some facts about the beneficial character of exercising will be summarized. Having this in mind, we will try to provide solutions that could help people to go more often to the gym. Financial incentives will be discussed, as well as other motivational stimulants.

After having presented the particularities of gym contracts, we will finish our work by reviewing other situations where companies use similar methods to extract money from consumers. Diverse contracts using time-inconsistent preferences or procrastination, as a way to increase firm's profits, will also be discussed.

### **Definition of key concepts**

This part will be used to define the different words and concepts that are going to be employed repetitively during this work. The goal is to come to a common understanding of those key concepts and preventing confusion.

First of all, a fitness club, a health club, a fitness center and a gym are words I will frequently make use of. There will be no difference in the meaning of them, I will use one and then another from time to time to avoid repetition. The Collins Dictionary defines a gym as: "a club, building, or a large room, usually containing special equipment, where people go to do physical exercise and get fit". For the purpose of this work, I will add to those several definitions, that in order to be allowed to have access to those sport or beauty facilities, people have to pay an entry fee (monthly subscription, day pass, etc.).

Gymgoer is a modern term frequently used in the fitness community. It comes from the fusion of the words gym and goer. A goer is, according to the Oxford Dictionary, "a person who attends a specified place or event, especially on a regular basis". The expression gymgoer will be used as a synonym for a fitness club member or gym rat. The word athlete will be used several times in this work and will have no different meaning from the three terms discussed previously.

# First part: The fitness trend

This section will start with a brief overview of the three different segments present in the fitness club industry. Afterward, we will address the situation of the fitness sector in Europe. Firstly, we will discuss the size of the market and its presence in today's economy. Succeeding the analysis of Europe, we will take some time to discuss the fitness industry in Belgium while focusing on the market leader: Basic-Fit. We will conclude this part, by giving the reasons behind the booming interest people show in gyms.

## Chapter 1. Segmentation of fitness clubs

The fitness market is divided in three segments; premium clubs, midrange clubs and finally, low-cost clubs. We will define premium clubs as gyms which offer subscriptions for more than 100 euros a month. To be allowed to enter those clubs, people often need to be sponsored by existing members. The facilities are luxurious and very varied. The membership fee gives access to personal trainers, large interior and exterior pools, spas, saunas, steam rooms, massages...

In order to be member of a midrange fitness club, people have to pay between 50 and 100 euros a month. Some advantages, but less luxurious, are also proposed to the subscribers such as access to saunas and steams rooms. Nevertheless, this segment of the market is struggling due to a fierce competition from the numerous low-cost health clubs. For instance, a Canadian study showed that more than 300 midrange clubs had to close their doors in 2014 while 600 low-cost gyms started their activity in the same year (Canadian Business, 2015). If these clubs want to survive, they should succeed to offer premium services while reducing their costs, prices and the contractual subscription length.

Low-costs gyms are booming all across the world since a few years. All these different firms have the same model: a low monthly fee, 24 hours opening, benefits and services reduced to the essential. You won't find any personal trainer, nor a sauna, nor group lessons, nor free towels. Sometimes people even have to pay for a shower. These low-cost clubs are attracting new athletes but they are also increasingly attracting the existing consumers of midrange gyms who are sensitive to the cheap subscription fees.

For the purpose of this work, except if mentioned otherwise, the readers should assume the discussed gym contracts are low-cost ones.

## **Chapter 2. The presence of health clubs in our society**

The figures about the topic show us that in Europe, 56.4 million people were member of a fitness club in 2016. This level increased by 4.4% compared to the figures collected in 2015. This raise can essentially be explained by the success of low cost fitness clubs, which attracts an increasing number of clients (Deloitte, 2017). Thanks to these results, Europe is the first market in the fitness industry above the United-States.

In the ranking of the largest countries in terms of gyms membership in Europe, Germany sits on the first place with more than 10 million athletes. This country is closely followed by the United Kingdom. France completes the top three with 5.46 million of adherents. The following two places are taken by Italy and Spain (see appendix 1).

Regarding the turnover of fitness clubs in Europe, it has increased by 3.1% between 2015 and 2016, bringing it to an amount of 26.3 billion of euros. This means that the Old Continent is responsible for more than one quarter of the total industry turnover (84 billion dollars worldwide). Indeed, Europe is the largest fitness market of the world in terms of revenues ahead of the United States (23.3 billion euros). It is commonly known that the number one sport in Europe is Football, but if we compare its turnover (22 billion) with the one of the fitness industry on the continent, we can begin to doubt this statement.

As we can see on the graph of the second appendix, the two largest countries in terms of revenues produced by the fitness market, are the United Kingdom followed by Germany. The top 2 is the same as for the ranking of the number of adherents, but this time, Germany is not on the first place but on the second one. Both with a revenue of approximately 5.1 billion of euros, these two nations have a large advance on the ones behind them. Indeed with a share of 19% of the total European fitness market, the United Kingdom and Germany have more than twice the market share of each of their followers: France, Italy and Spain. If we combined the revenues of these five leading countries, we can observe that they account for 65% of the total European health and fitness market. It is interesting to notice that Eastern European markets such as Poland, Russia and Turkey have entered the top 10 ranking while Belgium is not part of it (see appendix 2).

As we can see on the graph of the third appendix, the three largest countries in terms of fitness market revenues and in the number of adherents of health clubs are also the ones with the most growth in membership (Germany, the United Kingdom and France). This massive growth can be explained by the continuous expansion of low-cost clubs in these countries. If we take all the top 10 markets into consideration, we can observe that the membership increased by at least 2.3% in each country, even though large differences exist between the national markets. Turkey and Russia are two countries that catches our eyes when focusing on potential. Indeed, they have a low penetration rate, 2.4% and 2.0% respectively, while having a growth rate above the average. Sweden has opposite results with a high penetration rate of 21.1% and a relatively low growth rate (see appendix 3).

Today the European fitness market is still growing. Indeed in 2016, the number of Europeans enrolled in a fitness club increased by 4.4%. These athletes are spread over 54,710 clubs all over Europe. In terms of the number of clubs on the continent, there has been an increase of 3.4%. The number of gyms is not the only things that has gone up, the average membership per club also increased by 0.9%.

By trying to attract as many consumers as possible for the lowest price, the low cost firms are the most visible in this industry. In point of fact, in 2016 the average monthly membership fee decreased by 1.3% compared to the previous year. But even by taking into consideration those clubs, the European average gross membership fee per month is equal to 41.4 euros.

To understand the level of fragmentation of a market, it's interesting to analyze the place taken by the biggest firms. At the end of 2016, the thirteen largest health clubs gathered more than 12.7 million members in Europe. The power of those firms is increasing because the figures discussed here represents an increase of 15.5% compared to 2015. The number of adherents of the top 30 clubs represents 22.5% of the total number of European fitness club members.

If we focus our attention on the top 10 European fitness clubs that were selected based on revenue, we observe that they reached a total revenue of 3 billion of euros in 2016. By comparing those figures to the total market revenue, we can see it represents 11.4% of the total European fitness revenue. We can conclude thanks to these observations that the market is still relatively fragmented.

### Chapter 3. The situation in Belgium

Belgium's leading operator is Basic-Fit. In 2015, the Dutch giant gathered 53% of the total fitness clubs members of the small country. This is, with Denmark, the highest percentage of market share by membership in Europe and those two countries have a considerable advance on the other European nations. If we compare this result with the leading operator in Germany, a neighbor of Belgium, we can observe significantly different numbers. Indeed, McFit only has 11% of all the German adherents. The figures are even lower for the United Kingdom, where Puregym only holds 8% of the total amount of athletes of the country (EuropeActive/Deloitte 2016).

So, Belgium's health clubs market is highly concentrated. Does this mean that the average membership fee is high or low compared to other countries? Studies proved that there is a negative correlation between the level of concentration in the fitness market of European countries and the average monthly membership fee. In Denmark, the top 5 operators gathers more than 80% of all adherents. It is the most concentrated country in Europe. In terms of average monthly membership fee we can observe that the Scandinavian country has the lowest fee of all Europe alongside with Sweden (+/- 25 euro).

Let's now focus on the country that interest us, Belgium, which is the second most concentrated country (60%) of Europe in terms of adherents of the top 5 operators. As it was the case for Denmark, there is a negative correlation between the market concentration and the subscription fee. Indeed Belgium is part of the top 5 countries with the lowest average monthly fee with a price of 35 euros. If we analyze the situation of Germany, Belgium's neighbor as we discussed before, the market concentration is way lower and amounts to a level of more or less 23%. In terms of average monthly fee, the results are consistent with what we discussed before, with an amount of approximately 45 euros (EuropeActive/Deloitte 2016).

The low-cost leader of the Belgian fitness industry, Basic Fit, offers their clients a basic subscription for only 19.99 euros a month. The direct concurrent of the Dutch company, Jims Fitness tries to attract customers with a subscription fee which is located between 14.99 euros (access until 4PM) and 24.99 euros (full access).

Even if the low-cost companies attract most of the consumers, Belgium is also provided with luxury fitness clubs such as David Lloyd and Aspria. In the case of David Lloyd, the European number two health club in terms of revenue, the basic subscription costs around 150 euros per month. Another premium fitness club, Aspria, offer their

consumers access to their clubs in exchange of a fee amounting to more or less 120 euros per month.

## **Chapter 4. Basic-Fit, the Dutch giant omnipresent in Belgium**

In August 2017, Basic-Fit, Belgium's fitness market leader, announced it reached the number of 450.000 members in Belgium. Worldwide, the company can count on more than 1.3 million subscribers. Even if it is as Dutch company, the multinational has located most of its clubs in Belgium (165). The Netherlands follow closely with 151 clubs and France can also be seen has a large part of Basic-Fit sector of activity due to the 135 clubs based in the Hexagon. Additionally, if we take into account the countries where Basic-Fit is less present, the total number of clubs it owns is approximately 440. On average each club has between 3.000 and 5.000 members. The last published information stated that the turnover of the company was amounting to 259 million of euros (2016). But on the other hand, the company faced in that same year losses worth 32 million euros.

The brand is omnipresent in Belgium, it is not possible that a person living in the country has not heard about the company at least once in the past five years. They are everywhere, on television, on radio, on social networks or on billboards. The owner of Fun Gym Center, an independent club in Belgium said in 2016 that Basic-Fit was so present in people's minds that they wouldn't even consider other clubs when deciding to become member of a gym (Le Soir, 21 mai 2016).

Even if the company has an enormous success among its clients, it faces a lot of criticism from its competitors. Some say that Basic-Fit is bringing unfair competition to the fitness sector. Indeed, the Dutch giant offers subscription fees that are way lower to what independent clubs or other gyms are able to afford. This lead to large crowd movement of people leaving mid-range gyms in order to become member of the orange company. Most of mid-range clubs are going bankrupt and the premium clubs are the only ones able to survive against the competition of low-cost gyms such as Basic-Fit.

Another critic that is often launched at Basic-Fit is that sporting there can lead to serious injuries. Indeed, the staff on the spot is reduced at maximum. The ones left are "hosts" and are not required to own any sport or physiotherapist degree as it would be the case in mid-range or premium gyms. The hosts only received a very short training and are only able to help the customers on how to use the machines properly. They are not able to

give customers any training programs. Therefore, gymgoers can be seen as abandoned and this can lead to injuries.

## **Chapter 5. Reasons behind the increase of gymgoers**

Fitness clubs have drastically changed during the last two decades. The time when the machines were old and when one could only find men in the gyms is long over. Clubs owners modernized their machines and completely rearranged the interior of their clubs to make them way more attractive. These changes made gyms more modernized and turned them into places of conviviality and of meetings.

However, the two main ingredients behind the increasingly number of health clubs members are: the feminization of the customers and the prices lowering. Indeed, in the past women were absent from gyms and prices were way too high to attract mister everyone. As previously discussed, membership fees drastically decreased towards the years mainly thanks to the emergence of low-cost fitness clubs.

But some other elements helped gyms to attract more customers. The adaption of the fitness companies was based on well-known factors that touches western countries: the social pressure and the omnipresence of social networks. Firstly, there is in the West a growing social pressure to be healthy and to be in good shape. In order to fight against the growing obesity of people in these developed countries, several advertising campaigns were launched such as: “eat five fruit and vegetables per day” or “take the stairs instead of the elevator” or “walk 10 000 steps per day”. These campaigns were aimed at linking healthy eating habits with physical activity and were very beneficial to the success of gyms.

Secondly the omnipresence of social networks in the lives of western people pushed them towards a certain narcissism and towards the necessity of having a beautiful body. Snapchat, Facebook, Instagram and their consorts rapidly became places were people tend to share pictures of their perfect lives and thus, their perfect body. This explains why some personal trainers, or random gymgoers, became worldwide stars by uploading videos of workout advices to gain muscle or just to lose weight.

## **Second part: the methods used by gyms to make money**

This part will start with a presentation of gyms business models and what they do to gain money while having small spaces and large costs. To continue in this perspective, we will analyze why the month of January is so important for fitness companies and how they use the way people feel about themselves and their body, after the holidays, to gain money. Thereafter we will use an example based on the tariffs proposed by Jims Fitness to check whether the degree of competition affects the price level of monthly subscriptions.

### **Chapter 6. The business model of fitness clubs**

We can consider gyms as club goods. These goods exhibit high excludability but low rivalry in consumption. The non-rivalry assumption means that club goods have essentially zero marginal cost. So health clubs can be seen as a service shared exclusively by several persons, as it would be the case for a private tennis court belonging to a collective residence. The particularity of these kind of goods is that consumers extract a satisfaction from it which depends on the others. The more the number of subscribers is high, the more the contribution of each consumers to the fixed costs is low. But on the other hand, the more athletes, the more the crowding in the club increases. Therefore, increasing the number of adherents will make it possible to reduce the subscription fee, but will increase the queue at the sport machines and at the showers.

Health clubs companies have found an ingenious idea to increase their profits: engage the consumers who won't use much or not at all the facilities to a one year subscription. The advantage of this way of payment is that it decreases the individual cost of subscription without increasing the crowding within the gyms. Indeed, a study launched in 2016 in the United States proved that approximately the half of the people who subscribed to a gym in the first days of January, the peak period of fitness registration, won't set a foot into those clubs in the next months. Only one fifth of the new subscribers will continue to exercise in fitness clubs after September (Cardlytics, 2016). There are even more choking results, if we believe another American study, the new subscribers will go, on average, only four times to the fitness club during the year (Medium, 2015).

However these new consumers are willing to sign these contracts, without negotiating the length of their engagement contrary to what they would have done for other types of goods. Therefore, we could ask ourselves why people are willing to pay if they don't go to the gym. We will try to formulate an answer to this question later in this work.

When the people who wanted to subscribe to a fitness club were asked how many times they were expecting to exercise at the gym, they answered an amount which was, on average, more than two times higher than their real attendance. This is because people believe in the long lasting effect of today's goods resolutions to get fit and healthy. Some of the new subscribers also believe that the fact that they pay a fee every month will oblige them to exercise in order to avoid throwing money out the window. Whatever the reason, it has been proven that it is not the case.

The absent subscribers allow fitness clubs to offer a cheaper membership fee or make the owners of those gyms wealthier. It all depends on the level of competition. If there are no other health clubs nearby, the owners will keep the profit coming from the absent subscribers to themselves. If there is more competition, gyms will be forced to reduced their membership fee to attract more customers.

We can observe that gyms have far more members than they can actually accommodate. The figures taken in 2014 on Planet Fitness can illustrate this trend. The company charged a monthly subscription of between 10 and 20 US dollars. It had on average 6,500 members per club while having place for only 300 people at the same time (npr.org, 2014). Planet Fitness was able to do this because it knew most of its customers would not show up. If every member would regularly come to the gym, it would be chaos. Therefore, the members who are not appearing at the gym are fitness clubs best clients. Indeed they do not cost a dime to the company, except maybe for some administrative fees, but bring money every month.

Gyms are not only bad, and are not only stealing money from their absent customers. The gymgoers who are actually coming to the club on a regular basis are offered an amazing deal. If fitness clubs were only composed of active customers, the monthly price would be way higher than the ones clubs offer today. The fact that health clubs are affordable for mister everyone is made possible thanks to the customers who won't show up.

What really interest fitness companies is to attract people who won't come to the club. Stealing active members from other gyms is not what will bring the most money, it will

only make the club more crowded. Therefore, they will try to attract people who are not known to be gym rats. This way of thinking changed considerably the way clubs presented themselves. Nowadays gyms avoid to have open windows that intimidate the passersby due to the presence of sweaty bodybuilders lifting some very heavy weights. The new trend is to hide the weight rooms in the back of the club and to display lobbies that look like hotels or fancy restaurants to make the new customers feel comfortable.

The biggest issue for fitness companies is the retention of their customers. Every year most of them lose half of their members. Indeed, once people noticed they paid 20 dollars a month without showing up, they may realize the important amount of money they lost and quit their subscription. To fight this trend, gyms try to innovate and find new ways to offer value to the customers who aren't necessarily into working out. For instance, Planet Fitness offers bagels and pizzas on a regular basis. It has also massage chairs. Other companies offer movie nights and beauty treatments for instance.

## **Chapter 7. Sweaty January**

In his Book "The Secret Life of Money" (2015) Dan Davies, discuss and analyses the most important period for gyms: the month of January. The author found out that 75 percent of all gym memberships are taken out in the month of January. Even if other studies talk about a smaller percentage, they all pretend that the "Sweaty January" phenomenon is absolutely fundamental for health clubs and it would be very difficult for these companies to survive without taking advantage of the January trend. The goal of the health club companies is to attract the customers who want to lose some weight and enroll them in a one year subscription. The majority of these new clients will not visit the facilities more than three or four times until the end of their subscription. One day, the founder of Colman's Mustard said the part of his fortune was based on the bid of mustard that everyone left behind on their plate. But gym companies have been way further, by making people pay for a lot more of the product than what they are actually using.

Most of the commercial gyms do not offer any pay-as-you-go subscription, the ones who do, offer a one day pass that is more expensive than a full January pass, everything is put in place to attract consumers to subscribe to a long term membership. Gyms don't want people to think that exercising at their facilities is something they can pick up and put down whenever they want. Indeed, this way of thinking would jeopardized the sustainability of fitness clubs.

A gym is a high fixed cost business and inside the club, each customer needs a bite more space and stays longer in the facilities than in any other retail store in the neighborhood. For instance, let's compare a fitness club with a supermarket, both at a busy period. We can easily conclude that the retail shop has more people per square foot than gyms. On top of that, gymgoers expect to be able to store their clothes and to take a shower afterwards. Therefore, this reduces even more the number of customers a gym can have per square foot. Additionally, let's not forget that athletes tend to stay for one hour on average at the gym, while people shopping will stay for approximately twenty minutes in the store. These arguments show that health clubs are amazingly inefficient in terms of space occupation.

On the other hand, gyms have an excellent conversion percentage. Indeed, by definition everyone occupying the space is paying to do so. On the opposite, supermarkets customers could leave without buying anything. But the amount each customer would have to pay "per sale" at the gym, in order to meet the costs, is way far beyond the means of most customers. The solution found by fitness clubs is simple; pushing the purchase per visit much higher than 100 per cent, thanks to all the members paying their subscription without coming to the gym. This is where the place of the "Sweaty January" is so important. Thanks to this mechanism, customers pay on a regular basis, but some will come less than four times a year to the gym. At the end of their subscription they will either decide they gave up enough money and quit, or decide to renew their contract and give even more money to gyms which would be the dream of health clubs owner.

## **Chapter 8. Testing whether more competition leads to cheaper subscription fees. A Jims Fitness example**

When selecting the type of membership new customers would like to subscribe to, Jims Fitness offer the possibility to choose minimum two clubs between all of those based in Belgium ([www.jimsfitness.be](http://www.jimsfitness.be), 2018). Thus, the new gymgoers will be allowed to exercise in the selected locations. This make us possible to verify if the fact that the more competition there is, the cheaper the subscription will be. And, on the other hand, that if there is less competition, gyms owners will keep the profit coming from absent members to themselves.

If customers choose to be member of two of the many Jims Fitness clubs in Brussels, for instance Jims Jourdan and Jims Porte the Namur, they will have to pay 14.99 euro for the basic membership. Brussels is a very competitive place for fitness clubs due to the many

gyms located close to each other. This amount is the company's lowest subscription fee (seen appendix 3).

If we analyse the subscription fee offered by Jims Fitness when the customer chooses to exercise in the clubs located in Ostend and Bruges, we can observe that the price for the basic membership is two euros higher than the one in Brussel (16.99). The superior price of two euros is also present for the two other types of subscriptions (see appendix 4).

This proves that what was said earlier in this work is correct. Indeed the fitness competition in this particular region of Flanders is lower than the one existing in Brussels which allows gym owners to put subscription fees to a higher level. This would not be possible in Brussels where Jims is heavily fighting over new customers with other low-cost companies.

## **Third part: Discussion about the reasons behind the low gym attendance**

After having discussed the situation of the fitness industry in Europe and particularly in Belgium, we analyzed the business model and the specificities gyms have put in place to maximize their benefits. In this part, however, we will start with a brief overview of what the literatures tells us about the reasons why people accept to pay for a gym membership without going. After this, we will narrow our analysis down to the theories of Behavioral Economics and try to see if they could explain the low attendance rate of subscribers at fitness clubs. We will focus our discussion on a well-known study called: "Paying Not to Go to The Gym" (DellaVigna & Malmendier, 2006).

### **Chapter 9. Analysis of the reasons explaining why gyms members won't show up**

We broadly discussed in this work the fact that gym's best clients are the ones who won't show up. But why are people accepting to subscribe to a monthly membership if they don't enjoy what they are paying for?

If you ask people why they are not going to the gym, the same excuses will come up: "I'm too tired", "the weather is really bad today", "I'm too busy and I have other things to do", "I'm still too sore from my workout of last week to go today" or the most famous one "I won't go today but I will tomorrow". However, the actual reason is just because they don't want to go. But why don't they want to?

Some argue that the answer has nothing to do with how busy people are, and that the reason is more psychological. These persons believe people feel intimidated by gyms and that they don't like exercising in front of an audience because they feel judged. Some other people say that members will not show up because when they do, they do not know how the machines work and how to exercise properly. Some feel too embarrassed to ask for help or cannot find anyone who can. For instance, we discussed earlier that at Basic-Fit, the hosts, who are present in small numbers, are only trained to explain how the machines work but not on how to give proper work out programs. However, all these arguments could only be a very small part of the explanation.

Another explanation is that human beings are naturally optimistic. By accepting a monthly membership fee, people think it will motivate them to go exercise, that they will feel obliged to amortize their investment. Normally people hate being locked into long contracts like for cellphones, but gym memberships are an exception. This behavior is called pre-commitment. At first, gymgoers like the idea of being locked into a monthly gym contract. When subscribing, people are picturing the “new me” who’s actually going to the gym three times a week and become a physical fitness machine. They imagine a total change in their lifestyle. But obviously it won’t happen!

The problem with gym subscriptions is having the possibility of not going. Let us imagine someone making a pact with himself, which states that he has to exercise four times a week at the gym. By making these kinds of deals with himself, the person is giving himself the possibility not to go three days a week. The problem is there, having the possibility of not going. “If I won’t exercise today, I will go tomorrow and this will make me still stick to my plan”. However, this way of thinking will not happened only once, and the possibility of skipping an exercise day will show up very often. At the end of the subscription, the gymgoer will realize he never achieved his goals. The solution would be simple: not allowing yourself any rest days. However, this could lead to injuries and would only be a solution for people with the desire of becoming “big athletes” and not for mister everyone who just wants to stay in shape.

Another reason for not showing up is that it’s way easier for people to talk themselves out of going to the gym than it is to actually pack a bag and go. By accepting a monthly membership fee or by buying a new outfit they think it will motivate them to exercise. But eventually they realize that the financial pressure or even rewards will never be sufficient to convince them to show up at the gym if they don’t want to.

Nowadays we live in a society where immediate gratification is the new standard. People can shop online, buy dinners in drive-in restaurants, or swallow a pill to stay thin. In comparison, working out is way different. It requires a lot of work, sweat and pain to see some results. It may take months to lose weight or to gain muscles and for some persons, it’s just too long so they stop coming to the gym.

Another explanation of why people will not go to the gym is the theory of decision fatigue (Baumeister, 1990). It argues that the simple act of making any decision depletes humans of the limited store of will power they have. Going to the gym is not only an

investment of time; it is also a choice, and a difficult one. Having to decide can be very exhausting for people who are not used to sport very often.

It all comes down to one crucial thing: internal motivation. Paying for a membership or buying new sport outfit won't make people come more often. Gymgoers need the envy to exercise, because they know about the benefits it will bring them or simply because they enjoy coming to the gym. The motivation needs to come from a strong mental discipline. Desperately wanting to have a summer body is not sufficient, being ready and determined to workout is necessary.

## **Chapter 10. The Behavioral Economics view on the issue**

We largely discussed some of the reasons that could explain why people are being irrational concerning their gym membership by paying without showing up. In this chapter, we are going to come up with some other arguments that could explain this conduct while narrowing our point of view on a particular stream of the economics: Behavioral Economics. We will base our research on a famous paper called "Paying Not to Go to the Gym" written by Della Vigna and Ulrike Malmendier in 2006.

Investopedia defines Behavioral Economics as "the study of psychology as it relates to the economic decision-making process of individuals and institutions. The two most important questions in the field are:

1. Are economists' assumptions of utility or profit maximization good approximations of real people's behavior?
2. Do individuals maximize subjective expected utility?"

The Guardian came up with a slightly different definition in 2017: "Behavioral Economics incorporate the study of psychology into the analysis of the decision-making behind an economic outcome, such as the factors leading up to a consumer buying one product instead of another".

Psychology Today offers a very small and clear definition: "The field of behavioral economics blends insight of psychology and economics, and provides some valuable insights that individuals are not behaving in their own best interests. Behavioral economics provides a framework to understand when and how people make errors".

These are different ways to say the same thing, namely that this particular stream of the economy links psychology with the decision making process of a customer in order to

understand why he choose an action instead of another and why he takes irrational decisions. This theory can be used to help people make better choices for themselves.

These definitions could be perfectly applied to the issue discussed in this work: the fact that some people take an irrational choice by paying a monthly subscription while almost never showing up at the gym. In this part we are going to see what Behavioral Economics offer us as possible answer to this recurrent problem in our society.

## **Chapter 11. Present bias as an explanation**

A study launched in the United States in 2006 tried to understand the behavior of Americans going, or actually, paying for being able to go, to the gym (DellaVigna & Malmendier, 2006). This research contains information about 7,752 health club members over a period of three years. It includes data about the attendance rate of these athletes as well as about the type of membership contract they enrolled in.

There are three different types of contracts in the dataset of the study: a pay per visit contract (\$12 per visit), a monthly contract and finally an annual contract. The difference between the annual and the monthly contract is the possibility for the customer to opt out of it. In the monthly contract (which costs \$70 per month on average), people can choose to stop the membership every month, and if they don't, it continues over time. In the annual contract (\$850 on average), the membership with the health club expires after 12 months, but can be renewed for another 12 months by the athlete. Overall, if we take, from the data set, all the health clubs, all the different possibilities of contracts and all the consumers choices into consideration, a visit to the gym costs, on average, \$17.27. This result is clearly not optimal because consumers could pay \$12 per session using a pay per visit contract.

Different observations can be pointed out from the study of DellaVigna and Malmendier. First of all, people who choose a monthly contract pay, on average, 70% more than what they would have done under the pay per visit subscription for the same attendance rate. Eighty percent of the monthly subscribers would have saved more money if they had chosen to pay per visit.

A second interesting observation is that people who choose the monthly subscription have, on average, 17% more chance to stay enrolled after one year than customers selecting the annual contract. This could seem contradictory because monthly contracts are

more expensive than the annual ones, because they give the possibility to opt out from it every month. However, in many cases, when the one year subscription ends, people don't renew the contract. On the other hand, the monthly subscription never ends and most people don't opt out of it by themselves even if they can.

A third information that can be extracted from this study, is that people overestimate their attendance rate at the health club. Indeed, on average, people predict that they will go, each month, 9.5 times to the gym. However, by analyzing the exact figures of this study, it can be proved that they visit the gym only 4.17 time per month on average. This means that the people studied in this research predict they will go twice more often to the gym than what they actually do.

A fourth finding states that on average, 2.31 full months pass by between the last visit to the fitness club and the termination of the monthly subscription. This means that those people pay around \$187 without benefiting from what they are offered in exchange.

This study states that consumers systematically deviate from the optimal contractual choice. In the database analyzed, most of the athletes chose the monthly subscription, and by doing so, lost around \$600 per membership, out of a total cost of about \$1,400. This savings loss is due to the fact that consumers do not select the most optimal subscription option. If these results were generalized to the total amount of Americans going to the gym, the benefits made by health clubs, just because customers choose the wrong contract, would be enormous.

These observations don't coincide with standard preferences and beliefs. The reason behind these findings is, according to DellaVigna and Malmendier, related to the overestimation of customers own future self-control and future efficiency. Indeed, this behavior leads to an overestimation of the attendance frequency at health clubs and the possibility to opt out of an automatically renewed subscription. Furthermore, the authors suggest that the persuasion made by the fitness clubs employees can also explain most of the findings.

This article helps us to draw some interesting conclusions. People accept monthly contracts even if they would have spent less if they had chosen the pay per visit option because they are too optimistic that they can become gym rats, which would make the monthly package worth it.

Economists call the behavior behind it: hyperbolic discounting. This theory states that people pay more attention to their short-term well-being and that they discount rewards (being fit and healthy in this case) that might come further down the road. People to whom would be giving the choice between a small and imminent reward versus a larger but later benefit, will opt for the former. This behavior can explain why drug addicts stays addicts, why indebted people don't pay their bills and why gym members tell themselves that the right day to exercise is always tomorrow.

Behavioral economists use another term to describe this phenomenon: present bias. The theory behind it is that people tend to give stronger weight to payoffs that are closer to the present time when considering trade-offs between two future moment (O'Donoghue & Rabin, 1999).

In order to emphasis the existence of present bias in gyms attendance expectation, we will discussed a paper called "Naivety, projection bias, and habit formation in gym attendance" that was issued in 2013 by the London School of Economics and Political Science (Acland and Levy, 2013).

The authors recruited 120 non-gym members and paid them 100 dollars if they would attend the gym eight times in one month. Furthermore, they asked the control group and the "treated group" to predict their future gym attendance. This had to be done twice, once before the treatment started and once after its end. They found out both groups over predicted their attendance in both situations. This forecasting error did not only happened for the weeks where the participants were paid, but also for the weeks where they were not, which means that the subjects are also overestimating their gym preferences. The authors concluded that the subjects were naïve with respect to future self-control problems caused by present bias. Indeed they appeared to expect their future selves to be two-thirds less "present biased" than they actually were.

## **Fourth part: Discussion about the possible methods that could make people exercise more**

This part is going to be about the fact that exercising is good for people and that they should be pushed to do so. We will start our analysis with an explanation on why going to the gym is so important for people's health and why companies, governments and even gyms feel concerned about this issue. After that, having in mind that exercising should be pushed, we will discuss if the most common incentives, the financial ones, can bring people more often at the fitness club. Following the conclusion that financial incentives don't work, at least not in the long run, we will discuss several means that could have the expected positive results on gym attendance.

### **Chapter 12. The benefits of exercising at the gym**

Health and obesity issues are one of the most important concerns of contemporary societies. In 2017, the OECD published a paper in which it states that in its member countries, one on the two adults were overweight or obese and one child on six had the same problem. In Belgium, 51% of the adult population is overweight against 70.1% in the United States. By 2030, the OCDE expects, if nothing changes, that the number of obeses will double.

This is mainly due to the way people eat nowadays. Fast-food restaurants are popping up at each street corner. Pre-prepared food is the new trend. Almost every meal is cooked with a high concentration of salt or sugar. People eat way more than they should. If we add to this the fact that people don't exercise enough, we can conclude that the situation is worrying. For instance a study issued by the American government showed that 80% of Americans adults do not get the recommended amount of exercise each week.

More and more firms across the world are tackling these issues by pushing their employees to exercise more. The idea is that if the workers are in better health condition, they will bring a lot of benefits to the company. Indeed, employees who are working out have higher jobs performances and are less likely to be sick. If the workplace itself offers fitness facilities to their employees, the workers will feel more engaged with the firm.

Surprisingly, the issue of the level of attendance of gymgoers at the fitness club is also concerning gyms themselves. Indeed, nowadays, more and more fitness club

companies are realizing that making people show up at the gym can increase their benefits. Where in the past, the goal was to attract people who would pay but won't come, the new trend is to keep its clientele and making it pleased. Actually, it is way cheaper to retain a customer than to find a new one, so the key is to make them happy. Furthermore, gyms start to understand that if their clients are satisfied, they can provide additional services and charge more a month.

But firms are not the only ones concerned with health problems, governments are too. In the United States, obesity, without taking into account the overweight persons, costs around 210 billion dollars a year (Cawley and Meyerhoefer, 2012). In order to fight against this problem, programs and campaigns to promote exercise and healthy food have been launched all over the world.

Taking into account the fact that an important proportion of the population has a gym membership and that these figures are growing each year, and knowing that most of these gyms members don't go to the gym, wouldn't it be a good idea for governments to launch campaigns with the aim of pushing people to show up at their gyms?

### **Chapter 13. Discussion about the efficiency of monetary incentives on the frequency of gym attendance**

A study issued by the Santa Barbara University of California in 2009, tried to understand if people would show up more often at the gym if they were incentivized with money (Charness and Gneezy, 2009). This study was launched on a period where the overweight and obesity issue was worrying the American society. Indeed at that time, 66 percent of Americans adults were overweight which, was the highest level in the country's history.

Previous studies showed that exercising was the best way to lose weight and to provide health benefits (Andersen, 1999). Besides that, there are also psychological benefits of exercising: people feel less depressed, have an improved body image and more self-esteem (Brownell, 1995). Exercising on a regular basis may also reduce stress and anxiety (Kayman, Bruvold, and Stern, 1990).

In the discussed paper two studies were conducted, and in both of them, the researchers paid students to attend the university's gym. In the first study, the behavior of three groups was analyzed and compared. Each group received a folder explaining the

benefits of going to the gym and for one of them, it was the only requirement they received. The students of the two other groups received 25 dollars if they exercised at least once during a week. One hundred additional dollars were given to the people of one of the two groups if they would attend the gym minimum eight more times in the following four weeks.

The results were in agreement with what we could expect. The attendance rate of the group receiving 100 dollars if exercising more was more than twice as high as the group receiving only a fitness propaganda folder. Surprisingly, the differences between these two groups did not decline at all during the time following the payment, proving that the effects had some degree of persistence. On one hand, there was only a small difference between the behavior of the non-incentivized group and the group receiving 25 dollars. But on the other hand, there was a large difference in behavior between the low and the high incentivized group.

For the purpose of the second study, the researchers invited people to a first meeting where biometrics measures were taken and where participants were given a folder explaining the benefits of exercising. They received 75 dollars for this part and were asked to come two more times and would receive 50 dollars for each visit. Once again, biometrics measures were taken at each visit.

The participants were randomly separated into three groups. The control group had no further requirements. The second group had to go to the gym once during the one month intervention period, and the participants of the third group had to show up eight times at the gym during the same period.

There was a significant and persistent increase in the attendance rates for the persons in the third group. The biometrics measures of the third group were also way better compared to the ones from the other participants.

This paper proves it is possible to encourage the formation of good habits by giving monetary incentives. In both studies, the rate of gym visits increased significantly after the intervention. The participants who did not attend the gym before the study started doing so during the intervention period, and continued to go after it was finished.

Earlier in this work we discussed a paper called "Naivety, projection bias, and habit formation in gym attendance" (Acland and Levy, 2013). The authors concluded that even if habit formation appeared for the subjects who were incentivized with money, it didn't last

long. Therefore, we can say that the results were not as concluding as the study discussed in the beginning of this chapter. For this reason, we will analyzed other studies in order to have a broader and more critical view on the subject.

A more recent paper issued by the American National Bureau of Economic Research in 2017, also tried to see if paying people would push them to visit the gym more often (Carrera, Royer, Stehr and Sydnor, 2017).

It is important to notify that the experience was conducted on new members of a fitness facility, therefore, on a population that is already engaged in trying to change their health behavior. The participants were divided into four groups. The control group received a payment of 30 dollars unconditionally. The three incentivized groups received a reward if they went at least nine times to the gym over their first six weeks of membership. The different incentives were a payment of 30 dollars, a payment of 60 dollars or receiving an item with a value of 30 dollars.

The results showed that the discussed incentives had only a moderate impact on the attendance rate during the first six weeks of subscription and had no effect on participant's behavior after the research period. Not surprisingly, low exercisers were the ones with the largest increase in total visits in response to the incentives. But overall, we can conclude that offering modest financial incentives only marginally changed the behavior of new gym members. This study states that the best way to make people change their habits, in terms of going to the gym, would be to offer them tailored incentives and help them to set realistic and reasonable goals. Moreover, the study discussed here states that financial incentives are less effective when they target a population whose potential for habit formation is not at its peak.

In 2016 a study from the Journal of Economic Behavior & Organization tried to see if people would go more often to the gym if they received a rebate of 10% or 20% on their membership if they would do so (Rohde and Verbeke, 2016). They concluded the rebate incentive had a positive but small impact on gym attendance, however, in the long run, after the experiment, the effect disappeared.

Based on the results of the several researches and studies analyzed in this chapter, we can conclude that offering financial incentives to persons in order to motivate them to go more often to the gym does not work. Indeed, even if some studies found that there was a positive correlation between the gym attendance rate and financial incentives, the results are

mainly not significant or persistent. Most of the papers showed that the (small) positive effect disappeared a few weeks after the incentive period finished.

## **Chapter 14. Summary of the efficient incentive methods on gym attendance**

### **Self-funded commitment contracts**

Based on the findings of previous studies, and therefore knowing that financial incentives have no lasting impact on gym attendance rate, a paper from the NBER tried to see if self-funded commitment contracts created after the incentives period would increase the visitation rate (Royer, Stehr and Sydnor, 2012). Therefore, in this study, after a four weeks incentive period, half of the subjects were offered the chance to create a commitment contract. These contracts gave people the opportunity to put as much money at stake as they wanted. If the person continued to go to the gym during the two months after the incentive period, he could receive his money back. If he didn't, he had to give it away to charity. The results were positive. Indeed, the self-funded contracts had very long-lasting effects. Even one year after the end of the incentive program, the positive effects were still detectable.

### **Gym-Pact and StickK**

In 2011, two Harvard College graduates, Yifan Zhang and Geoff Oberhofer, came up with a new idea: making people pay when not achieving their gym attendance objectives. This was done through the creation of an application called "Gym-Pact". The app offers what the founders call motivational fees: customers agree to pay a certain amount if they don't stick to their fitness plan. The idea arose during a Behavioral Economics class at Harvard, when the teacher explained that people are more motivated by immediate consequences than by future possibilities. The graduates believed that if missing a workout would cost money to people, they would be more motivated to stick to their objectives.

The principle was simple, each time a person would skipped a work-out session, Gym-Pact would charge the slacker's credit card a financial penalty (5 or 10 dollars). The penalty was chosen by the user on beforehand. Furthermore, if the fitness member respected his planning, he received money from the app. The money that was given to the well performing gymgoers came from the pool of money created by the persons who didn't make their pact. The app tracked down if the users were actually going to the gym thanks to the GPS of their cell phones.

Later on, the app extended its business to other activities which were good for people's health like healthy nutrition. On the 11 of July 2017 Pact (the new name for Gym-Pact) ceased its activity for unknown reasons.

StickK, an application very similar to Gym-Pact is still downloadable today. As it was the case for Pact, StickK uses commitment contracts that people sign with themselves in order to stick to their objectives. The users put money at stake, which can be given to charities or to friends. Once again, the app makes use of people loss aversion to help them attain their objectives. It offers some particularities compared to Pact. Indeed, users have referees who monitor and verify the progress of the person's Commitment Contract. Supporters are also cheering people to do the best they can.

One particular difference with the previous app is that StickK offers the possibility to their users to lose their money to "anti-charities". These organizations promote values that are contrary to the user ones, as it would be the case for a Tottenham Hotspur soccer fan risking losing money to the "Arsenal Fan Club". The founders believe that, thanks to anti-charities, people will work way harder to ensure that their money will not fall into the wrong hands.

### **Temptation Bundling: an audiobook example**

In 2013 a study of Management Science tried to understand if linking an instantly gratifying experience (enjoying page-turner audiobooks) with a delayed rewards experience (exercising at the gym) would increase the attendance rate at the fitness club (Milkman, Minson and Volpp, 2013). This is called temptation bundling: coupling "want" activities with a "should" behavior which is providing long-term benefits and requiring a lot of willpower. The idea behind this kind of bundling, is to make exercising more appealing due to the fact that the gymgoers can combine it with a tempting activity.

Three different groups were randomly composed for the purpose of the study. The first group received an iPod with audio novels they could only listen to at the gym. The second group had also access to an iPod with audio novels but could listen to it whenever they wanted, but were encouraged to only allow themselves to use them when exercising. The last group was the control one, with no iPod.

The conclusions showed that when temptation bundling was imposed, it increased the attendance of the persons by 51% and at very low costs. For the group where people were encouraged to listen to the iPods only at the gym, people exercised more by 29%.

Furthermore, after the study, 61% of participants were ready to pay to have a gym-only access to iPods with tempting audiobooks. On the other hand, the disadvantage was, that over time, the effects of tempting bundling diminished. The study showed it was very difficult for people to self-impose tying temptation bundling rules. However, this experience also proved that tempting bundling could be a very good and cheap solution to make people show up more often at the gym.

### **Team incentives**

In 2015 a study called “Letting down the team? Social effects of team incentives” tried to understand if team incentives were a good solution to push people go to the library or to the gym more often (Babcock et al., 2015). In the experiment, participants were randomly divided in three different groups. The control group received no incentives. In another group, participants earned incentives based on their own behavior, we will call this the individual group. People in the last group received the same incentives as for the second one, but this time, they were dependent on the behavior of a randomly assigned partner. In the individual group, people could earn 25 dollars by going to the gym at least five times during a two weeks period. On the other hand, under team incentives, the money was given only if the two participants went the required numbers of times at the fitness club.

The results showed that the team treatment outperformed the individual one in terms of attendance rate. Indeed, people who were linked to someone else went 20% more often to the gym. On the other hand, the treatment worked less well when the two participants didn't know each other. Another interesting finding was that when facing the choice between team or individual treatments, almost every participants (97%) chose the individual one, which suggested that the social effects operated through guilt rather than altruism.

When people had the possibility to choose between team or individual treatment, even if most of them opted for the first option, the visitation rate went 27% higher than for the imposed individual treatment group. This observation demonstrates that per se choosing one's environment can have a beneficial effect on people performance.

### **Feedback and news taking**

Pamela Kufahl, the editor of Fitness Business Pro, a publication for health club owners said: “We're going to see clubs do more hand-holding in the future”. As we discussed earlier in this work, retaining gymgoers is cheaper than finding new ones. This is why fitness clubs do their best to keep their customers. More and more gyms are giving people feedbacks on how much they exercised in the recent weeks and are trying to

motivate and take news from the members who are not showing up. For instance, some gyms use FitLinxx, a computerized system that can be attached to fitness equipment and tracks clients' progress. Users of the system receive reports on the amount of pounds they lifted, the amount of calories they burned, etc. Clubs using this device have a 16% lower dropout rate according to FitLinxx chief executive.

Other gyms have personal coach or employees calling the clients to motivate them to show up. A study conducted by the Stanford University in 2010 proved it works. In this paper 218 people were divided into three groups. Each participant had, during an introductory session, to establish his goals. The first group was the control group. The second group received, every three weeks, calls from a Stanford health educator, who asked about the compliance with the objectives and who cheered them on. The last group, received the same calls, except that these were made by a computer program.

The results showed that, after one year, the participants who were called by a human, exercised 78% more often than before the study. For the ones who were called by a computer voice, the increase in exercising was also important but smaller than for the participants who interacted with real humans. Six month after the study ended, the researchers found out that the results didn't changed much compared to the one year situation.

# **Fifth part: Application of gyms contracts to other industries**

This part will start by enumerating the particularities of gym contracts. After having listed these specificities, we will try to find other sectors where similar contracts are used and discussed them. We will start by analyzing the first contracts that come to mind when thinking about resemblances with gym membership engagements. After that, we will focus our attention on companies which are taking advantage from inconsistent time-preferences of consumers. Lastly, we will discuss contracts where procrastination is present and debate if the reason behind this delaying behavior is present bias or not.

## **Chapter 15. Overview of the particularities of gyms contracts**

We could define a (low-cost) gym membership contract as a monthly contract that is made so cheap that it is possible for anybody to exercise. The fact that a lot of members procrastinate, and therefore, don't show up at the gym, makes the membership contract very interesting and profitable for the ones who are actually using the club facilities on a regular basis. Indeed, if there were no absent subscribers, the price for the actives ones would be way higher.

Earlier in this work we also defined these type of contract as "club goods". Gyms offer high excludability but low rivalry in consumption (until the place is too crowded). The more subscribers, the smaller the contribution of each one of them to the costs.

An interesting element about this type of contracts is how people feel about it. Nowadays, exercising and trying to be healthy is seen as a good thing in our society. Bragging about their gym membership could make some people feel socially good. Absent gymgoers may be reluctant to quit their gym membership because it is difficult to accept and to tell people they did not made a proper use of it.

So the three important elements of these type of contracts are:

1. The low subscription fee which make it possible for active users to pay less than what they would have done if there were no absent members.
2. The high excludability but relatively low rivalry.
3. The positive social feeling it brings to members.

## Chapter 16. Presence of similar contracts in other industries

Obviously the first thing that comes to mind when thinking about similar contracts, are swimming pools memberships, indoor running memberships or any membership which involves sport facilities. However, these contracts are too close or even similar to the ones discussed in this work and therefore, analyzing them, won't be very interesting.

If we only take into account the two first elements of the three important particularities of gyms contracts, a specific type of contract may be seen as very comparable: insurance contracts. Indeed, in the case of health insurance for instance, a large pool of healthy people are paying at every period (month, year, etc.) a fee which fund the health-care costs of those who do get sick. If the sick people were the only ones who had to pay for their health-care costs, they would be obliged to pay an enormous amount. The fact that people in good shape are paying for a service they don't immediately use, makes the fees suffering people have to put on the table more affordable. This mechanisms is also used by any other type of insurances. Additionally, insurances respect the definition of club goods: being excludable for those who are not paying the fee, but non-rivalry between those who do. The any problem with these contracts is they're not bringing any social positive feelings to the subscribers.

Even if those contracts seem very similar to gyms memberships, a crucial element is missing: procrastination. Further away in this work, we are going to address contract where this behavior is present.

Different things may make people have a socially positive image about themselves: exercising, being ecological, helping people, etc. Nowadays, the trend very present in our society is the awareness of people about their climate footprint.

When thinking about similar contracts as the ones issued by gyms, and taking into account the fact that we are looking for something ecological, I came up with a particular service: the renting of shared bikes in big cities (like Villo! in Brussels). The principle is simple, people pay a yearly membership and have access to bikes located all over the city. By having this kind of membership, people feel good about themselves and feel like they are fighting in the war against pollution.

But when I was talking with my friends living in Brussels I found out that most of the ones who have a Villo! subscription almost never use it. Unfortunately, there still is a difference with gyms contracts, indeed, Villo! is not a club good because rivalry is present. There is a limited number of bikes, and people may face a situation where there are no more bikes available.

We can conclude by saying it is very difficult to find contracts that are perfectly similar to the ones gyms offer. One of the main elements characterizing them is often missing to have a perfect match.

## **Chapter 17. Presentation of contracts taking advantage from time-inconsistent preferences and of naive consumers**

In this part we are going to discuss contracts that are similar to the ones issued by fitness clubs on two particular aspects: all these contracts will use time-inconsistent preferences and will take advantage from the naivety of consumers.

As we already discussed in this paper, consumers have a higher discount rate between the present and the next period than between any of the further away periods. Most of the consumers are naïve about this particular behavior. The economical name for this behavior is time inconsistency. It refers to a situation in which a decision-maker's preferences change over time in such a way that they can become inconsistent at another point of time. But people are not aware of it and think that their preferences in the future will be similar to what they are right now. This is particularly present in the fitness industry. When deciding to engage in a gym subscription, people really desire to exercise on a regular basis but don't know their preferences will change in the future, mostly because of present bias. In this particular case, gym's members overestimate their future attendance at the club.

We will discuss here two types of goods where time-inconsistent preferences are present: investment goods and leisure goods. The former gives delayed benefits but demands immediate costs, while the later requires the opposite. Indeed, leisure goods offer immediate satisfaction but request delayed payment. A typical example of investment goods is the one we discussed broadly in this work: gyms attendance. People have to pay every month a subscription and have to physically suffer during their sport session but only gain muscles and see results after some time.

A study called “Contract Design and Self-Control: Theory and Evidence” (Della Vigna and Malmendier, 2004) used empirical evidence to explain how profit maximizing firms create contracts that take advantage of the time-inconsistency preferences of consumers.

The paper found out that firms selling investment goods price below marginal costs if consumers have time-inconsistent preferences. The naïve consumers will overestimate their usage of the investment good.

To take advantage from this irrational behavior, firms will offer contracts with a discount on the per-usage price and a higher flat fee. Consumers will overestimate the value of the discount and will believe they received a good deal because the price is below marginal cost.

Firms selling leisure’s goods will price above marginal cost, as opposed to investment goods selling firms. Once again, naïve consumers will underestimate their usage of the product.

An example of investment goods where time-inconsistent consumers are exploited is the case of vacation time-sharing. These types of services offer the customers the opportunity to go on holidays for one or more weeks in different places. As it is always the case for investment goods, there are immediate costs and delayed benefits. In this particular situation, booking a holiday is an activity with current effort costs due to the required level of planning and of organization. On the other hand, the fun part of the service, enjoying the vacation, is further away in time. The typical contract in this industry involves an important initial fee to become member and then only a small cost is required to book a one week holiday. For instance, in the United States, the average fee new consumers have to pay to be member of the program is 11 000 dollars. But the amount they have to put on the table for a one week vacation is way lower, around 140 dollars.

Credit cards are good examples of leisure goods. They allow people to increase current consumption at the expense of future consumption. Naïve individuals underestimate the usage of this credit system. In 2002, the average credit card debt was around the 5 000 dollars per American household (Gross and Souleles, 2002). Evidence show that the introductory interest rate on credit card is low, but over time it increases a lot. This is done by companies in order to exploit naïve consumers, by attracting many of them with low fees and making them pay more afterwards knowing they will underestimate their usage of credit cards.

Any addictions can also be seen as leisure goods. Indeed they provide immediate benefits (good feeling, physical pleasure, etc.) but have delayed costs (health problems, mental issues, etc.). For instance, in Las Vegas, hotels use gambling addictions to attract consumers to their establishment. Most hotels offer very competitive rooms and buffet prices in order to attract a lot of customers. But they make up their loss in profits thanks to the money customers lose at gambling. These deals seem very attractive to naïve clients, who believe they will gamble moderately, but obviously, this will not be the case.

Cellular phones subscriptions are also leisure goods. People can immediately enjoy calling other persons, but have to pay a fee at the end of the month. Most cell phones subscriptions offer a limited amount of data, call minutes and number of text messages for a predefined price. If the customer exceeds those limits, he has to pay an extra amount on top of his monthly subscription. Naïve consumers believe they won't exceed what is offered by their membership. But companies predict this underestimation and set very high marginal prices for extra minutes (or extra text messages or extra data).

## **Chapter 18. Presence of procrastination in other contracts**

Except for Villo! and vacation time-sharing, all of the different contracts discussed previously in this work are related to gyms contracts but miss a very important element: procrastination. It is because people procrastinate that they won't show up at the gym.

Procrastination can be defined as when someone keeps delaying something that must be done, often because it is unpleasant or boring (The Cambridge Dictionary, 2018). The Oxford Dictionary gives an even shorter definition: "the action of delaying or postponing something".

The first thing that comes to mind when one thinks about the possible reasons why people postpone going to the fitness club is because it is a physical activity, most people don't like doing it, and many more enjoyable things can be done instead. Moreover, the results can only be seen in the long run. Therefore, an activity that combines the need of a physical effort, which is, for most, not enjoyable, with the absence of immediate visible results, often lead to a procrastination situation.

However, this work discussed the actual reason why fitness members procrastinate; present bias. As a reminder, present bias can be defined as the tendency to over-value immediate rewards at the expense long-term intentions (being healthy in this case). It is

important to highlight that when consumers choose the gym membership they would like to subscribe to, procrastination is not present in their minds. At that time they truly believe they will exercise often. So at the decision time, consumers will choose the contract that will maximize their expected utility, without taking present bias into account.

In this chapter, we are going to discuss contracts where procrastination is present. For each of these business arrangements, we will check if present bias is the reason of the delaying behavior. If it's not the case, we will try to give the determinants that could explain the existence of procrastination.

Automatically renewed contracts often lead to procrastination situations. Indeed, in order to stop the subscription, consumers have to take a number of cancellation measures. Because most of the time these actions are boring, and because it takes time to complete them all, some people forget or just don't unsubscribe. Firms are aware of this particular behavior and do their best to make money from it. Many examples can be discussed where automatically renewed contracts lead to procrastination. For instance, in some cases, telecommunication operators offer consumers the possibility to buy a smartphone in addition to their monthly subscription fee which is giving them access to a number of phone call minutes, text messages or data. The package for which the clients have to pay each month is equal to their classic subscription fee plus a certain share of the total price of the smartphone. After some time, the price of the smartphone is completely paid by the consumer because of the many shares he bought over time. Eventually, even if the total price of the cell phone has been amortized, many consumers still continue to pay the full monthly package fee. This is done despite the fact that the most rational solution would be to opt out and to select another subscription package.

Firms often use teaser rates in order to to engage people in contracts where procrastination is present. Indeed, by offering a very low introductory fee, consumers feel they are getting a good deal and accept the contract. But after a while, companies increase their rates either drastically or either more gradually.

The combination of teaser rates with automatically renewed contracts allows companies to largely benefit from the procrastination behavior. Teaser rates help them attracting an important number of people and automatically renewed contract make sure these new consumers stay enrolled.

In the situation where people buy goods or services, which are seen as good for themselves, for their body or for their intellectuality, procrastination is often present. Memberships to sport clubs often lead to this delaying behavior, but this is almost similar to gym subscriptions.

Going to museums, theatres or operas is something that is considered, in our society, as something very intellectual and as making people more cultivated. Therefore, many people visits these different places in order to extend their general culture, to feel socially good or to be able to brag about it. Most of the companies offering these type of services give the opportunity to their customers to subscribe to a monthly or annual membership. By paying for a membership, people expect to feel obliged to go as it is the case for gyms subscriptions and so, push themselves to visit more often these intellectual activities. But once the payment done, while facing the possibility of assisting a performance, people will often postpone it and procrastinate because their preferences are present biased. Indeed, each different museum exhibition, theatre or opera performance gives people a different intellectual baggage. In order to feel cultivated about a broad number of topics, individuals have to go to these activities an important number of times and hence, the benefits are only visible in the long run. Whereas immediate benefits could be brought by the activities done instead.

Even if it is less seen as an intellectual activity in our society, and that on average, people go more often to the movies than to operas, theatres or museums, these findings can also be applied to movie theatres. Indeed, for instance UGC, an important European cinema operator, offers a monthly subscription fee of 18.9 euros per month to get access to an unlimited amount of movies (UGC.be, 2018). In order to get a good deal from this membership proposal, supposing that on average a movie tickets costs around 8 euro, people need to go at least 3 times per month at the cinema. This can be seen as an incredible deal for the people who are actually going very often to the movies, but going three times a month or more, is an important frequency level most movie amateurs won't reach. Indeed going to the cinema requires the will of moving to reach the theatre, it means "losing" at least two hours that could be used for something else, and this, at least three times a month. In this particular case, present bias can not explain procrastination because the benefits of watching movies are immediate.

Refocusing on intellectual activities, many people are subscribers of intellectual magazines or newspapers. In an ideal world, these persons would like to have sufficient time to read all the information about important subjects that are integrated in the readings. But,

very often, people pay their membership fee without reading the magazines or newspapers, at least not entirely, because they procrastinate and prefer to do other, more distracting, things instead with more immediate benefits. Once again, the reason behind this delaying behavior is present bias. As it was the case for museums, theatres or operas, the cultural benefits from intellectual readings are only visible in the long run which discourage people who prefer instant rewards.

In a further extend, the situation where people have to move, to travel or to commute to enjoy goods or services can often lead to procrastination. This can be the case for subscriptions to places such as amusement parks, aquariums or zoos, where the consumers have to take the car or take some time to arrive at destination. People are very excited to have a membership which seems very cheap, but after a while they realize it was not such a good deal. Obviously, the explanation behind the procrastination behaviour, in this particular situation, is not present bias.

We already discussed the topic of shared bikes in big cities. In addition to the fact that it gives people a good feeling about themselves because of the ecological idea behind it, this mean of transportation can also be a fruitful area for procrastination. Indeed, even if people pay for it every month or every year, it remains a physical effort, and can feel as a as an ordeal in case of bad weather. Additionally it requires adequate clothes, and sometimes, the necessity of taking a shower. Biking drastically limits the amount of things people can carry with them in comparison with taking the care, the bus or other means of transportation. Even if the subscription fees of shared bikes are often cheap, many of its users also have an unlimited public transport membership or a personal car. For all these reasons and in many cases, people procrastinate and won't use the bikes.

But once again, present bias is the main reason people don't use the shared bikes while paying for them. If the reasons of taking a subscription is doing more sport, the explanation behind the procrastination behavior is the same as the one for gyms memberships.

These types of contracts, such as Villo! in Brussels are very similar to gym subscriptions. Indeed, they also provides its users a good social feeling about themselves and procrastination is very present. The fact that so many people pay without using the service may explain why the subscription fee is so affordable.

In order to show that those types of contracts are very similar, even in their contract proposal, we are now going to compare the passes Indego, a sharing bicycle system present in Philadelphia, and Basic-Fit, the gym market leader in Belgium, offer to their clients. As you can see on the sixth and the seventh appendix, even if for gyms, the monthly subscription is put forward while for Indego, the annual one is highlighted, it is really striking to observe the similarities those two type of contracts have in common (appendix 6 and appendix 7).

# Conclusion

The large number of studies, papers, articles and books I analyzed for this work helped me to provide some potential answers to the different questions implied by the goals I wanted to achieve.

The first question I felt the need to elucidate was concerning the procrastination behavior of people: why aren't they going to the gym while paying to be able to? Behavioral Economists states that it is because of the existence of present bias. The theory behind it is that people tend to give stronger weight to payoffs that are closer to the present time when considering trade-offs between two future moment (O'Donoghue & Rabin, 1999).

Present bias explain why people procrastinate and why they don't exercise much, but do not explain why they accept to pay for these subscriptions. One of the reasons may be that individuals are naïve about present bias and don't anticipate it. But another reason is that people have time inconsistent preferences. This refers to a situation in which a decision-maker's preferences change over time in such a way that they can become inconsistent at another point of time. In this case, when deciding to engage in a gym subscription, people really desire to exercise on a regular basis but don't know their preferences will change in the future. This adjustment can mostly be explained by the existence of present bias.

This work broadly discussed the fact that, even if exercising has a positive impact on people's health, most fitness members don't show up sufficiently often at the gym. Therefore, one of my main goals was to come up with efficient solutions that could make people increase their appearances at the fitness club. It has been proved that the usage of the following methods can increase gym's attendance: self-funded commitment contracts, apps like Gym-Pact and StickK, temptation bundling, team incentives and finally, feedbacks or news taking. More surprisingly, financial incentives don't seem to have a significant impact on fitness attendance rate, at least not in the long run.

Procrastination is a word which is more and more used in today's society. In order to understand its presence in modern economies I tried to come up with contracts with similarities compared to the ones fitness companies offer. I came to rapidly understand that this delaying behavior is very present in today economies but that the procrastination compartment present in those contracts can't always be explained by present bias.

For most of the discussed contracts, there is always a missing element which makes the comparison with fitness contracts imperfect. However, one particular services stood out from the others in terms of resemblance with the business engagements offered by gyms: shared bikes contracts. Having such a subscription offers consumers a good feeling about themselves due to the ecological and sport characteristics related to it. However, in most cases, people procrastinate and use other means of transport. Once more, present bias can be the main explanation behind this postponing behavior. Furthermore, the fact that a lot of people pay without using the service makes it possible to reduce the subscription fee per person. All these elements make shared bikes contracts very similar to fitness ones.

We know that exercising has an extremely positive impact on the health of persons and that sporting on a regularly basis may reduce a lot of costs for the society (spending in health care, sick leaves, etc.). Furthermore, this work proved that the fitness industry is very present in modern societies, that a lot of individuals have fitness subscriptions and that these numbers are still growing. We also noticed that most of these fitness members procrastinate and don't show up very often at the club. Having all these elements in mind, we could ask ourselves the question if governments should not put methods in place in order to push people to exercise. A further research could maybe address this issue.

While discussing contracts where procrastination was present we rapidly understood that firms are often aware of this behavior and try to take advantage by making money from it. A further study could be done on trying to understand if it would not be relevant to restrict or regulate these kinds of actions taken by firms which are harming consumers and hence, harming the society in its entirety.

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# Appendix

## Appendix 1

Figure 1: Top 5 European fitness markets by membership (2016)

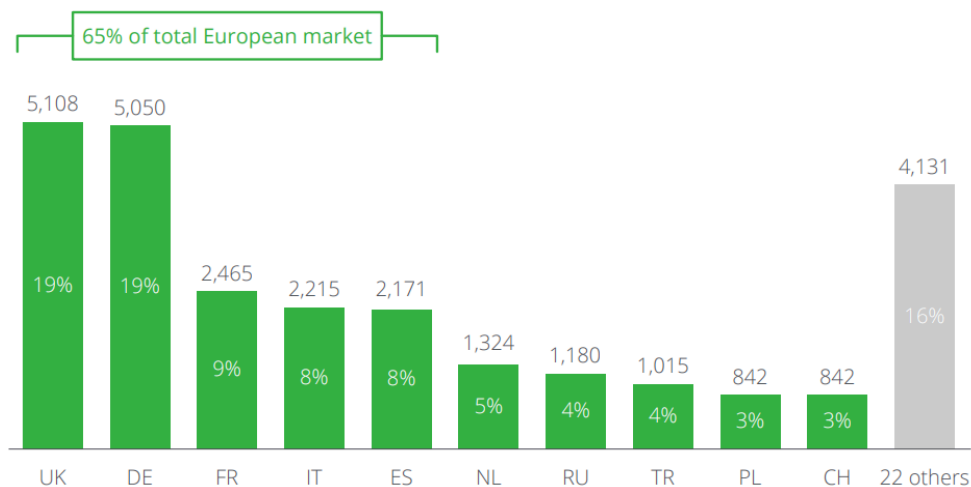
Rank	Country	Membership	Growth (vs. 2015)
1	Germany	10,080,000	+6.6%
2	United Kingdom	9,250,000	+5.1%
3	France	5,460,000	+5.0%
4	Italy	5,250,000	+2.9%
5	Spain	5,060,000	+2.4%

Sour

ces: EuropeActive, Deloitte

## Appendix 2

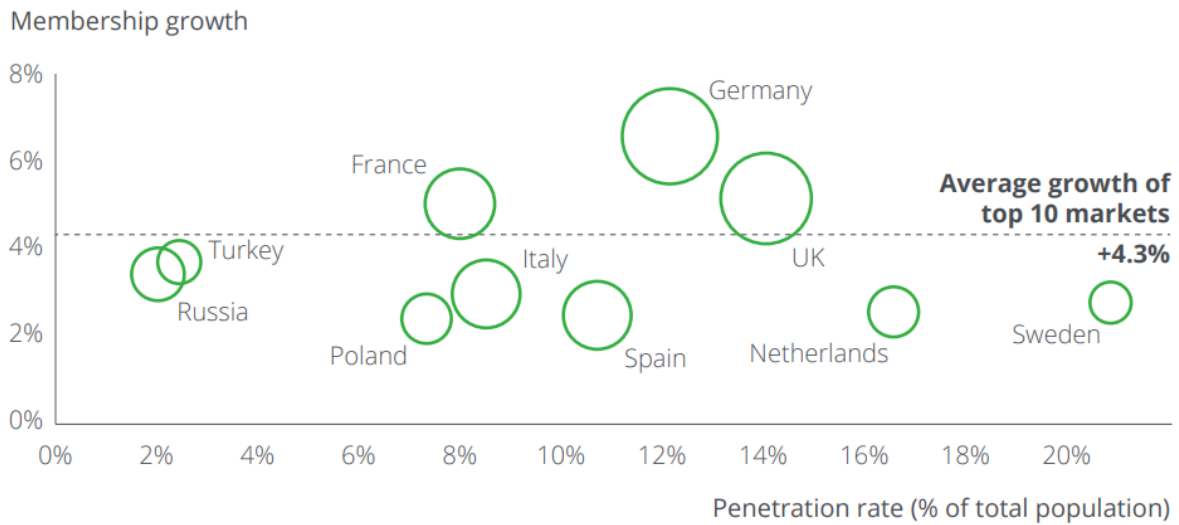
Figure 2: Top 10 European fitness market by revenue in million EUR and share of the European market (2016)



Sources: EuropeActive, Deloitte

### Appendix 3

Figure 3: Total membership, membership growth and penetration rate of top 10 European fitness markets (2016)



Sources: EuropeActive, Deloitte

### Appendix 4

Jim's subscription fee for two clubs in Brussels

### Découvrez nos tarifs

Choisissez votre club préféré [Modifier](#)

Jims Bxl Porte de Namur

Choose your alternative club [Modifier](#)

Jims Jourdan

Choisissez votre adhésion:

Inscrivez-vous aujourd'hui et recevez 25 € de réduction sur les frais d'entrée!

Daytime

...

- ✓ Fitness illimité
- Semaine: jusqu'à 16h
- Weekend: illimité
- ✓ 12 mois

14<sup>99</sup> par mois

Devenez membre

Anytime

...

- ✓ Fitness illimité
- ✓ 12 mois

20<sup>99</sup> par mois

Devenez membre

Group Classes

...

- ✓ Fitness illimité
- ✓ Cours collectifs EN DIRECT
- ✓ 12 mois

26<sup>99</sup> par mois

Devenez membre

Sources: [www.jimsfitness.fr](http://www.jimsfitness.fr), 2018

## Appendix 5

Jims subscription fee for two clubs in Flanders

### Découvrez nos tarifs

Choisissez votre club préféré Modifier

Jims Oostende

Choose your alternative club Modifier

Jims Brugge

Choisissez votre adhésion:

Inscrivez-vous aujourd'hui et recevez 25 € de réduction sur les frais d'entrée!

**Daytime**

...

- ✓ Fitness illimité
- Semaine: jusqu'à 16h
- Weekend: illimité
- ✓ 12 mois

16<sup>99</sup> par mois

Devenez membre

**Anytime**

...

- ✓ Fitness illimité
- ✓ 12 mois

22<sup>99</sup> par mois

Devenez membre

**Group Classes**

...

- ✓ Fitness illimité
- ✓ Cours collectifs EN DIRECT
- ✓ 12 mois

28<sup>99</sup> par mois

Devenez membre

Sources: [www.jimsfitness.fr](http://www.jimsfitness.fr), 2018

## Appendix 6

Indego subscription possibilities

**Indego30**

\$17/month

**Indego365**

\$13/month

billed annually for \$156

**Day Pass**

\$10 for one day

Monthly pass

---

Unlimited one-hour trips

---

\$4/hour after one hour

---

\$5/month for ACCESS cardholders

BUY A PASS

Annual pass

---

Unlimited one-hour trips

---

\$4/hour after one hour

---

\$4/month (billed \$48 annually) for ACCESS cardholders

BUY A PASS

One day pass

---

Unlimited 30-minute trips

---

\$4 per 30 minutes after the first 30 minutes

BUY A PASS

Sources: [www.rideindeg.com](http://www.rideindeg.com), 2018

## Appendix 7

### Basic-Fit subscription possibilities

The image displays three subscription options for Basic-Fit, each presented in a white card with an orange button and a list of benefits. The background is a blurred image of a gym.

- BASIC-FIT EASY**: 239,88 PAR AN. Button: JE CHOISIS EASY. Benefits: Sport gratuit jusqu'au 1er juillet 2018 !; Pour 12 mois; Résiliation automatique après 12 mois; Payez en une fois (12x19,99€).
- BASIC-FIT SMART**: 19,99 PAR MOIS. Button: JE CHOISIS SMART. A green banner above the card says "La plus choisie". Benefits: Sport gratuit jusqu'au 1er juillet 2018 !; Pour 12 mois; Après, résiliable mensuellement; Payez par domiciliation mensuelle; Cotisation totale 259,87€.
- BASIC-FIT FLEX**: 28,99 PAR MOIS. Button: JE CHOISIS FLEX. Benefits: Résiliable mensuellement; Arrêtez quand vous voulez; Payez par domiciliation mensuelle; Frais d'inscription 29,99€.

Sources: [www.basic-fit.com](http://www.basic-fit.com), 2018