

OTDK-dolgozat

Planned Obsolescence:
The source of asset wasting
(or how brand loyalty earns extra profit)

Tervezett elavulás:
A pazarlás forrása
(avagy hogyan szereznek a márkák extra profitot)

Kézirat lezárása: 2013.November.17.

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1. Abstract

I chose this topic, because although it started in the beginning of the 20th century, it became very important nowadays. This topic is also interesting, since we can recognize the effects every day, but we do not realize the main reason behind it. The most common notification is ‘‘light bulb conspiracy’’, which is the starting point of how multinational companies started to produce built-in-obsolescence products. I am demonstrating why we cannot prevent these actions. Furthermore, we – the ‘‘consume as much as we can’’ society- are attracted to these wasteful products, because the marketing tools make us think emotionally – like advertisements- , instead of rationally. One of the best examples is Apple. I show related facts behind the greenfield company, how it attracts us and how much profit Apple gains by convincing us not use the entire useful life of their products. I made some assumptions to calculate or realize whether we are prudent or wasteful consumers and how much Apple earns in short-term with a single product. I then highlight the main attraction tools, which makes us ‘‘hooked on’’ and why we fall in love with a product. On the other hand, I list an example in which in Brazil they found the truth behind the marketing curtain and the consequences of the lawsuit. After several readings, I will try to summarize the theoretical consequences, solutions and possible effects. I try to name certain ways to avoid planned obsolescence, although some suggest ‘‘de-growth’’, I consider ‘‘frugal engineering’’ to be a more adequate answer. Some pioneers started to think and act frugal – think in a smart way for the future- like Tata Nano or Nokia 1110. Their target audience is the Third world countries – or emerging markets- where they can earn at least as much profit as in the Western countries- because of the 5 billion people-, but in a resourceful way. Finally, I summarize the main effects of planned obsolescence and I am trying to show solutions –like jugaad innovation- on how we can avoid becoming wasteful consumers in this society and, thinking and acting for the future on a planet where resources are limited.

2. Introduction

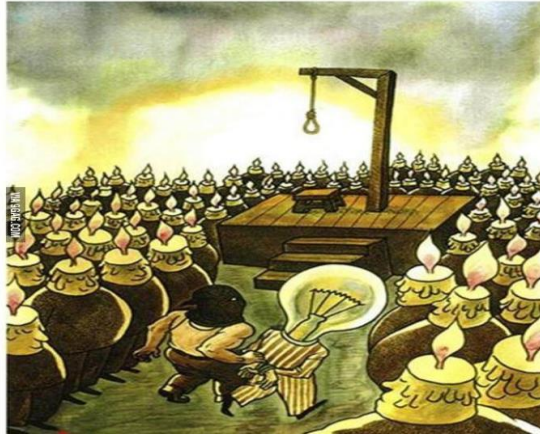
Planned obsolescence sounds complex, but if we have examples it is easier to understand its real meaning. I chose this topic because, its importance is growing nowadays; unfortunately most of the people are not aware of the increasing problem. It was general practice in the past as well, and it is growing, especially now – in the 21st century- where we are addicted and can not even live without electronic products. The main advantage of the multinational companies is that they do not have to care about the quality of the “junk” product or the harmful consequences – only about the competition-, because they know that we – the customer audience- are dependent. Consequently, we can say that the customers can not win against the multinational companies, only decrease the harm.

3. The Light Bulb Conspiracy

3.1 Overview

The light bulb conspiracy is a theory that the leading manufacturers of incandescent light bulbs have conspired to keep the lifetime of their bulbs far below their real technological capabilities. This way, they ensure the continuous demand for more bulbs and hence, long-term profit for themselves. (Cosima Dannoritzer, The lightbulb conspiracy,2010)

Cosima Dannoritzer – director of the film- made this document movie about planned obsolescence and the fundamental element of the issue was a light bulb. The movie represents the issue in a really simple way: an office worker is trying to use his printer, but it immediately breaks down and he will not be able to use it for the original purpose. He brings it to 3 different repair companies, but the advice or “solution” is the same everywhere: he should buy a new one and leave the unusable at the service, instead of repairing it for 4 times more money. He decides to bring the old one back and he is trying to find out the source of the problem. He found it! The reason of the breakdown was a chip which was responsible to stop functioning after a certain amount of machine hour. This example shows how to avoid becoming a part of this system.



(www.9gag.com, This is what happened to humanity)

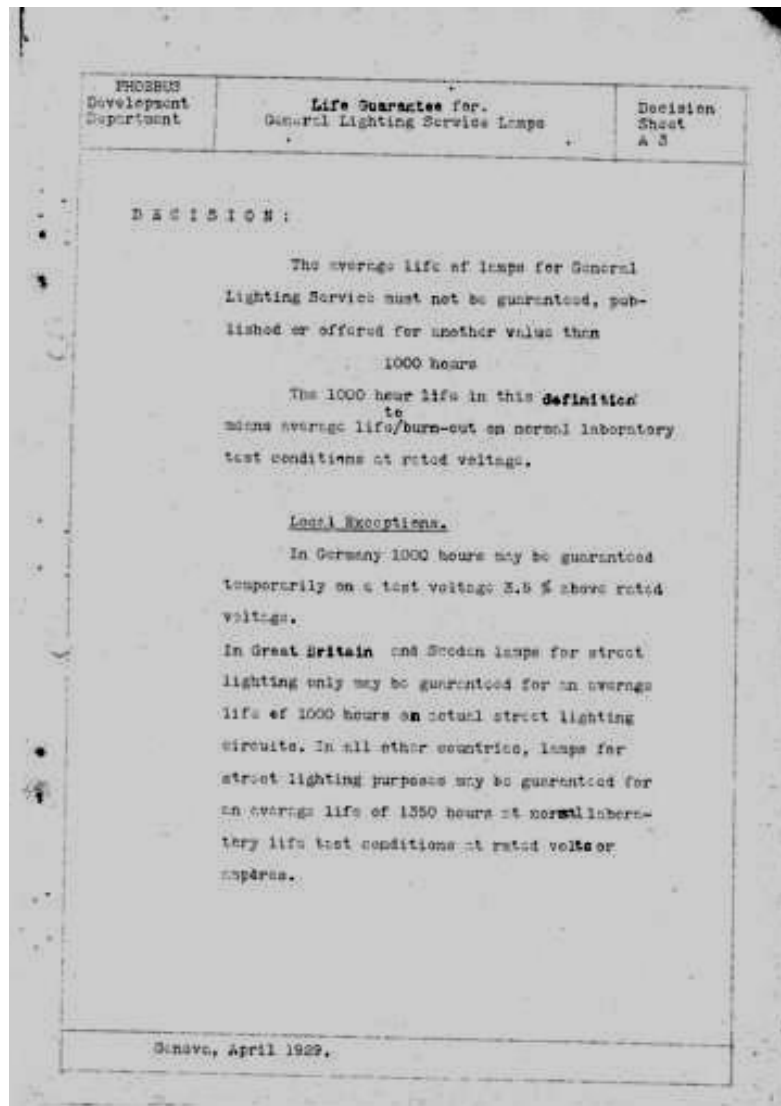
The name of this theory comes from the fact that in Livermore Fire Station- California, United States- there is a light bulb which is still working since 1901, although no one knows the reason. Another interesting aspect of this example is that a lot of people do not know that the first cartel was made for light bulb production. The first – Phoebus- cartel was founded in 1924 in Geneva, the main aim was to control the production of the light bulb and it was sliced between not just European countries, but also the US and Asia as well. (Cosima Dannoritzer, The lightbulb conspiracy, 2010)

3.2 Phoebus cartel

According to the definition of literatures, the cartel is an organization created from a formal agreement between a group of producers of a good or service, to regulate supply in an effort to regulate or manipulate prices. A cartel is a collection of businesses or countries that act together as a single producer and agree to influence prices for certain goods and services by controlling production and marketing.

By doing that they could control the consumers and force them to buy regularly. Even in the end of the 19th century Thomas Alva Edison could have created light bulbs which useful life was between 1500-2000 hours. Despite that the Phoebus cartel limited the useful life to only 1000 hours and they hid behind the 1000 hour life Committee. (Cosima Dannoritzer, The lightbulb conspiracy, 2010)

Here follows the proof:



(<http://www.taringa.net> , Phoebus cartel, 1924-39)

To control the other corporations in the competition, they forced the others by the government to decrease the lifetime to less than 1500 hours and if they could not have reduced it or they wanted to create a better product with higher quality they had to pay fines. In the next years the useful life of the light bulb was less than 1500 hours all around the world and that is why this product became the first element of planned obsolescence, but then they were not thinking about the consequences.

That was the beginning of planned obsolescence and according to the ‘‘success’’ of the Phoebus cartel other production companies realized the huge profit resulting from this and they started to take the same steps in their own field.

Although the Phoebus cartel was successful, the others could not have earned huge amount of profit in short term, because of one unexpected event- the crisis of 1929-33. The unemployment rate increased by 25 percent and the people were afraid of their jobs and salaries instead of whether buying the newest products or not.

3.3 Possible solutions

One possible solution to save and restart the economic development was starting planned obsolescence by Bernard London, real estate broker. His suggestion was to calculate and define the useful life of every product and if it is damaged or can not be used for the original purpose, officially calls it dead product. Governmental agencies were responsible to gather these products and destroy them instead of recycling. The main purpose behind this theory was that if the customers want to buy more and more, the production companies will need more and more employees. After long discussions the plan was not started. The interesting point is that planned obsolescence was introduced in the fifties, but at the time without any aim or purpose. It created a huge difference between the US and Europe: while the European production companies created products for the consumer’s entire life, in the US they tried to reduce the products’ quality, but they achieved to sell newer products because of their attractiveness. The prior feature of the product was then the ‘‘style’’ and not the usefulness. In other words, the marketing was more important for a company than the engineering development. The main difference between the Phoebus cartel and the fifties’ production was that the consumers were not forced to buy one specific product, they chose because they wanted it– although they did not need it- and that is why they are responsible for the long-term consequences of their decision. The consumers also had a big role in the economic improvement which in the beginning was good for the society because the consumption increased in short-run, but the problem was that they bought superfluous products.

This process still exists and without it the marketing and other sales elements could not have improved. One great example is the mall: first of all it gives jobs not just for the salesmen – who helps the producer to distribute their products and services-, but for those persons who

are responsible for the safety and cleanliness of the mall. We can say it is just a big box – an ordinary product - which can increase the consumption and decrease the unemployment rate.

Serge Latouche- Farewell to Growth

Serge Latouche said that the system we live in has three main tools: advertising, planned obsolescence and credit! (Cosima Dannoritzer, The lightbulb conspiracy,2010)

The aim was to force emotionally the customers to buy the newest products, even if they had to take loans. On the corporations side their aim was to speed up their R&D to create newer and newer products even if they did not improve the product's usefulness. That was their main strategy to attract the customers to buy a newer product, even if they could not pay back the loan. (Although planned obsolescence in the communist countries, where the lack of consumer products was the big issue, could not spread)

“ Anyone who believes that infinite growth is compatible with a finite planet is either a fool or an economist”. [“Car” example]- Serge Latouche (Cosima Dannoritzer, The lightbulb conspiracy,2010)

One solution could be to increase the transport costs for these products and because of the fact that oil is a non-renewable resource- and cannot be substituted- the transporters would not take enormous distances.

Serge Latouche says that de-growth is a provocative slogan which originally should mean reduce. We should reduce not just waste, but also over-production which is the base of over-consumption. The main purpose of the products and services is to make the consumer happier, but it does not happen, because happiness is a subjective and unique intangible “product”, what we cannot buy according to the size of our wallet. To return to a sustainable economy, we should decrease our claims, which would mean that we should return – not to the Stone Age- to the sixties.

Gandhi said: “ The world is large enough to satisfy everyone's needs, but it will always be too small to satisfy anyone's greed.” [Mahatma Gandhi quotes,1869-1948]

DuPont example

In the fifties, DuPont stockings were world-wide famous, thanks to their flexibility, which was a good investment for the customers. On the other hand the producers were not satisfied, because buying one pair of stocking was enough for an entire life. The engineers were forced to create a less flexible and thinner product. This method created some moral and ethical issues: the original aim of an engineer was to create a better and improved product, but in this case time they had to forget the method and R&D of creating a unique product and start creating mass junk production.

Conclusion: Cradle to cradle

“In a waste-based society short-lived products are a waste problem. If a society produces nutrients every short-lived product can turn into something new.” [Michael Braungart, The lightbulb conspiracy, 2010]

4. Apple’s case policy: the protagonist of planned obsolescence?

4.1 Why Apple

The demonstration of my thesis in practice or – according to my opinion- the most obvious example for planned obsolescence is Apple. They are the typical greenfield corporation with the American dream about how to recycle and guarantee every product. Well, this way of thinking is going to change during the next pages. In the beginning I am going to show the main data of Apple just to realize how big the corporation is and then I will show the calculations, facts and reasons about why people are still attracted to a “poisoned” apple. In other words we will see the unique marketing tools which manipulate our mass consumption society.

4.2 Some information on Apple

Apple

Market Cap \$416.62 B As of May 2013

At a Glance

- Industry: **Computer Hardware**
- Founded: **1976**
- Country: **United States**
- CEO: **Timothy Cook**
- Website: www.apple.com
- Employees: **72,800**
- Sales: **\$164.69 B**
- Headquarters: **Cupertino, California**

Forbes Lists

#15 Global 2000

- **#15** in Sales
- **#2** in Profit
- **#141** in Assets
- **#1** in Market value

#1 World's Most Powerful Brands

#26 Innovative Companies (#5 in 2011)

Apple's cash asset is 147 billion USD

In this statistics or report, HuffPost Tech assumed that what position would Apple have if it was considered as a country. The results are maybe shocking, but expectable, and it perfectly shows the power of a couple of giant organizations. According to the US Department of State there are 195 independent countries in the world.

If Apple was considered as a country according only to their cash reserves it would be the 58th richest country. With their assets and brand value they would jump to the 28th place. We could easily consider them as an developed nation. At the second place there is Google with 93 billion USD, followed by Microsoft, Cisco and Pfizer in case of electronic companies. (www.forbes.com, Apple data)

4.3 Beginning of the truth:waste

The multinational companies like Apple sends the non-recycle products to the Third World countries, like Ghana, but the main question – besides the moral issues- is that how can they do it besides the strict rules? The method or trick is easy: they gather the “junks” and send them to the Third countries as second-hand products. With this method they can tell the authorities that they want to decrease the huge gap between the First and Third world countries. But in real life they treat the Third world countries as a container country. The developed countries method is: Use it and throw it.



(<http://svtoxics.files.wordpress.com> ,Non-recycle Apple products in Ghana- Mike Anane)

4.4 The costs of a phone?!

How much is the actual cost of an iPhone?

Apple sells millions of iPhones every year and many of the customers think it is too expensive, even if the TOOLS can be made with a very low price. According to the facts how much can be the real cost for the corporation and how much is the market price?

Components	Costs	Description
Memory	5100Ft=25 dollars	16 GB NAND flash memory for the data and for the operation system plus 1 GB operation memory for running the system.
Touch Screen	10200Ft=50 dollars	4 inch 640*1136 pixel IPS TFT retina screen
Processor	4060Ft=20 dollars	Apple-unique A6 central unit includes two pieces of 1,3 GHz processor seed
Camera	4200Ft=20 dollars	The front camera is 1,2 mega pixel while on the back there is an 8 mega pixel camera which let the user to record HD video.
Radio section	7900Ft=80 dollars	The radio chips – which are responsible for the mobile communication- provide for the 2G-, 3G- and even 4G networks to launch calling and data connection.
Wi-Fi- and Bluetooth module	1200Ft=5 dollars	One of the most important part in case of a cell phone to share data.
Sensor	1500Ft=6 dollars	The orientation and gyro sensors enable the phone is enable to sense if we rotate or stir it.
Battery and Power Supply	3050Ft=12 dollars	The 1440 mAh capacity lithiumion-polimer battery is in the set, which is extraordinary, because the user cannot only the repair workshop is able to substitute it. The inner power supply is responsible for the necessary voltage.
Cover, Housing and Other Elements	7700Ft=32 dollars	Outside on the phone there are several mechanic elements which are necessary, without which the cell phone can not to be switched on.
Accessories and Packaging	1600Ft=8 dollars	We get the device in a package, which includes charger and other auxiliary tools as well –earphone.
	Total 46510 Ft!!!! = 258 US dollars	

Table No.1, Components

(IPM: InterPressMagazin: 358. szám 112-113 page)

If we check only the component costs we can easily realize that the difference between this and the other cell phones is huge. The manufacturing cost can increase the total cost just a little and also the logistic cost can be negligible. Which can be a larger part of the cost is the Research&Development, because Apple engineers their processors by their own. The majority of the remaining cost is the marketing or advertising cost, but I am going to demonstrate that in another table. But even with these costs the total would be much lower than 210,000 Ft= 950 US dollars. What can be the reason for this huge margin?

The remaining part is the cost of lifestyle, a relevancy to a special group and we also get an apple logo. For these costs we earn extra huge profit for the shareholders. On the market we

can find cell phones with similar features or even better phones- in case of operation system or multimedia – for half the price, the only difference is the logo. But if it is so obvious why do people buy it? Because Apple has important marketing tools which make the consumers think that they need this phone. They think that marketing has a more important role than engineering.

Advertising cost

Phil Schiller – Senior Vice President of Worldwide Marketing- reported Apple’s marketing budget compared to the Samsung case. While Apple grew bigger and bigger it also increased iPhone’s marketing cost. While in 2008 they spent 97, 5 million dollars, the next year the cost increased to 149.6 million dollars and because of the latest version and higher quality products it had reached 346,6 million dollars- iPhone and iPad.

In the next year -2011- Apple spent 933 million dollars on advertising, which is 35% more than in the previous year (691 million dollars). It can sound a huge amount, but the publication concluded that Apple’s advertising costs are even less than 1% of its total sales.

4.5 Sales and revenue charts

Product Life Cycle of Apple Products



(www.johnnashcroft.com, Apple product life cycles)

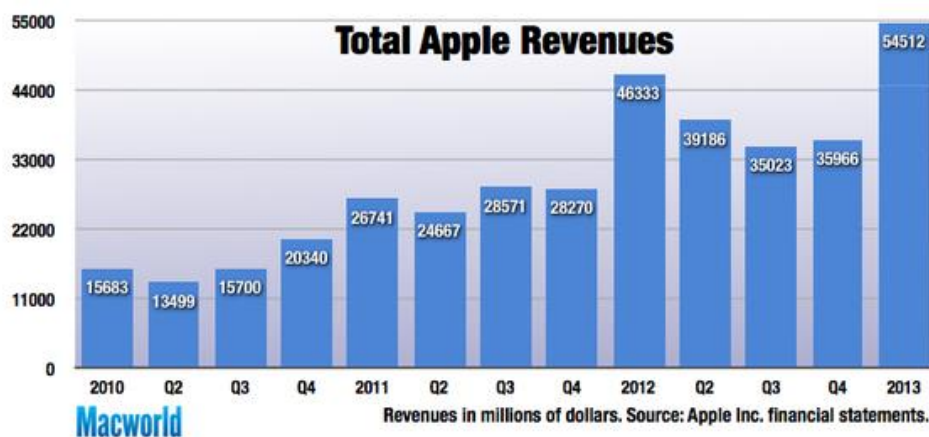
Apple market analysts are disappointed because of the reduction of the sales of iPad, it has decreased from (2012 3Q) 17 million to (2012 4Q) 14 million, although the total sales increased from 32.4 million to 58.3 million comparing 2011 and 2012.

Although iPad has achieved cumulative sales of 100 million units – in the first three years-, it is just a small part of the revenue compared to the new iPhone which has just sold 34 million units in the same period. The annual sales of iPhone has sharply increased with 73 %-2011: 73 million units; 2012:125 million units.

iPhone has an enormous sales advantage in the whole store, not just compared to iPad, but even to iPod. Since the launch, iPod – which is nearly six year old- Apple has sold 120 million iPods and 270 million iPhones. Apple analysts proudly and courageously say that based on their product life cycle model not just iPhone, but even iPad will sell more than 1 billion units.

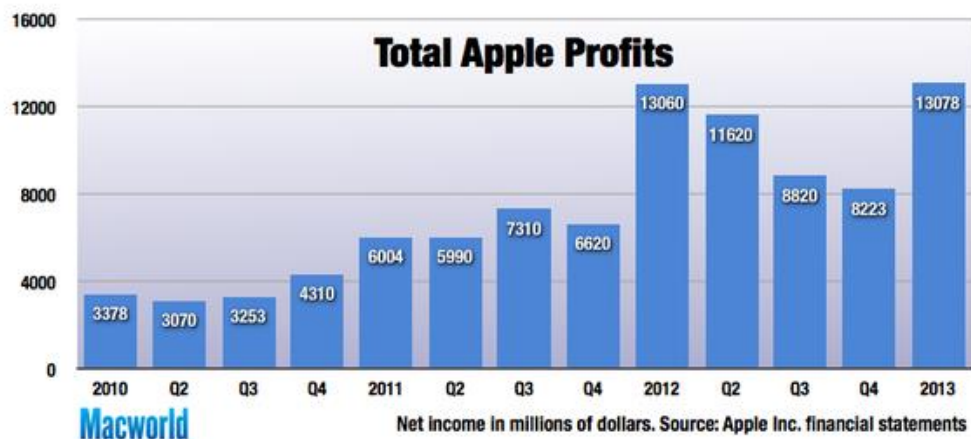
Sales records

In the beginning of 2013 Apple's sales – iPhone and iPad- reached records both sales and profit. For the first fiscal quarter of 2013 Apple's revenue was 54.5 billion dollar and the net profit was 13.1 billion dollar. Although Apple earned 13.81 dollar per share which decreased compared to the last year results – 13.87 dollar per share. However analysts were calculating for almost the same sales – around 54.7 billion dollar- and earning per share of 13.42 dollar.



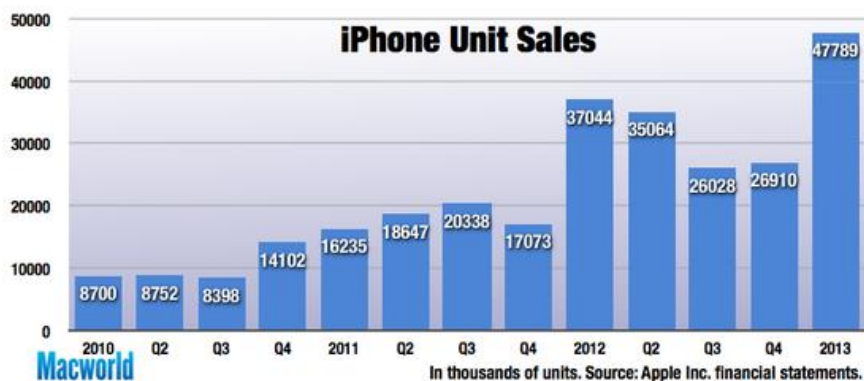
(www.macworld.com, Apple Inc. financial statements)

Peter Oppenheimer – Chief Financial Officer- said that Apple’s average weekly revenue increased to 4.2 billion dollar, while at last year it was 3.3 billion dollar. Oppenheimer also noted that this growth was also due to the new products which were a big boom on the market.



(www.macworld.com, Apple Inc. financial statements)

Tim Cook – Chief Executive Officer- told analysts: “ No technology company has ever reported these kinds of results” (www.macworld.com, Apple Inc. financial statements)



(www.macworld.com, Apple Inc. financial statements)

Sales of iPhone hit a record with 47.8 million phones and Apple sold 3.7 million phones a week, compared with 2.6 million during the 2012 quarter. The main reason for this is that sales increased in Greater China- China, Taiwan and Hong Kong- and it doubled compared to the previous year.

Net Sales

The following table shows net sales by operating segment and net sales and unit sales by product during 2012, 2011, and 2010 (dollars in millions and units in thousands):

	2012	Change	2011	Change	2010
	\$	%	\$	%	\$
Net Sales by Operating Segment:					
Americas net sales	57 512	50	38 315	56	24 498
Europe net sales	36 323	31	27 778	49	18 692
Japan net sales	10 571	94	5 437	37	3 981
Asia-Pacific net sales	33 274	47	22 592	174	8 256
Retail net sales	18 828	33	14 127	44	9 798
Total net sales	156 508	45	108 249	66	65 225
Net Sales by Product:					
Desktops (a)(i)	6 040	-6	6 439	4	6 201
Portables (b)(i)	17 181	12	15 344	36	11 278
Total Mac net sales	23 221	7	21 783	25	17 479
iPod (c)(i)	5 615	-25	7 453	-10	8 274
Other music related products and services (d)	8 534	35	6 314	28	4 948
iPhone and related products and services (e)(i)	80 477	71	47 057	87	25 179
iPad and related products and services (f) (i)	32 424	59	20 358	311	4 958
Peripherals and other hardware (g)	2 778	19	2 330	28	1 814
Software, service and other sales (h)	3 459	17	2 954	15	2 573
Total net sales	156 508	45	108 249	66	65 225
Unit Sales by Product:					
Desktops (a)	4 656	0	4 669	1	4 627
Portables (b)	13 502	12	12 066	34	9 035
Total Mac unit sales	18 158	9	16 735	22	13 662
iPod unit sales	35 165	-17	42 620	-15	50 312
iPhone units sold	125 046	73	72 293	81	39 989
iPad units sold	58 310	80	32 394	334	7 458

Table No.2: Apple products sales

(www.biz.yahoo.com, Apple Inc. Annual report)

(a) Includes revenue from iMac, Mac mini and Mac Pro sales.

(b) Includes revenue from MacBook, MacBook Air and MacBook Pro sales.

(c) Includes revenue from iPod sales.

(d) Includes revenue from sales from the iTunes Store, App Store, and iBookstore in addition to sales of iPod services and Apple-branded and third-party iPod accessories.

(e) Includes revenue from sales of iPhone, iPhone services, and Apple-branded and third-party iPhone accessories.

(f) Includes revenue from sales of iPad, iPad services, and Apple-branded and third-party iPad accessories.

(g) Includes revenue from sales of displays, networking products, and other hardware.

(h) Includes revenue from sales of Apple-branded and third-party Mac software, and services.

(i) Includes amortization of related revenue deferred for non-software services and embedded software upgrade rights.

5. Thesis, definition, calculations

Based on these facts, I believe it is necessary to define the economic effects of loyalty rate, increasing and to quantify the economic consequences of wasteful asset management.

Thesis 1: Assumption

Assumption: if loyalty rate is higher: unused lifetime is higher

According to reports, analyses and calculations I assume that, if the loyalty rate is higher – which means there are more repeat customers, who are willing to buy the latest product of the same brand/manufacturer- the unused lifetime of the current product is higher as well.

I would like to show with a couple of calculations the “real” profit after every sold iPhone and the real wastage that we create without thinking about the consequences to the environment and of course to our wallet.

First of all, according to the statistics from TechieInsider 84% of iPhone owners would replace their older device to a newer one. In general – because it is hard to define- the useful life of an iPhone would be approximately 3 years- according to the generally accepted professional view. If Apple creates or just introduces a more recent one every year- what they do- it means 2 unused years for the majority of the customers. (<http://www.techieinsider.com>, iPhone repeat customers)

The price of an iPhone is generally around 1000 US dollars, while according to the previous cost calculations the real cost for Apple is 258 US dollars. That means that after every sold iPhone Apple makes a 742 US dollar of profit margin. The problem is that it would happen only if the customers would use their devices for the whole useful life. In case of a customer, who would utilize the whole useful life of the product, 742 US dollars margin would cover 3 years profit. As the consumer replaces his product, after a year, he creates $2 \times 742 / 3 = 495$ US dollars extra –unearned- profit.

Consequently, if an average consumer buys this phone for 3 years, they already earn a huge margin, but just to show the extreme outcome I assume that an iPhone admirer buys 3 iPhones during the 3 years period. Furthermore I am not going to calculate the extra costs which are the repair costs, accessories and obligatory updates. And I am not going to calculate the case if the buyer would pay in installments, which would be even less cost-efficient to them. For the 3 years – in the best case- it means a 3000 US dollar bill to the buyer, while to Apple their cost still less than the purchasing price of one device – 774 US dollars, as gross margin.

According to the yahoo table, Apple sold 125 046 iPhone during 2012, and now I would like to show these scary data with huge numbers.

If we calculate with a 1000 US dollar price of an iPhone it means they earned nearly 125 million US dollars as revenues. On the other side of the Profit&Loss statement, within the costs, they gathered only a little bit more than 32 million US dollars. If we deduct the total cost from the total revenue from iPhone sales, the result is 93 million. (If we added the previous extra costs to this number it would easily achieve more than 100 million in profits)

That is enormous, but the real terrifying fact about this calculation is that I calculated it for only one year. In case of the customer side it is easier to calculate the total cost for them because I have already assumed that the purchasing price of the iPhone was 1000 US dollars every year. To sum up, the consumers' side it is 3000 US dollars for three years only for a phone device.

If we assume that the number of Apple followers will at least remain – which would not be very extraordinary- we can sum up the followings for three years:

- total customer cost: 3000 US dollar X 125 000 customers= 375 million US dollars
 - total iPhone production cost: 3X258 US dollar 125 000 customers= 95 million US dollars
 - total iPhone revenue: 375 million US dollars
 - gross margin: **280 million US dollars (if we do not calculate the further costs)**
- Total profit (above financial and other operating costs)

Thesis 2: metrics

I suggest introducing a new index, which can measure the willingness of companies to waste asset value, just to follow the latest trends, remain trendy and become a victim of brand loyalty.

$$\text{POI} = \frac{\text{asset liquidation revenue}}{\text{book value}}$$

The definition is called POI – Planned Obsolescence Index. In my view, it shows whether a person utilizes the whole useful life of their product – no matter whether it is electronic or other.

Let's say the interval of this index is between [0, 1]. The value is 1 if the customer uses the product until the end of its lifetime, which would be optimal, and 0 if the customer does not use it at all or, is a wasteful repeat customer, regardless of the remaining useful life of the product he owns.

I categorized the value of this index to different intervals, and we can judge whether we are prodigality customers or we use our products in an optimal way. But first of all, a few data about different kind of products' depreciation, according to the generally applied best practices:

- building/office: 50 years
- vehicle: 5 years
- phone and other electronic devices: 2-3 years
- software: 1 year

The intervals of this suggested new index are the following:

PAM	IAM	WAM
1-0,75 Prudent Asset Management	0,75-0,25 Influenced Asset Management	0,25 > Wasteful Asset Management

This index can show, and face the huge number of companies/users in the wasteful range, that the more the producer focuses on brand name and its psychological and marketing tools, the more their customers become prodigal users. Furthermore, this index is also influenced by the second-hand market conditions.

6. Apple's CRM, loyalty rate

Customer Relationship Management or the effect of the biggest psychological tool and the advantage of Apple's unique way of taking care of customers!

According to the literature, customer relationship management (CRM) is a new marketing trend in which organizations try to get to us as individuals in order to satisfy our wants and needs more accurately. (Serge Latouche : Farewell to growth, 2009)

In case of Apple it has one of the most important roles in their budget and –as a result of planned obsolescence- this type of thinking or marketing is way more important than the product (quality) itself. Through the launch of newer and newer products it is obvious – especially in case of Apple- that little changes in products appeal or marketing message can attract customers without any changes in the quality. So we can rethink the following question: Why should or would I pay 50 dollar more just to change the color of the phone? The easiest answer could be that, as world changes as well we need to follow the new trends and lifestyles. In a more grotesque way, I would say that the staff of Apple had more psychological class than engineering, which means that they know that people usually buy rather according to their emotions, than the rational reasons. Everyone knows that the easiest operation system – what even a child can handle- is the IOS. But they serve it not as a cheap, but as a world-wide system and they encourage people – from toddler to retire- to try it and they will realize how easily usable their product is. But how can they really convince the

customer- even the repeat customers- to change it? At this point we have to say that they have a unique and smart strategy.

The steps are the following:

1. They collect customer information based on questionnaires via Internet or personal promotions. It can include personal data- name, address, contact references- then they create a table or chart with these data, and Apple can research the market, analyze the segments and target their advertising tools to the target audience. With this information they can predict the demand and according to that Apple makes the updates or correct/develop their products.
2. Apple separates the personal and non-personal information. Non-personal information is which does not include name or any contact possibilities. However the pedestrians do not need to worry about their personal information, because Apple guarantees them to be protected in their warehouse. Their main goal is to always be updated, keep privacy and analyze the reasons behind the declines- if it happens.

Although attracting and being sure that a company has a wide range of loyal customers many of the companies do not like to disclose the main ideas and methods. In case of Apple they like to post it on different sites and they are right because according to their strategy they got nothing to hide. And also they have nothing to fear, because they can be sure that there will be customers who would suffer or even would sleep outside the store – before the new launch- just to be the first person – in their area- who can purchase and own it.

According to the next site they created 11 strategies to maintain the curiosity – of what can be the next product or update- and to create loyal customers. Most of them are obvious, but in practice these can be done only if a company has already achieved an approximate as big vogue as Apple has.

1. The first is a unique and quite perfect marketing tool in theory, but is it really as easy as we think? A STORE JUST FOR APPLE. In the start-up of a new business it is a huge expense and effort if it wants to rent the stores just for themselves and not share it with others. On the long-run it will pay the efforts back with interests and Apple succeeded. With the advantage that they can treat their stores, staff and customers the way they want is a great method. Apple

created a friendly place where current and new customers are encouraged to try the new products.

2. The next method also results in huge profits and loyalty – in the long-run-, but it is hard to be the best, if the company isolates itself, but Apple's idea was successful again. COMPLETE SOLUTION. The products are isolated and complete each other. There can be two problems with these. First, isolated means that in case of an iPhone you cannot share anything with others, only with those who have the same phone. Second, the devices complete each other comparing an iPhone and an iPad for instance, we use the iPhone for text messages, but watching a movie on the iPad is way more amusing and due to this problem the products can cannibalize themselves.

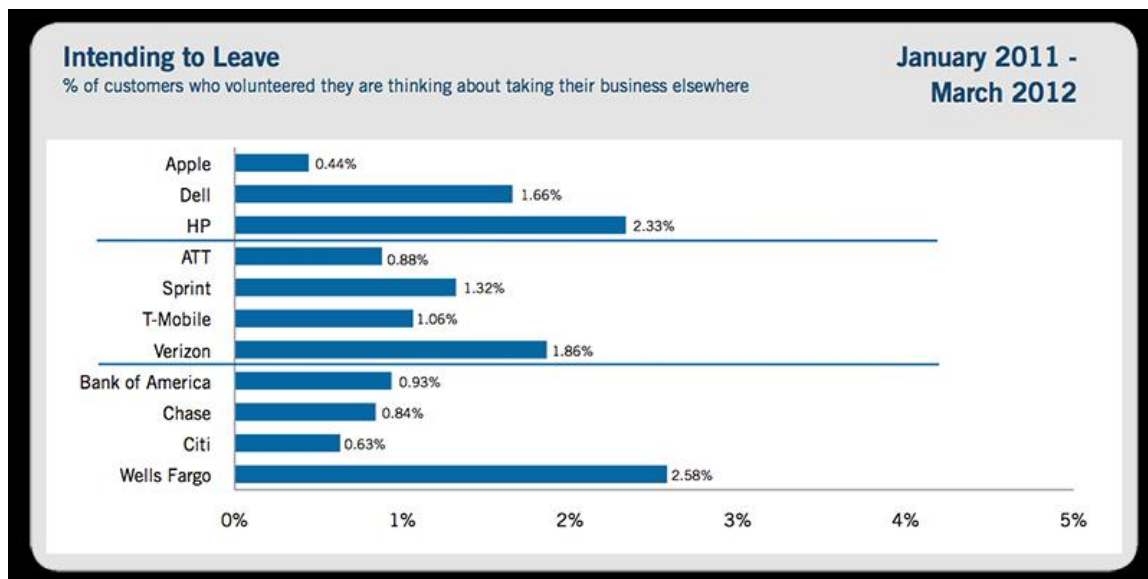
3. EDUCATION SALES. Most of the schools and universities – in the US and Asia- have license agreements with Apple. This method generates huge profit, because as I mentioned Apple has an isolated system and students are obliged to use them from their first year. Apple approaches/ ("infects") the next generation and it can be one reason why the sales are increasing. Generally the first Apple product what a teenager will use will be the computer which shows the opportunities of the Mac system and automatically it will encourage them to use this system in their phones and other multimedia device as well.

4. With the previous theoretical method, we are at the next one: CONSISTENCY. Because of the fact that Apple products have the same architecture or system the users can get confused if their main devices like phone and computer are absolutely different. If Apple makes some updates it is easier to install it on all devices then compare them and analyze which is the better.

5. From my point of view the last important fact is the design. ATTRACTIVENESS. As I mentioned formerly the appeal is becoming more and more important nowadays. What people really do not think over is they never repair or change much in the system or the product, which would really increase the value, but they want to offer newer and newer design – which is sometimes superfluous, but people make decisions based on their emotions instead of comparing the REAL important features of the device.

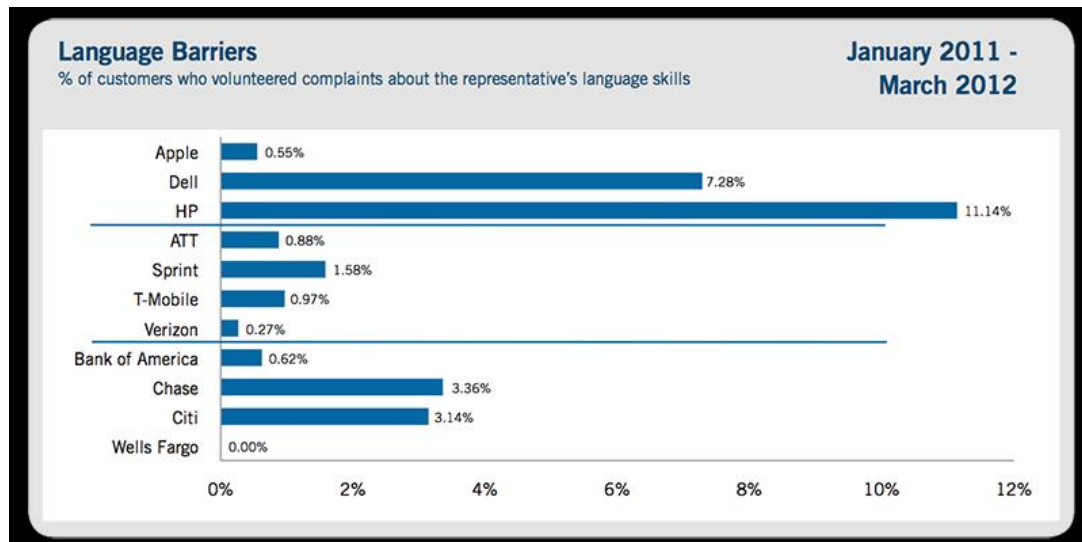
Apple's service complaints low

According to Vocalabs studies— research firm- Apple's customer service and its methods are competitive with not just electronic corporations – Dell, HP- , but even with banks – Citi, Wells Fargo- as well. The corporations and banks were ranked by four important issues. The first statistic shows the rate of customers who think about leaving the current company and go to another competitor. This can be the most sensitive topic, because even one percent can cause billions of losses for an enormous company like Apple. But as we could expect from Apple, it had the lowest number only with 0.44 percent. (www.appleinsider.com, Vocalabs: Apple study)



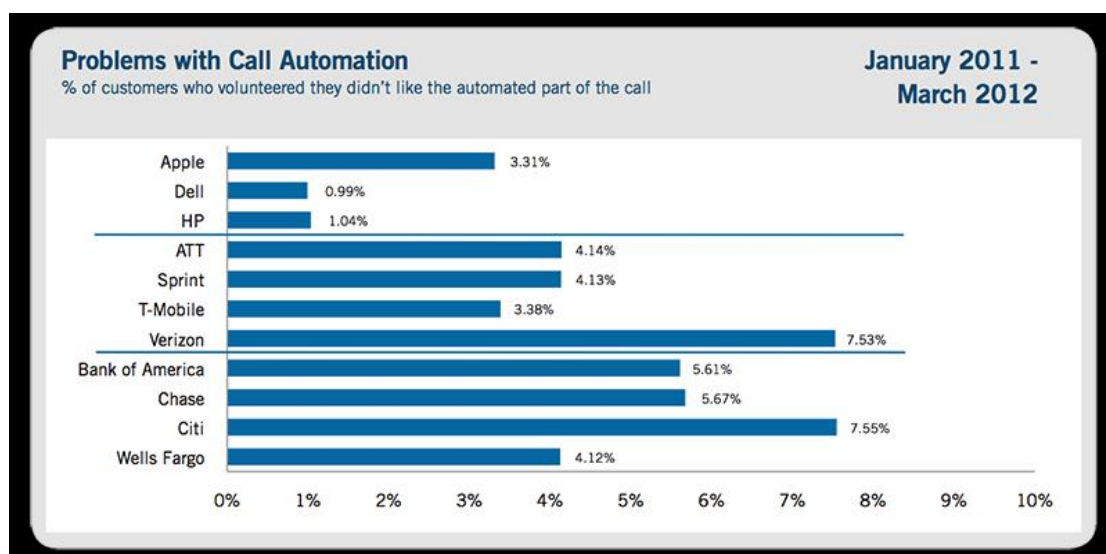
(www.appleinsider.com, Vocalabs: Apple study)

The next was about the language barriers, which can easily encourage the customers to change to another company if it is not comfortable for them. Despite the poor performance and lack of professionalism of the other two tech companies, Apple had the third place with 0.55 percent.



(www.appleinsider.com, Vocalabs: Apple study)

But if a company expands it means it has more and more customers which means it will need a larger staff to satisfy their needs and claims or an automatic problem-solving announcer which is cost efficient, but not as personal and it can make customers dissatisfied about the service they offer. Unfortunately, Apple is not an exception and their customers complain about the difficulty to get into contact with a human being – instead of dialing the superfluous menu options, which can frustrate the already hurt customer (because it has to get a reason why he/she is calling)- . These statistics proved that customers never speak to a live person, which can also mean that they think their system is well-devised, but it is not so efficient in case of the customer's time and phone bill. From that aspect, Apple reached the worst, in case of tech companies, with 3.31 percent- although it was even better than banks' results.



(www.appleinsider.com, Vocalabs: Apple study)

The final test focused on hang-ups and disconnections experienced by customers – whether intentional or accidental. Peter U. Leppik – President and CEO of Vocalabs- noted that ‘... customers should almost never get disconnected or hung up on in a well-managed customer service operation’. Fortunately, most cases were unintentional, but it can happen as well that it is intentional, in order for agents to keep their average call time down or to get rid of difficult customers. From that aspect tech companies had the worst results both HP and Dell had around 1, 5 percent, while Apple had the fifth place with respectfully 0.55 percent.

To sum up, Apple had- mostly -the best results in tech companies, but it could even compete with banks and other corporations from other sectors.

iPhone owners are the best repeat customers (loyalty rate)

If the number of customers is constantly growing it can have two main reasons: first, the existing customers are satisfied – which means they do not think about leaving the company- and second, they share their experience and opinions with their friends, relatives – who become interested (‘word of mouth’). According to TechieInsider Apple can trout out with both attributes. Another survey continues to support the fact that the best repeat customers – in the competition of smart phones- are the iPhone owners. (<http://www.techieinsider.com>, Iphone owners are the best repeat customers)

The following test was made in 9 countries with 4500 participants and the main question was whether they would replace their current phone and if yes which would be the next one. According to this survey 84% of iPhone owners would replace their existing phones with another iPhone. This data was the peak of the statistics and it encourages Apple that if they create a new phone or update there will be always demand for it. (<http://www.gfk.com>, Apple loyalty rate)

In case of Android repurchase the rate was 60% which is growing from year-to-year thanks to the new releases of system updates- Ice Cream Sandwich. In the looser team the highest record was 48% loyalty rate for the RIM and Blackberry which sales is declining constantly.

The worst participant was Microsoft with even less than 10 percent market share- and the majority of it comes from the Nokia believers.

The huge number of loyalty rate of Apple iPhone comes from the successful opening in China- which is the second largest market- and it's still increasing which –at least they hope- can be the largest source of profit and product.

Apple's lifetime customers are locked in and cannot leave (repeat customer)

In 2013 summer Brenstein Research tried to measure the number of long-term customers. Analysts suggest that almost every person who owns at least one Apple product from time-to-time goes back to the store and purchases a new – or repurchase- like if they would pay a subscription already. From the report they could realize that the growing number's reason is not only the customers keeping buying them, but it also shows a low rate of stopping of purchasing.

Toni Sacconaghi –from Bernstein Research- noted that: ‘’ One common concern is the sustainability of iPhone sales and profitability levels in light of the handset industry's competitiveness and transactional nature.’’Another big fortune – and risk- is that Apple releases from year-to-year iPad which is based on buying habits and consumer loyalty rate.(<http://www.cnet.com>, Apple loyalty rate)

Similar to the previous loyalty test according to these statistics 90 percent of iPhone buyers would repurchase the newer version – Strategic Analytics published last October. Although Sacconaghi does not say that it can happen with any Apple product- iPad, iMac-, but their loyalty rates are similarly high. (<http://www.cnet.com>, Apple loyalty rate)

But how can we measure them? The report says that lifetime values of each customer are based on retention date, replacement time and Apple's margin on each device type:

Data

iPhone: \$700-\$900 (replaced every 2 years)

Mac: \$600-\$650 (replaced every 3 years)

iPad: \$275-\$300 (replaced every 3 years)

(<http://www.cnet.com>, Apple loyalty rate)

Based on these assumptions it works out to a 204 billion dollar revenue for Apple in the end of 2012 and would reach 373 billion dollar by the end of 2014. However Sacconaghi says that there are risks which can ruin these estimates. These are like poor execution, rival platform or – which could be the worst not just for Apple, but even any other device corporation (if they have not invested in it)- people intend to move away from phones and other electronic devices – which is the main or only source of revenue for Apple- with something absolutely different product that Apple does not offer. As we could see and imagine from future science fiction movies it can happen that a start-up business creates holographic devices instead of the stream-wasting electronic products which are not so good for the environment- I mean mainly the Third World countries like Ghana (as we could see it from previous planned obsolescence example) - and the other big electronic companies do not realize that and cannot compete with it – not even with a cartel.

“ Clearly if a new technology emerged that challenged or superseded the Smartphone (like wireless did to wire line; or arguably satellite did to cable), lifetime values of Apple’s customer would be undermined.” Sacconaghi said. (<http://www.cnet.com>, Apple loyalty rate)

Cannibalism

The majority of iPad purchasers already owned –at least one- Apple product, says Piper Jaffray analyst from Gene Munster. Being more specific 74 percent of iPad purchasers were Mac owners and 66 percent owned iPhones. Besides this the real threat is coming from the next marketing question: “What will you use your iPad for?”. The answers were the following: 74 percent said surfing the web, 38 percent reading books, 34 percent email – which I think is ridiculous, because if you have the access to web it is obvious that you can

check your mails-, 26 percent watching movies and videos, 18 percent playing games and apps and 8 percent said listening to music.

The problem with iPad is the following: the first famous product of Apple – which hit the market-, was iPod, which had only one function in the beginning – listening music then watching videos- and iPad cannibalized it and we cannot even say that iPod is more comfortable, because the thickness of the new iPad makes it portable. (Not to mention the fact of killing books market and old values that they used to contain.) Furthermore, in case of iPod touch which was a foolish idea – because it was the gradation between iPod and iPhone-, it had only one advantage against the iPod – the touch screen- and was just a little bit cheaper than iPhone which included cameras, phone functions and it was more comfortable to keep only one device which contains the features of a smart phone and a multimedia device. In Nokia terms they created a TPD- Trusted Personal Device.

According to these analysts they can prevent that iPad will cannibalize the market share from the iPod Touch and possibly from iPhone as well. Unfortunately I have to say that iPad contains almost everything and is way more useful for an ordinary person than a laptop or computer, because although it has more functions it is nowadays superfluous to us. My opinion is that Apple could create an absolute monopoly in two steps: first, put the phone device functions into the iPad- which would kill the other phones market share- and secondly, merge with Levi's and create iPad size pockets. In this case iPad would contain everything that an electronic device can offer, until another company creates a holographic device, in consequence thereof they will drop their "green" surplus to the Third World countries.

7. Apple's iPad lawsuit

As we could see, Apple has a wide range of loyal customers all around the world, but how much of them have heard of a lawsuit about their products or real way of treating customers. The problem is that most of the users cannot find applications with the name of: "Apple proceedings" and most of the customers do not care about the real facts just about the feeling that they are part of a high-society brand. Apple already had problems with the court with their products during the year and I am going to show the newest and maybe the most harmful case.

In the February of 2013, a Brazilian newspaper – Journal do Comércio- reported a lawsuit about the launch of the fourth-generation iPad in Brazil. It was led by the IBDI – Institute of Politics and Law Software- and it sued Apple because of unfair business practices and planned obsolescence. (<http://www.macrumors.com>, Apple hit with planned obsolescence)

The institute found evidence that iPad 4 did not include any technological improvement; furthermore even the iPad 3 could have reached the same characteristics. The improvements were a faster processor, better camera and a port compatible with Apple's new Lighting connector standard.

“Consumers thought [they were] buying high-end equipment, not knowing [it] was already an obsolete version.” – said Sergio Palomares IBDI attorney.

At the worst case Apple could have been forced to compensate every Brazilian customer who bought the third-generation one. Finally, Apple was obliged to pay a fine of 30% of the value of each third-generation iPad. Furthermore, Apple launched an exchange program – with a discount from the newer iPad- in their stores, if someone wanted to get rid of the iPad 3. (<http://appleinsider.com>, Brazilian lawsuit accuses Apple of planned obsolescence)

In case of Brazil, this lawsuit was not the only problem of Apple, because they lost the rights to the trademark thanks to another company – Gradiente Electronica- which had first registered the iPhone trademark in 2000.

8. Consequences to the world – theoretical approach

8.1 Serge Latouche: Farewell to growth

Serge Latouche is a Professor Emeritus at the University of Paris-Sud – south. In this book he offered a solution- which is called de-growth- , which should be obligatory reading to any company – like Apple- who think that they are green and environment friendly.

For us the most important message can be that where are we going? Serge Latouche says: ‘‘ We are heading for a crash. We are in a performance car that has no driver, no reverse gear and no brakes and it is going to slam into the limitations of the planet.’’ Unfortunately, we have to agree, since we do not want to see or we are just too selfish to think about that even if during our lifetime we will not crash, but the following generation will have nothing to protect themselves and time they will not be able to reverse it. (Serge Latouche: Farewell to growth, 2009)

Discovering the territory of de growth

‘‘ Serious doubts then begin to arise in people’s minds. Can it be right to say that we have to produce too much so that we can buy too much? That is the idea that dominates the whole country’s economic life. What will become of us when the market is saturated and when we go on producing? An advertising campaign has been launched to persuade every family to buy two cars: one is not enough. Can they be persuaded to buy three? We buy our cars, our houses, our refrigerators, our overcoats and our shoes on credit. But there will come a day when we have to settle the bill.’ (Paul Hazard, *Le Malaise américain*(1931), cited Tertrais 2006:66)

Comfort; that is the word – besides envy and ego- that makes us –consumers- emotionally obliged to buy newer and newer products, while we cannot realize the consequences, because we are so satisfied – for a couple of seconds- that we own another –in case of life and death- superfluous product. We are happy for the moment when we use our credit card, but we do not know that we are the losers against the system- what by the way we created. Not to mention the Third world countries that get the second-hand and useless robot mixer and the only function they can use it is to build it into their houses.

But what can be the mystical solution and what does de-growth means? Latouche says it is a political slogan with theoretical implications, or Paul Ariés calls it an explosive word that is designed to silence the chatter of those who are addicted to productivism.

De-growth is not the same thing as negative growth and he does not recommend it to anyone: It would be too absurd- he says. Although he notes that: ‘‘...there is nothing worse than a work-based society in which there is no work, there is nothing worse than a growth-based

society in which growth does not materialize''. The problem is that while other countries' main goal is sustainability, to our society it is not enough and we need development. Unfortunately, the cautions are ignored by these development actors like nuclear industry or electronic devices. If we think about the word ''development'' is toxic – the difference is that we cannot feel it, but the next ones will suffer- no matter how we dress it up and sell it on the market with any marketing tool. According to Hervé Kempf (2007) the solution could be the sustainable development which would mean the maintenance of level of profit and to avoid the changes of our habits- for instance if our hunger would grow.

'' All the activity of shopkeepers and advertising executives consists in creating needs in a world that is collapsing under the weight of production. This requires an increasingly rapid rotation and consumption of products, and therefore the production of more and more waste. Waste-disposal is an increasingly important business.'' (Maris 2006:49)

It is ridiculous when we are talking about waste, we cannot imagine, but almost everything around us is waste. In my mind, definition of waste means anything which is not necessary to live and the prior and only function of it is to make our life easier and more comfortable or just to serve our amusement. That is the sad truth about our personal consumption, which – with sober sense- is hard to remember when was the last time when we bought a product not for our amusement. Sooner or later we will be obliged to get rid of these and then will we realize the real value of the objects. But at least with buying we can increase our Gross Domestic Product (GDP), but we are in a trap, because it is not a living being what we always need to feed.

As we could see in the light bulb conspiracy this consumer society needs three fundamental ingredients: (1) advertising which makes us desirable to consume and consume, (2) credit which gives us the real means to consume and (3) product – with a special gift in the form of planned obsolescence- which means that we always need newer and newer products- with no repair.

The beauty of advertising and marketing tools is, that it makes us want what we do not have and despise what we already have. This creates a frustrated desire to buy the next –possibly useless – product. That is why – instead of common sense- the corporations try to influence the emotions, because we have already accepted the fact that the most important part of a

product is the design, its message for the society and the way it goes from the shop assistant to us. We have to admit that not just the demand, but – as big companies realized it soon- the supply of superfluous products is increasing. Another main element of the suicidal circle of exponential growth is advertising – which is the second biggest budget – after arms- for instance in 2003 in the United States it was 103 billion euro. According to Latouche's statistics the world spends more than 500 billion euro just on advertising every year- what by the way we can call pollution. The easiest example is that luckily while in Hungary TV shows are interrupted twice in an hour in the US in every ten minutes we can see a washing powder commercial.

Credit in my opinion would be the powerful leader of growth. No matter whether we obtain it by downsizing, 'cost killing' or creating monopoly – like Microsoft- the main result is profit which is the main element of economy and capitalism. The problem is that if someone makes some research it is obvious that this process was already visible in the 50s. An American market analyst notes (Journal of Retailing, Lebow 1955:7) that ' Our enormously productive economy demands that we make consumption our way of life , that we convert the buying and use of goods into rituals, that we seek our spiritual satisfaction, our ego satisfaction, in consumption... We need things consumed, burned up, replaced and discarded at an ever-accelerating rate.' The best solution to consumerism is if the products already in the warehouse have built-in obsolescence and designed to fail from time-to-time. The other beauty of this suicidal mechanism is that even if we could give our 'waste' or dysfunctional products to experts to repair them, it would be more expensive than just to buy another one. That is the reason why we keep at home hundreds of electronic products – from mobile phones to dishwashers and old DVD players- which increase the pollution. Every year 150 million computers are shipped to the Third World for recycling and they contain toxic heavy metals like nickel or cadmium.

A further important problem is that hypergrowth is coming against the limits of the world's finite resources. According to WWF the earth's capacity can no longer keep up with our demand: '... human beings are turning resources into waste faster than nature can transform waste into new resources.' [WWF 2006:1]

According to his statistics, there are 51 billion hectares on the Earth, but the bioproductive space – what we can use- is only 12 billion hectares. If we calculate with the 2013 population

it shows that we have approximately 1.8 hectares per person. But researchers tried to calculate what an average person consumes and it is already 2.2 hectares, if we take into account the required space for energy, raw material, surface area and waste- while most of the African countries consume even less than 0.2 hectares. The problem is that we are already living on credit!!! A further problem is that it is not equally distributed- not surprisingly-: an average American consumes 9.6 and a European somewhere between 4 and 6. The grotesque thing is that there is no solution and it is absolutely impossible to decrease the hunger of a consumer. In theory, we should expand – and I mean more planets- if everyone's consumption would be the same as an average US citizen we would need five more planets. But this option would not even be too permanent or long term if we just follow the same steps as in the last 60 years. Within a few decades only, we have burned what it took the planet millions of years to produce –if everyone knew these facts, would their hunger decrease? - and we have even eaten our inheritance as well already.

Although even the Africans tightened their belts further, what can be the solution or is it a dead-end? The easiest one is – which unfortunately in practice is useless- if we could reduce the size of denominator until we get back to ‘normal’ life.

According to Francois Meyer with his ‘La Surchauffe de la croissance’ – ‘The overheating of growth’- (in 1974) this exponential rate of demographic growth is another problem which takes us further away from an equilibrium solution. Assumptions say that there are 135 million km² –above water level which is decreasing permanently- and comparing space that in 1650 was 0.28 km² per individual, in 1970 it decreased to 0.04 km² and according to the forecasts in 2070 it will be only 0.011 km² which is not enough for anyone to survive.

The grotesque and ridiculous fact is that no one cares about the future; everyone believes the marketing slogan –live for today- so the average consumers are not capable to be convinced. The other camp -which includes politicians and leaders-, is worse: their selfishness has already achieved a level that no one could ever imagine. There are direct campaigns – like WWF- , but they do not have enough ‘power’ to speak up, because it is and it will be always a safe planet – at least that is what ‘our’ leaders want to hear and they do not care about the bad news. I hope I will live at that time when this chaos – like anarchy- will happen and I can say that I have foreseen that years ago.



(www.9gag.com , Maybe I can try to spend on charity)

Utopia

In a perfect world, in theory, growth would be a profitable business only if the costs and expenses made by nature, for the aim of the next generation and ours – and mainly the Third World countries- health and working conditions and opportunities are covered. (In a society where workers would be obliged to create mess and destroy real values no one would apply for a job like that and if yes they would be tortured – and the whole society as well.) Unfortunately, we have to say that there are similar job proposals and applicants, because in short-term it looks good, because if their company hires people the unemployment rate decreases and the nation's GDP increases. But only for short-term! The real values – what we just realized, are stopped and polluting it- like water and meat, instead of electronic waste – which costs more, so it has a bigger role in the GDP and other indexes- will be the main elements of existence and in about 2050 we will look like Neanderthal men. Furthermore the half of existing species will die out, plus the population will reach 10 billion. If we run back over the past, we can see that every regime has been productivist: it does not depend on whether their government was of the right or left, and no matter whether they were communists, liberals, social-democratic or radical.

In the 1960s international professors, economists and technocrats framed the “viscous circle of 8 R’s”: re-evaluate, reconceptualize, restructure, redistribute, relocalize, reduce, re-use and recycle. These independent approaches could be the fundamental steps to de-growth and

if one succeeds, it reinforces the other. If these 8 can happen there is a last one for the future: resist to the temptation to buy unique and waste maker products. For me the two most important are redistribute and reduce.

Redistribute: If it could happen between nations it would have two main effects: First, in a direct way it would reduce the overwealth of the biggest sharks of the world. Which is a little bit of a dead-end, because although the goal is equality, but not in a fair way. It is impossible to ask the governments to create progressive taxes after every luxury product. If they would change their mind and stop buying these, the consumption of the nation would decrease – not to mention that, the luxury and electronic companies would go bankrupt, if there was no demand for it.

Reduce: In case of reduction I think the protagonist is mass tourism. According to Artisans du monde, if a family or individual spends around 1000 euro on holiday, less than 200 euro stays in the host country. In case of public transport, the ticket prices increased and the oil prices are twice as big as it used to be 15 years ago.

There is a project or a quest for the aim of urging the nations for self-sufficiency in food and in finance. Their main goal is to make these countries more autonomous and try to avoid the input from abroad (etc. fertilizers) and try to protect their real values and lands. In this theory every nation's fundamental activity should be maintained and developed, with forms of agriculture. The real advantage is that it has no obsolescence and no "depreciation", because nature's lifetime is limitless unless we destroy it. According to the National Institute for Statistics and Economic Studies (INSEE) in the 1960s the appearance of the malls and hypermarkets took away 17% of bakers, 84% of grocers and 43% of hardware dealers in France. If it was a merge, that would not have been a big economic trouble- not to mention the entrepreneurs who owned their stores- , but it was a huge cannibalization or loss to the previous owners.

“ If the inhabitants' purchasing power is to be maintained, monetary flows must, as far as possible, remain within the region, whilst economic decisions must be taken at the regional level, as far as possible. We have an expert's word for it (the expert in question is one of the inventors of the euro, as it happens): ‘ Encouraging local or regional development whilst

keeping a monopoly on the national currency is like trying to dry out an alcoholic by giving him gin.’’ (Bernard Lietaer, cited Blanc 2006:76)

Taking it all around, the difficulties would be less transport – which is hard to convince people- , encourage nations for self-sufficient consumption and cut the dependency upon multinationals. ‘‘Regionalization’’ would be a more democratic approach to the societies and to their economies, which means it would reduce unemployment rate and would encourage and support developing countries. There is a multinational slogan: ‘‘Think global, act regional.’’ Instead of that, this way of thinking reverse it: Think regional, act global.

The trap in the system of multi corporations is that they forecast and create needs and we think that these will satisfy our lives by producing and purchasing. It is good for the indexes, but it is even better to the companies. The unique feature of a company is that it can expand, move from one country to another – if they landed enough waste there- while a country’s position is set and it always have to bear the consequences and costs. In this case the losers are the Third World countries which have the option to ask the First World countries’ governments for support or at least less waste. Unfortunately the answer would be too obvious; it is not even worth to try. The main types of waste are mobile and other electronic products, but the most harmful are cars. Or the other option –according to a Guatemalan peasant, which is still more realistic- would be:

‘‘Leave the poor alone and stop talking to them about development.’’ [Gras 2003:249]

The political Program/ Solution

The aim of this campaign is to save the world from the wastes, which in other words means they try to forbid advertising and the production of non-recycle and built-in-obsolescence products. Most of them a little bit too theoretical for me like: ‘‘Get back to an ecological footprint’’. These are quite general, although they have good points which could be used in practice, only if they can ask the permission of the governments.

For me the most useful point was the following:

‘‘Heavy penalties for spending on advertising.’’

For an independent government – and I mean not dependent on the multi corporations- it could be profitable, although there is a threat that because of the decrease of the companies' revenue could cause that they would leave the country. If it was world-wide, the states would not have to be scared of the consequences.

Following these points I would suggest an alternative one which could work in practice and which would inspire customers to rethink about the real values. There should be a progressive and regressive VAT tax system: on the fundamental nutrition like water or bread there would be a relative small percentage, however the electronic products would be taxed heavily.

According to this theory the companies and their agents should pay the bill for the damages they have caused. The problem is as I mentioned they are not obliged and they cannot be pressed to stay as long as they repair the damages. If a business is not profitable, because of the complaints and the rough taxes of the country the owner just goes to another place. In theory, it sounds too easy that the governments oblige the corporations and taxes could ensure that the waste-makers would bear the costs as a consequence and perhaps the "good" companies could get subsidies as a reward. But according to this logic most of the electronic corporations would stop their activity, because it would not be profitable or –because if they have to pay more taxes, they will raise their prices- there would not be enough demand. And as we know there is not any insurance company which would be specialized in risks from nuclear industry.

Another problem with the packaging, advertising or just putting a brand name to the product will never increase the effectiveness of it. But the master of this operation is Apple they are the appeal master of it, even they could create an own industry only to this.

8.2 Peter Blair Henry: Turn Around- Third World lessons for first world growth

So why planned obsolescence can be important and can have worldwide effects? Those who started to think against "built-in-obsolete", achieved huge growth not just according to their GDP but according to stabilization as well. According to the author of this book in the distant future everyone will win or lose depending on the developed nations' reaction and faith in

humanity to these fast growths. The best advice is to transform the nations' policy into disciplined. With reasonable decision making system and self-control they can increase their standard of living. The two main winners, who followed this theory, are Brazil and China. While in the 1970es no one considered seriously these markets, in 2008 China responded the best to the global recession. One of the biggest players –that can determine a nation's growth and economy- is stock market and the biggest companies' sizes- not to mention Apple- are even bigger than most of the developing countries. So in case of these giants we can count them as countries. Furthermore they also have a huge role – maybe one of the biggest- in measuring a nation's economy.

We can say that real brand loyalty also depends on how many customers buy not just products, but the firm's shares which can also be obsolete and even more harmful if they just decrease the product's lifetime. Although high investments are part of the GDP, because they increase productivity and also can create further job opportunities.

To sum up, market has not just a major effect on the economy, but it is one of the leading indicators. Unfortunately, these giant –and obsolescence maker- corporations are not famous of being disciplined. Leaders create or improve nations' policy according to the forecasts of the actions of the companies. The problem is that governments started to make reforms according to these actions' forecast –which cannot be predicted obviously- , not according to the whole nations' inflation or economic growth. The easiest example is for instance if Apple launches a new product and put its shares to the stock market.

9. Solution: Nano or Frugal Engineering

3 years ago it would have been strange for an ordinary citizen from the high society, but now this type of thinking about aiming the emerging market is one of the most profitable business investments in the world. We have to realize first that frugal engineering is not trying to cut the cost, but focusing on avoiding and getting rid of the needless costs, and this from the beginning of the development process.

For instance, if we consider history, one of the first developing products was Ford's Model T. But as industries grew – almost as rapidly as consumers' claims- it became normal for the

operating procedures to work against frugality. In case of mature market consumers they will always accept huge price premiums for new features – which can be useless- even if they decrease the product's lifetime, but it is not visible for the first time.

If we try to calculate the profitability or decide whether it is worth to invest in it or not, for the previous or fundamental calculations we only need two elements. First, which can discourage the investors is the price-setting, which means that they have to realize that these countries – like India, China and Brazil- do not pay for the extras, but only for the basic needs, which means that the profit margin is low in case of one product. However the other main ingredient for the calculation is the number of potential buyers which can result a huge profit. This method is called ‘‘volume penny’’ approach. In case of these markets we are talking about even more than 4 billion people. If we calculate the profit from the emerging markets, it is nearly as big as that of the developed world.

A further problem which can discourage the companies, is that the target audience is sensitive to the prices – which means they do not spend as much, and they think about twice when they buy a product- and demanding. Consequently the engineers and the multinational companies have to change the way of thinking about design and decide whether a feature is important or not.

9.1 Tata Nano and Nokia

One of the first pioneers was Carlos Ghosn - Chief Executive Officer of Renault – who came up with a new idea about low-cost automobile manufacturing in 2006. The next icon of frugal engineering was Ratan Tata – chairman of Tata Motors- who designed Tata Nano. But what exactly are the main differences between Tata Nano and an ordinary vehicle? First, we have to think as a person who buys a car to transport things rather than to park automatically. They do not have those claims as in the First world, so the manufacturers just need to get rid of the fancy features:

- windows wind down by hand instead of automatically
- no air conditioning
- manual steering
- the bodywork made of plastic and sheet-metal
- 624cc rear engine
- no radio in any model

The original price of Tata Nano was aimed to 100,000 rupees which is around 2,200 US dollars. According to the statistics the average monthly salary in case of India is a little bit more than 5,000 rupees – which is constantly increasing- so if we calculate it an ordinary citizen can buy a car from their salary in less than 2 years.



(<http://www.shardamotor.com/sanand.htm> , Tata Nano)

Because of the success of Tata Nano, other global companies started to rethink their engineering and tried to focus on another target audience. Like Nokia, they started to produce Nokia 1100 cell phone which is an entry-level phone, what almost everyone can afford in the developing countries. It is one of the most basic phones: they can send and receive phone calls and text messages without any kind of fancy features. With the price of around 20 US dollars, Nokia 1100 became the best-selling cell phone ever.

9.2 Navi Radjou, Jaideep Prabhu, Simone Ahuja: Jugaad Innovation

First of all, jugaad is a hindi word for innovation fix, an improvised solution born from ingenuity and cleverness, resourceful. In this book the authors sum up and explain the main steps of Jugaad innovation, how to think or design in a smart way with limited resources. One of their saying for creating is: “fail fast, fix fast, learn fast.” Although the obsoleted multi-

giants would sound like this: “fail cheap, fail fast, fail often.” Jugaad is not just about getting rid of the superfluous devices, but using the objects in a new way or inventing new tools for everyday demand.

For instance, right in the beginning they mention Apple and Steve Jobs as a “bad” example with their way of thinking. Mr. Jobs got rid of the mouse, keyboard and these other features and tried to put these into one simple box – iPad- . He sounds like a savior, but the most important question to us as customers that: “Has it improved our life?” Because of the design and the marketing tools the answer seems to be yes, but cannot we satisfy our needs in a more environment-friendly way?

The “doing more with less” thinking has become widespread during the years. In China they call it zizhu chuangxin, while in Brazil they name it as gambiarra. If we sum up the emerging markets and their number of population or demand for innovations, we can talk about billions of people with a higher consolidated GDP than the Western countries.

But how did it start in the west? It started in the middle of the 19th century, which was the era of industrialization, which led to a structured approach to innovation with huge budgets and enormous resource consuming. The general idea of the system was that they would generate more output, if they fed more input. Due to this new system, corporations started to focus and spend huge amounts of money on R&D. There is an example in the book that in 2010, corporations – most of them Western- spent 550 billion US dollars just on R&D. Of course not all of them were successful and Booz&Company reported a photograph on which a CEO wears a shirt with the following text: “We spent 2 billion US dollar on R&D and all we got was this lousy T-shirt.”

A further problem is that Western firms have become risk averse, which means they bear higher risk, if the return is higher. They expect an already pre-calculated return, but not even people from Harvard Business School can forecast it for surely. They started to use “Six Sigma” which is a management strategy based on statistics, which ensures them by almost 100% confidence level to avoid any defect. The problem with that, it only works in case of mass production. It does not work in case of rapid changes, like creating unique innovations and satisfying the growing demands or claims of our society. Mainly that is why this structured approach is not flexible at all.

The other disadvantage of the advanced nations' giant corporations who cannot or do not want to change their way of thinking, is that they are suffering because of scarcity or velocity. There will always be unsatisfied customers and due to that corporations have to spend more and more on R&D, decrease product life cycles and launch newer and newer products, instead of creating products which are not designed to become obsolete right after we bought them.

Starting point

To start up the frugal thinking, the innovators firstly had to find a starting point where the consumers were not dependent on the superfluous tools. For this purpose they thought the BRIC countries –Brazil, Russia, India and China- were the best choice, especially India. It was a good choice, first of all, because most of the people do not realize, but even in the peak of the recession in 2008, India and China had reached a 7% and 9% growth. Furthermore the Goldman Sachs Group Inc. had forecasted that these nations would grow –with even 5%-until 2050. The other reason why they chose these nations, is for instance that there is a huge demand and scarcity in India for everyday products, so they can be and have to be developed easier.

For this purpose they gathered six principles, which include all the most important ingredients for complex emerging countries and to encourage innovators, not just in the BRIC, but also in the West as well. The principles are the following:

- Seek opportunity in adversity
- Do more with less
- Think and act flexibly
- Keep it simple
- Include the margin
- Follow your heart

I am going to sum up and explain the –personally- most important principles. In case of the ‘‘do more with less’’ it is really important that the ordinary R&D approach in the West is ‘‘bigger is better’’ which can be useful in some area, but rarely in these countries. It is not able to satisfy the basic needs,- although they do not decrease the superfluous use of resources-, in

case of health care or education. However, in case of frugal thinking they are trying to optimize the use of financial and natural resources to decrease scarcity.

In case of “think and act flexibly”, as I mentioned before the Western approach is not able to react to rapid changes. While the frugal innovators can respond to the unexpected changes, one of the best examples to it is Ratan Tata. And he could be the example to “keep it simple” as well. His purpose was not the perfection by overengineering products; just make it simple and good enough. This is called creative simplicity, instead of getting rid of the extra tools of a luxury product, from the beginning just design it in a simple, but useful way. KISS stands for my family name, on one hand, and on the other hand it is a frequently quoted “frugal” slogan which means: “Keep It Simple, Stupid.”

The last, but for me the most important is “follow your heart”. It means that instead of dozens of analysis and statistics trust your feelings. One of the first pioneers was – and we have to agree- Steve Jobs when he launched his unique products. One of the most successful was the iPad, no one thought that there would be market for a product like that. From this point of view he used to be an innovator.

“Your time is limited, so do not waste it living someone else’s life. Have the courage to follow your heart and intuition. They somehow already know what you truly want to become. Everything else is secondary.”- (Steve Jobs, <http://news.stanford.edu>, Stanford report, 2005)

Jugaad innovation is everywhere, not just in the corporations, but in the views of individual employees as well. Now the current potential employees – Generation Y- are motivated not just by the wages and the bonus, but they want to be a part of an organization which creates something beneficial for the future. According to a statistics made by EuroRSG 92% of the Generation Y do agree that the world has to be changed to a better direction, and 84% of them thinks that they are obliged to change it and believe that it is possible.

The other possibility to change the behavior of the customers is using emotional drivers as marketing tools. Nowadays people buy products, more likely according to their emotions rather than thinking in a rational way. Furthermore people trust in other customers’ opinion more than in brand names or the messages they bring with themselves. Unfortunately, most of the Western multinationals do not encourage or let their employees follow their hearts, which

could drive economic growth and innovation. And in case of R&D the biggest problem is that they use their tools according to scientific measures, instead of making direct researches – like personal sampling tests- . That is why 80% of new products fail right after launch.

What can be the main advice to the Western Organizations?

First of all, the executives of the companies should not rely on external stakeholders' opinion in case of launching a new product. These opinions can kill or vanish great ideas, just because it cannot be predicted.

In case of Nokia, they had a unique way of thinking when they discovered the needs of the Third world countries. They sent ethnographers for months to identify the real needs of the customers. After these researches, Nokia launched 1110 which –as it was mentioned earlier at Tata Nano topic- has been sold the most times in the cell phone market.

The three main elements for jugaad innovators are:

- willingness to take risks
- trust in their intuition
- passionate about their innovations

The Advantages of Jugaad or Frugal thinking

Besides of the newer and newer marketing and corporate strategies, jugaad is not a substitute for the traditional approaches, rather it is a useful “ingredient” to approaches. While the traditional way of thinking is volume-oriented and it's main goal is efficiency, jugaad is rather value-oriented and tries to achieve flexibility. The good thing in jugaad is that it does not try to get rid of the old ingredients, but boost them with new approaches.

According to their statistics, -which was made for European and American potential working capital- the Generation Y is skeptical about huge corporations and do not believe in job stability in those places. This generation is also called DIY generation – Do It Yourself-, because they prefer to start up their own business. A survey made by The Affluence Collaborative, shows that 40% of the asked students would like to launch their own business, while 20% of them already have. It also means that Generation Y is thinking in a more frugal – do more with less- and flexible way.

Furthermore, fortunately, Western nations and their governments started to realize the greatness of this way of thinking and supported it. For instance, in the United States Obama launched initiatives to boost up community-led innovation. One of the biggest achievement was- launched in 2009- the White House Office of Social Innovation and Civic Participation – SICP. It's main mission was, is to enable social inclusion and bottom-up innovations by fresh entrepreneurs in education and health care. Obama also added: ‘’ The best solutions do not come from the top-down, not from Washington; they come from the bottom-up in each and every one of our communities.’’

The best way to achieve and make people to think and act in frugal way is, if this way of thinking can go into the schools. One of them is DOT –Designing Out Tomorrow-, which is an innovative program held by teachers, because innovators think that people are way more creative when they are young and it is really important to start this way of thinking in schools. Also there are innovators club like DFA – Design For America- which is network between a lot of university students, like Stanford or Northwestern, for the new generation of creative activists – also founded by university students. One of the co-founder – Yuri Malina- had a report with the writers and said that:

‘’DFA was started with the observation that if you are young American engineer or designer, you do not need to buy a 1000 US dollar plane ticket to go to Africa or India to do development work. There are enough problems to solve right in your backyard – be they making health care safer and affordable, education better, or finding renewable energy solutions. Whether you live in San Francisco, Boston, or Chicago, you can apply your creative insights not just to design the next iPod or pair of cool sunglasses but rather to fix problems in your own neighborhood.’’ (Yuri Malina, Ibid.)

Due to this they work and solve firstly on local projects, which is a good starting point, especially if they recruit further universities from all around the world. On the other hand, there are university mergers as well, for instance one of the best – in my point of view- is the Stanford-India Biodesign Program. This program's main purpose is to create user-friendly and affordable medical services, on one case in India, because there are hundreds of millions without basic care, and on the other hand in the US where there are fifty million people with

the lack of medical insurance. Now there are hundreds of engineers, designers and physicians in this program, “sponsored” by the Stanford and Indian Institute of Technology. Their device costs 20 US dollars, which is available in the United States for 300 US dollars.

10. Conclusion

10.1 Summary

As we could see planned obsolescence and wasteful asset management have serious consequences and – already occurred- effects. The main players – giant corporations and “selfish” nations- make it impossible to the Third world countries to achieve worldwide equality, not just according to their GDPs, but according to other economic measurements. Although, fortunately there are innovators – economists, foundations, policymakers and corporations- who see potential in prudent management. Their goals are to offer important products and services to everyone, at an affordable price and with a real useful life. Instead of making junk products, they produce their own products in an efficient way, without superfluous tools and in an environment-friendly way. Most of the nations have already realized that the resources are limited and started to support the frugal innovators all around the world. In the theoretic part, we could see many possibilities to solve this issue like de-growth or frugal engineering. One solution can be decreasing our claims, but because of this “consume as much as we can” society, in what we are living, it would be really hard to launch it, especially in a world where marketing has really huge role.

10.2 Possible solution

In my point of view, if jugaad innovations could make not just companies, but nations to follow their way of thinking, they could launch new tax- and penalty systems in order to convince waste management corporations, like Apple, to become greenfield company for real. If I had a choice to ask governments to release them, I would create a new one, which would be beneficial to the Third world countries, encourage innovators and start-up entrepreneurs and would make junk producer corporations to rethink their asset management. I would like to release a new tax system according to the useful life of products, just like in my thesis and

those companies would get fines and penalties –or even grants, from the fund collected from penalties, if they are successful- according to their way of designing/ manufacturing. Obviously those Third World countries would get a huge portion of repayment, who suffered from the consequences of what giant waste corporations –like Apple- have done to their economy and environment, and made them even less competitive.

To sum up, this would be beneficial to everyone, even to the governments or to the nations' GDP. Furthermore, it would encourage the jugaad innovators to start-up their businesses and they would be supported. On the other hand, the main winners of this program or system, would be the future – generation z- and our planet.

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