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Traballo de
fin de grao

**Irruption of the textil
industry in the
economy of
platforms**

Case study: INDITEX

Lucía Neira García

Tutor: Manuel Vicente Nieto
Mengotti

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Resumen

Las plataformas digitales están presentes a día de hoy prácticamente en todos los setores. Los líderes de cada uno han comenzado a introducir a la tecnología como estrategia en sus modelos de negocio con el fin de aumentar su crecimiento. En el sector textil, el lider del fast-fashion, INDITEX, consciente de la situación ha aprovechado la oportunidad que le ofrecen las plataformas digitales para ofrecer una mejor experiencia a sus clientes mientras compran, y así afianzar su lealtad a la marca.

El objetivo de este trabajo es el estudio del comportamiento de la economía de plataformas en la industria textil. Primero se realizará un analisis de los componentes, la metodología y los efectos de esta economía en la economía global, a continuación se realizará un estudio del sector textil con la inclusión del estudio del caso INDITEX.

La metodología usada en este trabajo consiste en la investigación, comparación y contraste bibliografico de diferentes autores y fuentes de información. Entre los prinipales resultados obtenidos cabe destacar el uso no convencional de las plataformas por parte del grupo INDITEX, el cual en vez de abrir su software a diseñadores, clientes etc., como lo hacen otras empresas reconocidas como Apple, Philips o Amazon entre otras, ha creado una platafoma aprovechando sus sinergías verticales privadas derivadas de su gran infraestructura. Pese a no seguir las pautas convencionales la calidad y cantidad de información que recibe su plataforma es tal, que la empresa es capaz de descodificar cuales serán las proximas tendencias o los modelos más demandados a nivel global.

Palabras clave: Economía de plataformas, sector téxtil, innovación, Internet de las cosas, omnichannel.

*Número de palabras:*12836

Abstract

Digital platforms are nowadays present in almost every sector. The leaders of each sector have decided to introduce technology in their strategic programmes to achieve a bigger development by adjusting their business models. In the textile sector, INDITEX, leader of the fast fashion is aware of this new situation, and has seen the opportunity to integrate the digital platforms in its companies in order to offer its clients a better experience while purchasing its products and therefore, increasing its customers' engagement.

The purpose of this essay is the study of the performance of the platform economy in the textile industry. At first a general overview of the platform economy is done, explaining its components, methodology and effects on the world economy. Then, a more specific study is put forward concerning the textile sector to finally focus on the Spanish company, INDITEX.

The methodology used in this essay was mainly bibliographic research, comparison and contrast. Among the most important results obtained, it can be pointed out the unconventional usage of the platform in INDITEX, which instead of opening its software to fashion designers, customers or developers -as many well kown enterprises such as Apple, Phillips or Amazon among others do- they decided to create its own platform by taking advantage of its own vertical and private synergy derived by its vast infrastructure. Despite not following the conventional patterns, the quantity and quality of information that its platform receives is such, that the enterprise is able to decode what- will be the next trends or the most demanded pieces globally.

Key words: Economy of platforms, textile industry, innovation, internet of things, omnichannel

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Introduction

What is the economy of platforms?

In 2020 the digital economy growth is expected to account more than 25 percent of the world's entire economy, 15 percent more since 2005; and Platform business models will display a great volume of it (Accenture, 2016). But, what is a platform business?

Platform business are defined as those who are intended to create ecosystems that promote shared value instead of the conventional transactional relationships (Charlie Brown, 2016). They also enable the continuous connection between all of those involved: suppliers, consumers, shippers, designers, creators, etc (Accenture, 2016). What is more, the use of this platforms develop a social environment around enterprises which helps them to enhance access to the data provided by their clients, in other words, platforms allow an easier access to big data, which is nowadays linked with businesses' value creation (Diego Larrouy, 2017). SM digital points out the importance of trust in this economy system (2017). Marieta Rivero (2016), agrees, and furtherly explains that consumer's attitude towards the platform will be determined by how privacy and data is managed in it, it's community and the brand on itself.

Consumer's current tendency to choose online consumption versus conventional physic distribution, is due to the possibility that this option gives them: access to lower prices, time saving, comfort, a great variety of options of goods and services and the chance to compare them or to have access to products that they would never be able to reach in a different circumstance (Accenture 2016_ Platform Economy). This change in the consumer habits is also driven by the introduction of technology to our homes, the incorporation of internet to most of the electronic devices, and the rapid growth of social media (La Vanguardia, 2017).

As we previously have mentioned, data is determinant in this new business model and its relevance is due mainly for these three uses:

1. Clients' proximity agents work as their digital representative in this market; During every interaction with clients, they provide information of their individual preferences, which is immediately gathered and stored in a data base, this data will be used in order

to create specific customer's profiles with their histories, habits, beliefs, etc., and allow businesses to anticipate to these client's future needs and offer them the best experience, therefore, the more data, the better the experience. At the end, this mechanism works as a client engagement: the data enables business to offer a great service, eventually, this satisfied clients become loyal to those firms and keep sharing data, which translates into higher quality information and ultimately, an excellent experience (Mendelson Haim).

2. The value chain coordinator gives personalized solutions by adopting electronic innovation powered by client's provided information (Mendelson Haim). In this new business model, platforms usually work as this coordinators as they have been proven to be great competitive method for increasing value (Li, D., 2005). The implementation of hardware, software and networks speeds the process of decision making by improving process visibility, agility, speed, efficiency, customer satisfaction and reduces costs by maintaining key information in an accessible format (Krmac, E., 2011). In order to achieve this, this elements (hardware and software), are combined so that they create a cluster, which will eventually be filled with data that will be used to create predictive analysis, cybernetic security, etc. (Tableau, 2017).

Ebay is a great example of a platform value chain coordinator, as its business are focused around the use of data base technology with the aim of enabling the opportunity of commercial relationships between individuals while the rest of activities are done by others (financing, sellers, senders, insurance...) (Dr.Bijal Zaveri Amin, Mr.Prashant Amin)

3. Suppliers will increase its presence selling in the market and innovating thanks to information (Mendelson Haim). Platforms promotes the extension of the catalogue and the number of sellers; at the same time it allows to reduce prices thanks to the internal competition and the increase in demand caused by the possibility to reach a new variety of public –economies of scale and net economies-. Finally, it is required to point out that as the number of contributors to the platform increases, so does the value offer. (Braun, W., 2016).

1.The new business model

1.1 Industrial and platform models

Platforms are not something new, indeed, they have been present through the industrial era (ex: electric power grid), creating new markets, industries and platforms (Eland, S., 2016). What makes them now to be in the spotlight is how information technology has managed to drastically decrease the requirement to own infrastructures or/and assets, making them simpler and cheaper. These business are experiencing a dramatic growth in their industries with well-known examples as Uber, Alibaba or Airbnb (Van Alstyne, M.W, et al, 2016).

In order to understand better why it is considered a new business model, a comparison between the industrial model and the platform model is done in the table below:

Table 1. Comparison of the main characteristics of the industrial model and the platform model

Features	Industrial	Platform
<i>Resources</i>	Organization of the internal resources in order to create a product and sell it in a big segmented customer base.	Arrangement of the producers and consumers that are connected in an efficient digital marketplace.
<i>Organisational structure</i>	Hierarchical organization structure that includes differentiated lines of accountability.	Flat organization that counts with cross functional teams and an accountable culture.
<i>Supply Chain</i>	A warehouse to control the matching of the inventory and delivery with the supply and demand.	Open the ecosystem of community-producers and consumers that pay at the moment of consuming the products or services.

<i>Procurement</i>	Economies of scale driven by capital assets to expand in a national and global level.	Continuously growing community on the platform. When buyers increase, so do the sellers.
<i>Scale and optimisation</i>	Three-year strategic planning. "Waterfall" project management. Elaboration of KPI's and incentives for particular product objectives.	Vision, one-year strategy with continuous improvement to achieve short-term goals. KPI to attain community interaction and general ecosystem profits.
<i>Governance and control</i>	Top-down command and control, policies, contracts.	Listen to community ratings and speeding the decision-making. Ethical and transparency behavior. Usage of blueprinting policies into APIs and algorithms to obtain better results.
<i>Product</i>	Market research, segmentation, customer-centric design, customers have to attend to the sale spot to obtain the product or service.	Human-centered designs, offering real-time experiences by using the platform ecosystem. Constant connection between producers and consumers during the whole process.
<i>Marketing and sales</i>	Linear "path to purchase" and sales funnel. Marketing and sales work separately.	Non-linear user journey. Has to "know" the customer in order to be able to influence him in the right channel and, satisfied him at the required time.
<i>Brand and reputation</i>	It is separated in different "teams": leadership, content marketing, creative agencies and customer service teams.	Marketing, design teams, developers and scientists work together to provide the digital experience.
<i>Loyalty and advocacy</i>	Loyalty programs, structural and informal locks-ins.	Experiences are offered continuously to create customer's loyalty and encourage clients to stimulate them to invite others to join the community.

Source: Eland, S., 2016, "Building a new world: Moving to the platform era"

1.2 Job creation

The emergence of a new business model demands a new brand of specialized workers that suit with these incoming ecosystem and needed skills, Cohen (Wartzman R., 2016) believes that computer programmers, data analysts, and those who design, make and install all sorts of sensors across the commercial landscape will be the workers with higher demand in the near future. Although it has been judged for destroying jobs (especially the repetitive or laborious tasks), experts highlight the fact of this being a common tendency around this situations when new business model arise, indeed, of today's jobs many did not exist a decade ago and there are estimations that ensure that 65% of the children that are entering now to primary school will be working in jobs that are non-existent today (Hallet, R. and Hutt, R., 2016). In one of Deloitte consultancy's studies, technology as a whole has been described as a "great job-creating machine", it is true that it has substituted humans in laborious, dangerous, agricultural... jobs, but in exchange it has increased productivity, reduced essential product's prices, which translates into a higher purchasing power to spend on leisure creating new or higher demand and eventually jobs; While the number of typists, secretaries, weavers and knitters among other jobs has dropped, the caring, creative, technology and business services sectors have experienced a big growth, so at the end we should think about if those were the jobs on which as a society we would like to hold on to, or we would rather "evolve" (Allen, Katie, 2015).

Cohen (Wartzman R., 2016) agrees with this ideology and strongly asserts that as it was previously mentioned, programmable enterprises will be in need of managerial, marketing, manufacturing, cybersecurity, and support roles, but this does not mean that people with lack of this degrees will not be able to find a job, as there will be whole new categories of jobs for them; he also estimates that during the following fifteen years, twenty-five million jobs will be created- fifteen of those millions will compensate the ones that will be destroyed-. Meanwhile, others express their disagreements as they insist that first of all these non-degree workers will be destined to the gig economy, and moreover they believe that this new business model case is quite different from the previous ones, therefore the results might end up being different too, the speed in which these industries are evolving is unpredictable and extremely fast, and the outcome is usually the introduction of new technologies, creating an erratic circular system (Wartzman, R., 2016).

Constant formation and education is also an issue of extreme relevance on this economy, as apart from displaying a dedicated and indispensable appearance, it is key in order to be updated in an economy where the speed of growth is unpredictable and so are the directions that it may take, therefore, now more than ever getting belated and not being able to compete with the actual world is easy (Gual, Lluch, 2016). Over the last years, Google and other similar companies have been complaining about searching for well-prepared workers but not being able to find them, as many of the available laborers have been formed in the old economy and do not have the necessary skills for the new economy (Amiguet, Lluís, 2018).

Apart from the new professions mentioned above there is a new sector arising from social media -Social media managers, YouTube content creators, marketing traders, content editors, bloggers and influencers- that have nowadays a great weight of today's business publicity, marketing and communication (FMK, 2018); These jobs, enable business to establish more direct communication with their potential consumers as they might be listening to a product or service review from a person that they trust and usually idolize (Peláez, I., 2018).

1.3 Own vs rent

1.3.1 Collaborative economy

Inside the platform economy we can distinguish one of its most popular types: the collaborative economy, which although it is usually referred to both as the same, they are not.

Collaborative economy can be defined as the act of sharing private assets by trading, exchanging or renting them (Stewart Lansley, 2016). Ertz, Durif and Arcand (2016) indicate that this system will not only enable consumers to obtain services or resources, but also, to provide them, temporarily or permanently, through direct interaction or through a third-party. Moreover, although collaborative economy can adopt different kinds of organizational structures, all of them will have three common drivers: tenable citizenship, legitimate value creation and distribution, and open source (Drege, D. and Gyimóthy, S., 2017).

It is said to be the turnaround point of capitalism economy (Schneider, H., 2017). Some authors assert that the actual model embellish a minority and punishes the majority, creating an economy that will be easily exposed to an economic crisis; while a collaborative economy will distribute wealth more equitably, and therefore decrease the likeliness to experience a crisis (Lansley, S., 2016).

1.3.2 Collaboration

Collaboration is described by Thomson and Perry (Blomgren, L. et al., 2006), as a procedure where individuals with differences and conflicts cooperate jointly and create rules and frameworks that will guide their ways of acting or deciding on the issues in matter. This process is done with the aim of accomplishing a greater level of knowledge separately (Slater, J.J., 2013). And it usually leads to the development of creativity and innovation (Mcdermott I. and Hall L.M., 2016). Other authors refer to collaboration as the final step of a process that is formed by communication, coordination, cooperation and finally collaboration (Denise, 1999); where argumentative, interpretative and proponent skills are used in order to support the different ideas (Cabrera, E., 2008).

1.3.3 Concept and evolution

Collaborative economy has been said by many authors to be really difficult to define (Rachel Botsman, 2013),(Peter Teffer, 2017), (Georgios PETROPOULOS, 2016), and this leads to a wide arrange of labels to refer to the same thing: sharing economy, collaborative consumption, collaborative economy, on-demand economy, peer-to-peer economy, gig-economy, crowd-based capitalism, zero-marginal cost economy and more.

While some define collaborative economy as the one where consumers give to others temporary access to their unused assets in exchange of money (Koen Frenken, Meelen,T. et al , 2015). Maselli et al. (Pretopoulos, 2016) disagrees and stablishes, that all assets are located in a second-hand economy with no temporary access, and make use of those assets and services in general through auctions, not only the underused ones. Moreover, Moos, M. et al (2018) define this economic system as a set of decentralized networks and marketplaces that are able to obtain the real value of the offered underused assets, by matching needs and demand.

The collaboration economy is based on four fundamental pillars: transactions that reduce the costs of “possession”, greater social interaction, democratization and digital platforms that connect offer and demand (Máñez G., and Gutiérrez, M., 2016).

Regulations: There has been recently some controversy about collaborative platform enterprises' regulations as monopolies, privacy violations, exploitation of labour, and unfair market competition cases started to appear around these businesses (Frenken, K., Meelen, T et al, 2015). The main aspects that have been requested to reconsider their actual regulations are:

Employment regulations; In collaborative economies workers act as self-employed – lack of minimum wage, annual leave or pay in case of sickness-, this entails an economic independence to which labour law does not apply while the platform's terms and conditions prescribe all the work condition details – ex: pay, working conditions or intellectual property- (Klebe and Neugebauer 2014, cited in European Parliament 2016). The goal of these regulations would be to protect the workers while their flexibility is not affected, otherwise additional costs will be applied to customers (Petropoulos, G., 2016)

Taxation regulations; nowadays platforms have the capacity to choose the regulatory regime that suits best for them – avoiding safety and insurance requirements along the way- this situation demands local and international cooperation to remove tax evasion opportunities in such a way that it allows innovation, but it is not a fraud facilitator (Baker, D., 2014).

Data and privacy; users data and algorithms to match buyers and sellers, set prices and monitor behaviour are the bases of collaborative economy businesses, but, consumers rights, limiting data usage, or the selling of collected data are issues that may require more regulations. (Petropoulos, G., 2016)

Digital platforms can grow or evolve extremely quickly making the regulatory task very difficult, because the rules that looked sensible at the time imposed may be outdated at the moment applied. For that reason, the focus point of regulations should be on their clarity, as they have high jurisdiction power over the platforms potential development (Coyle, D.)

2. The roll off platforms

Platforms allocate the different models of the collaborative economy, and enable the establishment of a dynamic and on real time connection between offer and demand. Big data and algorithms are the responsible of the platforms' working system (Bernard Marr, 2016). This algorithms are transferred to the cloud- with easy access afterwards - creating the infrastructure on which, the entire platform-based markets and ecosystems operate, this two elements are the main attributes of what is referred to as the "third globalization," (Kenney, Martin (2016)).

We can divide platforms in three different categories: 1. Aggregation Platforms, which speed up the transactions and ease the connection between users to data resources, and usually operate on a hub-and-spoke model; 2. Social Platforms, in charge of facilitating social interactions and the connection of the individuals to communities, operates in relationship networks; 3. Mobilization Platforms, helps connecting moving people to mobilizations and to perform together, this category assists long-term relationships that foster common goals (White paper, 2018). Nevertheless, Gawer, A. (2014), points out another classification based on two different perspectives: theoretical and technological, influenced by economic theory and engineering design respectively, and which main focus would be platform competition for the former, and platform innovation for the latter. Other authors have joined to this tendency, but while some have interpreted them as types of markets (Rochet and Tirole, 2003), others describe them as technological architectures (Baldwin and Woodard, 2009) divided into a core –low variety- and a peripheral component- high variety-; this low variety component would represent the platform, where the rules and system's interfaces are established for the rest of the components.

As it has been previously mentioned, platforms are disparate in terms of function and structure. If we take a look at some of today's platforms, we will see that while some are a marketplace on itself (eBay), others provide us with search and social medial and work as an infrastructure for other platforms (Google and Facebook)(Travlos, D., 2013). Moreover, there are platforms (Airbnb and Uber) that take advantage of this available cloud tools, and offers the user, a better experience and in a different way than they are used to (Mangarelli, E., 2015, cited in Losa, G.)

Despite their disparity, platforms in general are evoking the reorganization of the economy, markets, work plans, and value creation (Bieler, D., 2017). In fact, Authors like Kennedy, M. (2016), compare this scene with the industrial revolution, and even assert that today's platforms owners' power is much greater than the one that factory owners used to have -This could be due to the fact that their main value-focus is on their flexibility, and openness, and not in the aggregation, as it used to be-. Businesses must be agile and must have a high organizational coefficient to be able to adapt to a constantly changing environment (Mendelson Haim). Currently platforms are dominating (Amazon) or disrupting (Uber) the different industries in our economy, and as it has been exposed, they will continue to grow; therefore experts recommend all businesses to think about how to develop their own platform or someone else will (Moazed, 2014). Moving too late can be fatal, as established platforms are very challenging -Microsoft is facing this with its Windows Phone- (Peitz, M. and Waldfoegel, J.).By any means, predicting their directions or dynamics is nearly impossible, but we can ensure that they will bring big consequences. (Kenney, M. (2016)).

Sangeet Choudary (Newton, J. 2016) explains which are the three steps that any company should follow in order to adapt their business to the platform economy: first, they must *digitalize* the essential interactions in the marketplace, then they have to *evolve* along with the market and finally they must *promote* their platform to third parties to create engagement.

2.1 Effect on the world economy

Platforms have already caused great impacts, in this section, a deep research about the two main affected market factors will be done.

-Effect in Consumers:

Connected technology in general has become part of our everyday lives till the point that, people have confessed to check their smartphone around 192 times per day, specialists even came up with a new term in order to refer to those who have fear of being without their device -nomophobia- (Vallejos, S., 2017). Those who suffer it experiment anxiety when they are not able to check their phone, and spend a lot of time on it, although, Díaz

Marcet clarifies that this obsession is caused by the device's contents -apps, internet accessibility, etc.- and not for the device on itself (cited in Sánchez Mateos, A., 2017).

This revolution began in 2007, when Apple launched its mobile phone iPhone – the most iconic of today's platforms – which incorporates some computer's characteristics in a phone; this new generation of connected devices entailed a radical shift in individual behaviour, creating what today is known as the connected consumer (Moazed, A., 2017). Unlike many may think, this group does not only include millennials; although their identity is very diverse, they are homogenous in many of their needs and behaviours: They don't focus only on the simple and fast, they ask for personalized and proactive, they are in constant connectivity, they trust influencers recommendations and for them loyalty is hard to build (Hyder, S., 2018). Connected consumers are also very demanding, technology has increased their consumer power as now they have access to more information to do research or find the most suitable way to satisfy their needs, raising consequently, the difficulty for business to satisfy them (Deloitte, 2014).

Moreover, in recent inquires respondents agreed that during their recent online transaction the majority of them went through the four same stages: *awareness* of their desire of a product, *consideration* when they contrast the product online and offline, *conversion* when they decided when and when they should buy it and finally the *evaluation* once they bought it (KPMG, 2017). During the consideration procedure, consumers use comparison networks or check other people's ratings and reviews, in fact, one of Deloitte's studies found out that 81 per cent of consumers read others opinions and one in three consumers contribute in online forums (2014).

In the figures 1 and 2 below, the average number of online transaction in 2017 of the different areas –North America, Latin America, Africa& Middle East, Western Europe, Eastern Europe and Rusia, Asia and Australia & New Zealand- are pointed out, as well as the three main generations that compose the connected consumer. Taking a quick look we can observe that, the higher number of online transactions (per person per year) were in Asia, North America and Western Europe; Among consumers the generation x (1965-1980), especially women, are the biggest ones, followed by millennials (1981-1996) and baby boomers (1946-1964).

Figure 1. Average number of online transactions (per person per year)

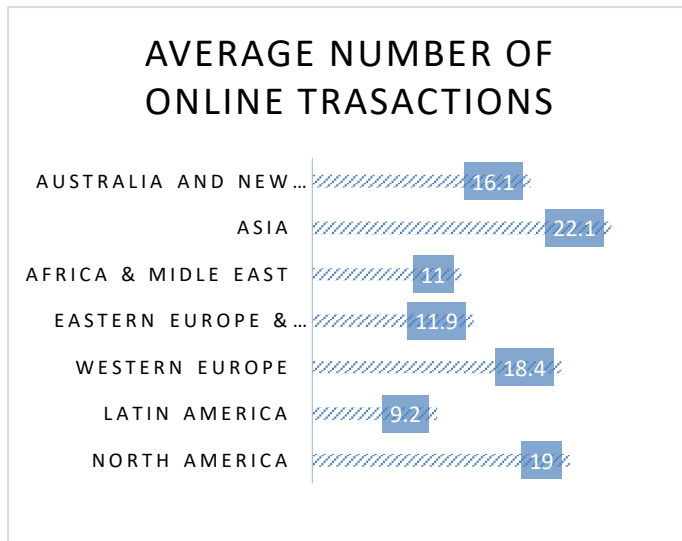
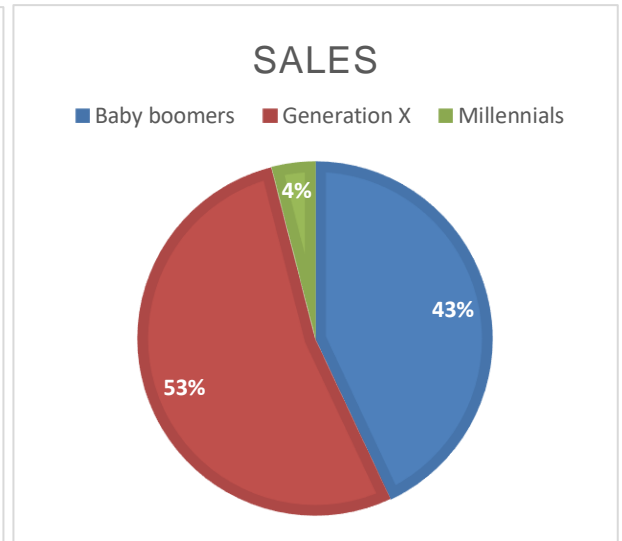


Figure 2. Who are the biggest online shoppers?



Source Figure 1 and 2: Own elaboration from KPMG, 2017

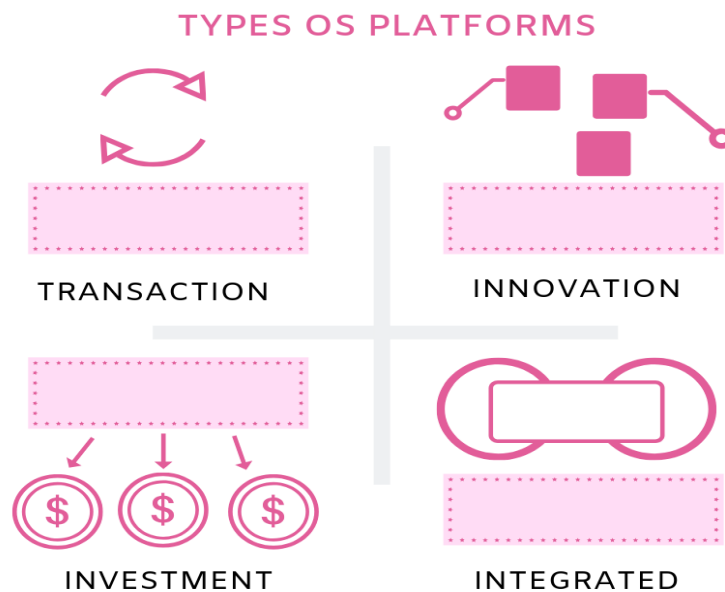
-Effect in enterprises:

Today’s business model is evolving towards a platform-based economy, but, this shift is not only happening in advanced industrial countries, but also in emerging and frontiers markets (Evans, P. and Gawer, A., 2016). Platforms allow businesses to create a more agile and open environment, hence, this entities will be able to anticipate to changes and be able to act, without having to face IT environments or tech-debt (Eland, S., 2017).

Companies born as platforms are able to manage customers and third parties’ interactions from the start, but this does not mean that traditional businesses wouldn’t be able to do so if they digitalized their business, in fact they should, otherwise they will not be able to compete with the agility and scale (Newton, J., 2016). Nevertheless, Authors like Braun, W. (2016) remind that platformization is not necessarily equal to success, this transformation requires open-mindedness and willingness to question established principles, as the change in roles, where customers become suppliers, or the competition turns into your customers, or users becoming producers and users at the same time.

Among other things, today's consumers demand quality experience (Kwon, YangJin, 2017). To successfully achieve this request, businesses must re-imagine themselves around the experiences they want to provide, and not so much on the transactions or products that they want to sell; starting out from this point, they would be ready to know what type of platform should be set up and which partners should engage (Eland, S., 2016). Other issues to bear in mind while reorganizing or creating a platform business would be Loyalty —quick customer service, individualized responses through social media ...- and the creation of entertaining, informative or exclusive content, in order to engage customers (Joel Benzmira, cited in KPMG, 2017). Many brands like Nike or Sephora use limited editions to create product and brand buzz, leading to large virtual and physical lines of people who are wishing to obtain these exclusive products (Sonsev, V. 2018).

Figure 3. Types of digital platforms



Source: Own elaboration from Evans and Gawer (2016).

Nichol, P.B. (2016) classifies platform business models in four different groups:

1. Innovation: co-create value with producers and consumers to redesign the interaction experience.
2. Investment platforms: offer back-end infrastructure to create different value and make the user's front-end experience better. It is a common platform model around multinational companies.
3. Transactional platforms: they reduce transaction costs by eliminating intermediators and substituting them with connected technology. Most of this companies have a private nature and their market capitalization is estimated to be around 1.1\$ trillion.
4. Integrated platforms: They produce new value by combining platforms and influencing consumer interactions into new behaviours. They have a high dependency on third-party network developers and multi-side markets. This type of platforms contain some of the transactional platform's features.

While there are more transaction platforms businesses, the market valuation of integrated platforms is higher. (Evans, P. and Gawer, A., 2016)

Regardless the type of platform business, there are three components that can work as an indicator of where the value in your organisation is, and in which part there is still spare room for growth; hence, this elements may help to create new value and extend the platform's reach and utility:

Platform (hardware, software, networks, partners, business processes, data and technology); Experience (Customer-facing and decision-making processes, tools and interfaces), and finally content (information and other consumables and digital products) (Eland, S., 2016).

2.2. The two faces of platforms

As it has been mentioned before, platforms help businesses boost their value and growth, but as everything in life, this positive features may come along with some negative ones. In their article, KPMG makes reference to one of them; while consumers' new trend of posting on businesses or retailers' websites their reviews about the products or services consumed may be positive for facilitating this business the job of engaging, managing and monitoring their customers, the rise of social media is tangling it, as many people use them to share their reviews in sites that are out of the business control or influence, obligating them to include this social media sites (Facebook, twitter, YouTube, Instagram and more) in their marketing and customer strategies in order to avoid possible negative issues (KPMG, 2017).

In relation to the previous point, value exchange in a platform economy depends on two elements: codes and community/culture. Whereas codes are the stablished rules of conduct by mediators, the community is the result of the platform evolution (values and practice) and its control is very challenging, in fact, a turn against the platform can occur if the appropriated attention is not given (Manville, B, 2016). In commoditized markets like Lyft or Uber, they should use an economic incentive strategy, and in markets where the offers are more individualized, like Etsy or Airbnb, the focus point should be on the community ecosystem (Shaughnessy, H., 2017).

Moreover, some specialists consider that this new business model not only did create a new low cost economy, but also, a low cost salary economy extremely hard to regulate, since only big companies would be able to afford experts with the ability to follow or escape from them and in many cases the will of trying to avoid monopoly abuses might end up translating in the obstacle of competitors' emerge (Amiguet, Lluís, 2018).

Finally, although this new economy brings different ways of earning income, the growing number of lawsuits created around worker misclassification – example: the controversy of considering ride-hailing drivers and delivery messenger as independent contractors or employees- shows how technology may not be favouring labour markets, and inducing the need of reconsidering social safety nets for their welfare (Rinne, A., 2018).

There are many other concerns around this economy, but this are the most crucial ones.

3. Textile industry

3.1 General overview

On its early days, the textile industry used to be a factory-based and labour-intense discipline, where looms and spinning jacks were basically all the equipment required. Now, it has turned into a heavily technology-driven process with high impact in new fields like athletic performance equipment, human health or rehabilitation (Varrasi, John, 2012). This industrial change was done as a result of the advance in predictive analytics, artificial intelligence and enterprise resource planning which empowered this industry with an automatic control over the textile fabrication process – design, colouring, fiber construction, fabric creation, finishing or delivery- (Weisenberger, Stefan, 2017). This digitization is usually referred to as Industry 4.0, for being the fourth redo of manufacturing -lean, outsourcing and automation- (Textile World, 2018). Indeed, it has been said to be more ground-breaking than any other innovation that the textile industry has experienced in the past – even more than large-scale manufacturing- (Gulsen, Tekin, 2018).

Although this transformative process is far from simple, if it is done right this business will be able to accomplish customers' expectations, create an omnichannel value chain, and recognize profit-generating customer relationships and business segments, which translates into an outperformance of the industry's average (Bizvibe, 2018). Technological innovation has turned utopic scenarios into reality, such as: the improvement of profitability based on small lot sizes and individualized orders (Weisenberger, Stefan, 2017).

The majority of this changes have been a resulting effect of the genuine nature of the textil industry, hypercompetitive and ever evolving, which in order to be on top, it request brands, retailers and manufacturers to make decisions rapidly. In this way, technology could speed up this procedure; the product would be conceived and designed digitally and transferred to other departments for more technical development -assembled, worked on digitally by supply chain partners or more advanced supply chains, manufactured by industrial robots- then the resulting products will be electronically sent, tracked, distributed, and marketed to digitally connected consumers. Therefore we could

say that technology is being used as a mean of communication between the business and its supply chain (Textile World, 2018).

In Kumar, et all's work, (2016), the omnichannel supply capability is considered to be determinant for a successful performance of any business in this industry. They distinguished five features that make a significant change when stablishing an omnichannel value chain: *cross-functional collaboration*, *omnichannel strategy*, *supply-chain network*, *supply-chain capabilities* and a *transition plan*.

The **cross-functional collaboration** consists on creating up cross-functional teams at the beginning of the omnichannel procedure, and letting them to have some resources and authority to make decisions in the areas of marketing, customer service, supply-chain finance, store operations, strategic planning, e-commerce, IT and more. The ultimate goal is to make business decisions that drive value for the whole company, so, when making decisions a company needs to look at its business and operations from an integrated perspective in order to avoid undesirable effects on the supply chain and on costs (Kumar, R., et all, 2016).

The multichannel culture is a common practice nowadays; people change from laptops to smartphones to television in a matter of seconds, indeed, they even check websites while shopping in a store (Rivera, K., 2017). When shifting and from one channel to another, clients demand comfort, clarity, speed and intuitive and easy steps to follow, creating the need for enterprises to develop a natural an attractive omnichannel (DMO global media, 2017). This circumstance asks entities to develop an **omnichannel strategy**. In order to develop one, it is important for businesses to clearly segment and define the channels in which the company will operate, the customer group, the product category and the location (Rivera, K., 2017). This process requires a deep understanding of the customer's preferences, behaviour, habits, needs and motivations, to do so, they have to gather detailed, insights of their customer's behaviour and their drivers that will enable them to help customers in their purchase process –big data- (DMO global media, 2017).

The incorrect execution of this procedure will translate into a misunderstanding of the customers' needs and the future evolution of the market which will turn into over expending in a strategy that will make customers unhappy and will not give results. Weisenberger, Stefan (2017) furtherly explains that a good employment of data will translate in competitive advantage, while on the contrary a bad usage will lead to ineffective sourcing processes, limited supply chain visibility, poor sustainability management and subcontractor integration, and disconnected financial systems, therefore, even though big data is essential to improve the performance of a business, the ability to use it is what makes the difference.

Therefore, lot of attention must be paid on how to help customers, so, differentiated insights for each of the target customer segment (B2B and B2C, B2B2C). Therefore, lot of attention must be paid on how to help customers, so, differentiated insights for each of the target customer segment (B2B and B2C, B2B2C). The textile and apparel industry has gone from mass production to higher value-added fashion items, raising the level of connection between the textile merchandisers and their suppliers, traders, buyers, wholesalers or retailers. Digital technology is being used lately as a union method of these different stages of the supply chain, and B2B e-commerce platforms are considered to be the best option among the different types of commerce transactions, for adopting digitization in their textile supply chain management. When powered by digital technology, B2B can solve many of the textile supply chain biggest shortcomings – unproductive sourcing processes, slow acquisition procedure, restricted access to industrial information, bad communication among all business parties, etc. - it can also increase the level of exposure of small, start-up or ethical textile businesses, reduce the supply chain management costs and engage the whole fashion supply chain, from material supplying to end market selling. In the future, B2B e-commerce platforms are expected to have a crucial role in the textile and apparel supply chain, being in charge of finding great suitable opportunities for businesses and value-added features in their business process (Bizvibe, 2018). Meanwhile, Gulsen, T. (2018) points out the tendency that has been befalling lately where B2B companies from the textile industry are transforming themselves into B2B2C companies by offering services to the customers of customers such as e-learning platforms for the customer's staff, development of joint projects through enterprise social platforms and more.

In order to establish a successful **supply chain network**, a company must decide first the positioning of its inventory, how products will go from the factory to the customer, what elements of the supply chain they should own and run themselves and when they should team up with other organizations and specifically with which ones (Kumar, R., Lange, T. and Silen, P., 2016). It is important to bear in mind that there is not a unique correct way to develop the supply chain network, in fact, experts assert that good omnichannel supply networks are always made to measure. Brands, retailers, and manufacturers can choose between imitating the leader's strategy or creating their own, but they should remember that before copying a successful solution, they must know the circumstances under which it is established (Lectra).

The following elements according to Kumar, R., et al (2016) are the ones in charge of shaping an effective network strategy:

1. **Segmentation**: After defining the segments, the supply chain elements will be designed to fulfil the requirements of each segment.
2. **Optimizing internal lead times**: this action will translate into faster order-to-release processes, shorter internal planning cycles, and the elimination of buffers from physical processes.
3. **Network structure**: crucial part of the supply chain strategy, it is in charge of defining the nodes and flows which connect the manufacturer with the customer. To be able to compete, the omnichannel networks have to be faster than ever before housing new demands, such as direct-deliver to costumers or helping retailers to achieve same-day delivery promises without implying an increase in inventory. Most of e-commerce are not able to introduce the required changes in their supply chain to achieve the market demands, therefore they need to find new ways to move faster.

We can summarize the most common procedures as following:

-Forward distribution network: location from where the product is dispatched up to where it is received- end user place-

-Backward distribution network: collection of products from customers and back to retailer again (Vinay Surendra Yadav, Sarsij Tripathi and A.R. Singh, 2017)

4. Horizontal and vertical collaboration: All market players need to shorten lead times, but, it's not feasible or efficient for them all to build their own infrastructure in every major city. That's why successful companies have started to collaborate.

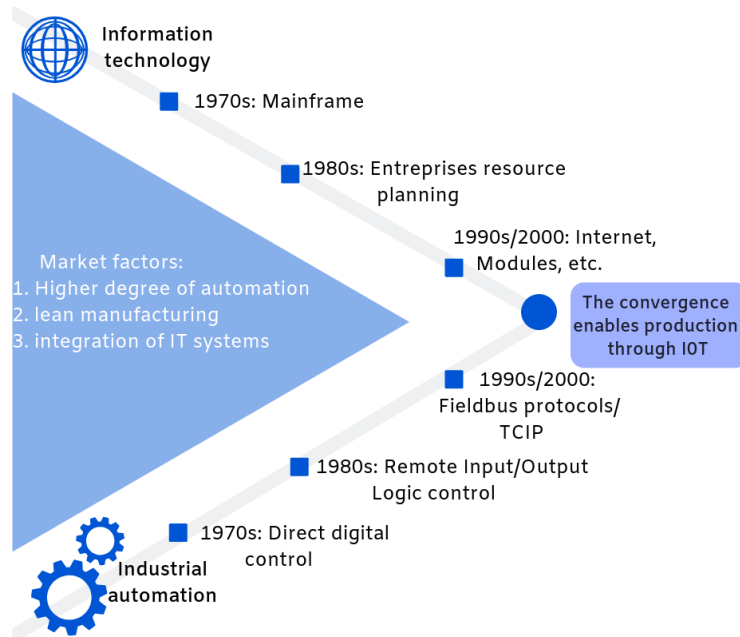
5. Disruptive technology: big data, the Internet of Things (IoT), 3-D printing, the platform economy and artificial intelligence are some of the main elements that will allow businesses to:
 - Forecast demand and production, and analyse the underpowered and leading indicators of the market.
 - Gather and analyse the statistics from the market to be able to monitor and manage the operational processes.
 - Know when it is time to replace the machinery before it is too late.
 - Optimize their supply chain.
 - Control manufacturing misspend by determining the most profitable products to produce (Gulsen, Tekin, 2018).

The principal supply-chain capabilities of the information system that make this structure work are: *software and hardware*.

Software is a cluster of instructions created through a programming process that directs hardware actions. It is divided in two categories –operating systems and application software-. It collects and analyses large volumes of data and turn it into actionable intelligence, channels of communication and collaboration, and coordination, optimization, and automatization procedures (TEL library, 2017). This is very useful when looking for solutions for a business, as just by integrating and analysing supply chain management, product lifecycle management and enterprise resource planning systems' data it will obtain reliable and personalized information (Textile world 2018).

The hardware is the permanent and invariable part –electronic circuits and other physic components-. The digitization has combined the automation with machines that are able to digitally communicate, all of this is connected to monitors and control systems that are constantly delivering valuable -material consumption, temperature, etc.- ready to be used when necessary (WHITE PAPER, 2017).

Figure 4. The convergence of industrial automation and information technology



Source: Own elaboration from White paper (2017).

The magnitude at which technology is evolving demands a renovation of the conventional von Neumann hardware architecture, right now data-storage units are separated from data-processing units what consumes time and power, and creates a bottleneck in performance, limiting what could actually be achieved. A possible solution for this problem could be the challenging procedure of combining the memory and processing units, meanwhile Google’s AlphaGo research has developed a different strategy, the creation of an innovative hardware called a tensor processing unit, which allows the performance of many operations simultaneously, increasing the speed and energy efficiency of computationally intensive calculations. The ultimate goal for hardware engineers is to be able to perfectly emulate the human brain –considered to be the most energy-efficient processor- (Nature, international journal of science, 2018).

The raise of the software and hardware communication gives place to the creation of a vicious circle, as this proceeding recalls for the need of a single platform that oversees, optimizes and manages the data of this newly formed digital workflows (Lectra).

Finally, companies should have a ***transition plan***, which mainly should focus on:

- Implementing small and quick changes rather than waiting for a whole long-term plan could arrive too late and obtain little or non-existent benefits.
- Using tests and pilots and apply them on a small scale in order to see if the new concepts work or not.
- Change the organization's mind-set, companies must be willing to try new things, accept mistakes and learn from them (Kumar, R., et all, 2016).

3.2 E-commerce trends

Here below are some of nowadays most successful trends of the textile industry that have improved their sales in online platforms:

- The insertion of sensors and chips in clothes, right now they are specially focused in digital devices focused on health and fitness, but businesses like Google or Samsung are taking a step forward and are developing smart or contactless payment jackets. (Sawh, M., 2018)
- The marketing strategy has experienced a dramatic shift, brands and retailers are making use of the customer's data to create tailored digital messaging, the luxury industry alone has increase its expense in this are more than a 60%. Digital Storytelling is a common practice in marketing strategy, which aim is to empathize with customers; it can be done through a video, a blog post or a caption and influencers are normally used to give extra credibility to the product of matter. This technique has proven to be able to improve the Searching Engine Optimization and online traffic of the brand (RMT logistics, 2017).
- Placement of microchips in clothes to avoid falsification –this microchips are used as a guarantee of authenticity that can be scanned with smartphones- or to elaborate their inventories (Valdés, Violeta, 2016).

- Purchase through mobile phones. In one of Mckinse&Company's research, it has been stated that nowadays consumers spend over 6 hours per week doing fashion research; although China (80%), Japan (60%) and South Korea (60%) are leaders when it comes to online shopping by phone, lately this tendency has been adopted by US and Europe consumers, and studies show that a more considerable growth will take place during the three following years. The main reason why this growth has not been experienced previously is because consumers still do not trust the security and privacy of mobile phones when it comes to introducing credit card numbers or personal data. This obviously brings new opportunities such as virtual wardrobes, pay-by-app and links to social media accounts and definitely, a landscape of start-ups that offer mobile payments solutions –there are currently around 700 fintech solutions globally- (Craig and Karl, 2017)
- Stores have changed their utility drastically, while they used to be a key feature for the success of a company, now they have been place on a second level. But, this doesn't mean that retail is dead – the largest amount of retail sales are still made in physical stores-, it is just changing, and new technologies and models may determine how they survive the online shift. Ex: artificial intelligence can optimize the store execution, data will help to better manage inventories, etc (Thomas, L., 2017). Concept stores, pop-ups or any other physic store are now places for exploration that create an immersive, holistic, and unique experience for consumers that still cannot be experienced online, they offer a high-end experience that complements the digital one, becoming an experiential space where customers can immerse in the brand's culture. While online shopping offers convenience, human interaction remains valuable (Florine Eppe Beauloye, 2018)

4. Case study: INDITEX

4.1 Background

INDITEX is considered to be one of the greatest fashion distribution companies in the world, formed by eight different brands –Zara , Pull&Bear, Massimo Dutti, Bershka, Stradivarius, Oysho, Zara Home and Uterqüe- it is present in 96 markets and it gathers 7.475 stores and counts with over 171.000 employees. The 59% of its factories are located in the surroundings of the central headquarter in Arteixo (A Coruña, España), and it counts with 1.805 suppliers and 6.959 manufacturers all over the world. The company is listed in the stock market since 2001, and it forms part of stock indicators such as: Ibex 35, FTSE Eurotop 100 and Eurostoxx 600 (Inditex 2018).

It started its journey in 1963 as a women's clothes Factory, but, it was not until the arise of Zara, in 1974 when the company started to internationally expand and integrate new brands to the group. All of these brands have common denominators when it comes to fashion creation: design, fabrication, logistic/distribution and selling; besides, since Zara Home launched the first online shop of the group in 2007, all the former brands of INDITEX followed this journey, and are now composed by online and physic stores (Inditex, 2018).

Inditex offers quality and design at an accessible price for the majority, a combination that is theoretically conflictive, and for that reason hard to imitate by competitors. Although it has been accused of copying designs, Inditex's formula has proven to be able to adjust to the speed of today's constantly changing fashion taste of the youths and to reach a great public that are willing to be on style without giving up to a substantial wardrobe (López, F.)

The way in which the stores work and are settled make customers feel important, they are at the level of the top ones, but with lower prices, they are spacious, and sellers are polite and helpful while at the same time leave clients their space and time to check the clothes. As a result, clients visit the stores around 17 times per year, 13 times more compared to the competence (López, F.).

4.2 The internet of things

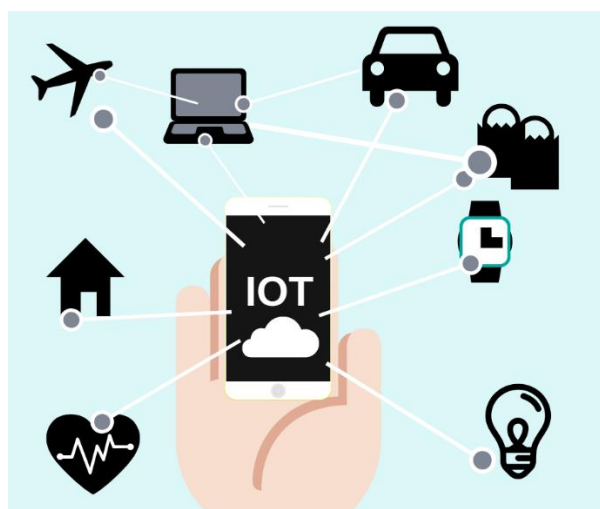
Before getting into more detail, it will be necessary to explain what Internet of Things consists on, as this element is the basis of INDITEX success that will be brake down in the following points of this project.

Internet of things, commonly abbreviated as IoT, refers to the interconnection of digital objects to the internet. This includes digital objects from cellphones, coffee makers, washing machines, headphones, lamps, wearable devices, components of machines and almost anything that you can think of (Morgan, J., 2014).

Internet of Things allows an automatic exchange of information between devices or with control centers without human mediation. As a result, large amounts of valuable information for usage and performance are captured, this information will enable devices to operate and monitor while they create unique experiences and unparalleled opportunities for people, business, governments and cities (Telefonica, 2016). IoT particularly benefits the following environments: manufacturing, transportation, defense, agriculture, infrastructure, retail, logistics, banks, oil, gas and mining, insurance, connected home & smart buildings, food services, utilities, Hospitality & Healthcare and finally Smart cities (Meola, A., 2018).

IoT generates operational efficiencies -the collection of real time data on product businesses can optimize their operations and improve their productivity- and creates competitive advantages -new functionalities and value added services to existing products what will help companies to differentiate themselves from competitors, or new and innovative business models that create additional sources of revenues and offer alternative consumption patterns for customers- (Telefónica, 2016)

Figure 5. Operating of the internet of things



Source: Own elaboration

The current 5 Billion connected devices existing today are expected to become more than 25 Billion by 2020. This will translate into an impact of Trillion of dollars to the market and complex value chain. Some of the most relevant companies in the industry will participate in this value chain by offering end to end IoT solutions, and the B2B segment will represent around two thirds of the expected value (Telefónica S.A, 2016).

Although it has had a great welcome, and as it has been mentioned in the previous paragraph this tendency will be maintained over the years, there are some issues that concern its “public” and which should be solved as soon as possible. First of all, security, companies must ensure consumers that the information provided by their interconnected devices stays secure. Secondly, the privacy and data sharing, and finally the need for companies to figure out a way to store, track, analyze and make sense of the great amount of data generated (Morgan, J., 2014).

4.2 The platform economy in INDITEX

Innovation is one of the main engines of Inditex’s activity, and it is in continuous search of it in order to implement it in different scenarios of the brand like its product lines or the selling points (online and physic) (Expansion 2016). Since “Zarahome.com” in 2007, the Company has shown its will to keep on being among the leaders in terms of technology innovation on its sector, and to give to its clients the greatest service, one that it is adjusted to their preferences and needs (Juste, M., 2016).

Right now thanks to their online platform it is present in 49 of the 96 markets in which the group operates (Inditex, 2019).

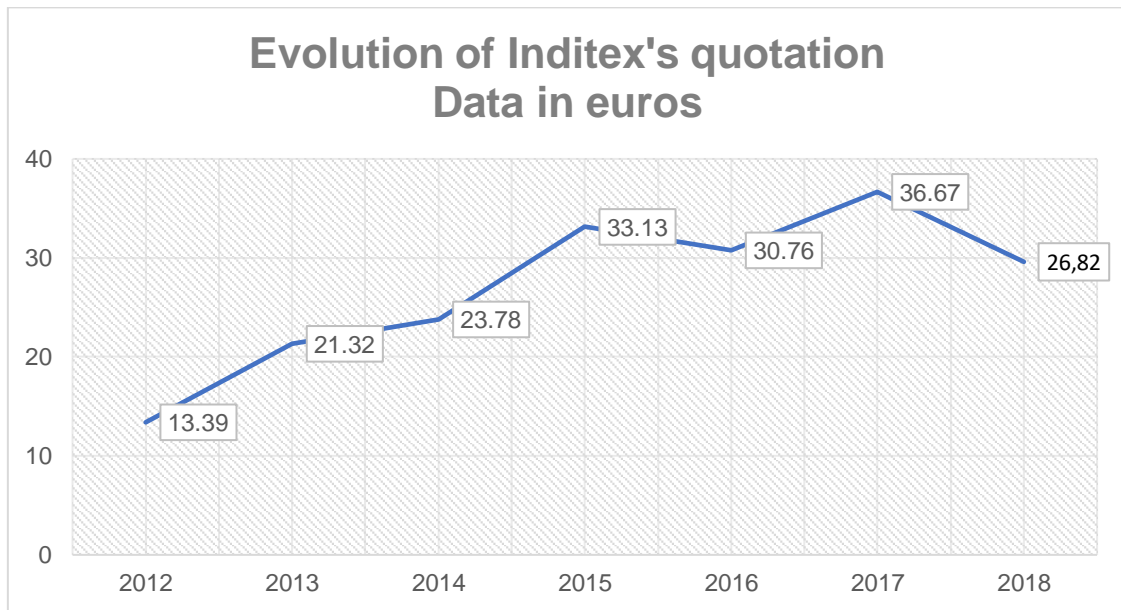
Since 2012, Inditex group has been preparing the company for a total integration of its physic and online shops –the development of an omnichannel system- in order to be able to show to the world, why it is still considered as the leader of its sector, although, some misinterpretation of certain data may make us think otherwise.

The Company investment in the digital transformation has been enormous during the last five years, allocating 1 Billion euros to the incorporation of supporting technology for the shops services and logistic centres, while it designated “just” 700 Million Euros to the modernization of procedures and operating platforms. Among its strategic digital projects we must call attention to the extension and modernization of the logistic installations and centres of design, the incorporation of new stores or the renovation of existing ones, the I+D of sustainable technology applied to the stores, and above all, online selling, which has been one of their biggest concerns since 2007, when the majority of the companies in the same sector did not even think about incorporating it (López, D., 2017). Today, online sales are starting to play a considerable part of its revenue generator; during 2017 Inditex has experienced a growth of 42% in webs transaction and a total amount of 2.418 million views in the group webs in just 12 months, accounting a 10% of its sales to online sales - 2.530 million euros- between the first of February of 2017 and the 31 of January of 2018 (Ramírez, N., 2018). This increasing growth tendency has forced the group to match the delivery of the collections in the stores and online, in order to continue with the total integration strategy, and also, to create a defense mechanism to face e-tailers –retailers that send products through electronic transactions in a website- who are constantly reducing the production cycles (Riaño, P., 2018).

In order to keep going forward in terms of I+D, Inditex has made some alliances with other companies, universities or centres of investigation, such as Jetlore or El Arte de Medir; Massachusetts Technology Institute (MIT) and three Spanish universities to develop new and improved technologies for a better recycling of the textile fibres (Moda.es, 2018). Inditex’s team is constantly in the search of start-ups and corporates to make synergies with, to do so, they often explore what is known as the technologic hubs: San Francisco, Tel Aviv, Boston, Madrid y Barcelona (López, D, 2017).

Moreover, the Company recently counts in its board of directors with Pilar López – President of Microsoft Spain-, as well as Denise Kingsmill –member of the board director of Telecom Italy and E.On- (Moda-es, 2018).

Figure 6. Evolution of Inditex's quotation



Own elaboration from INDITEX (2019)

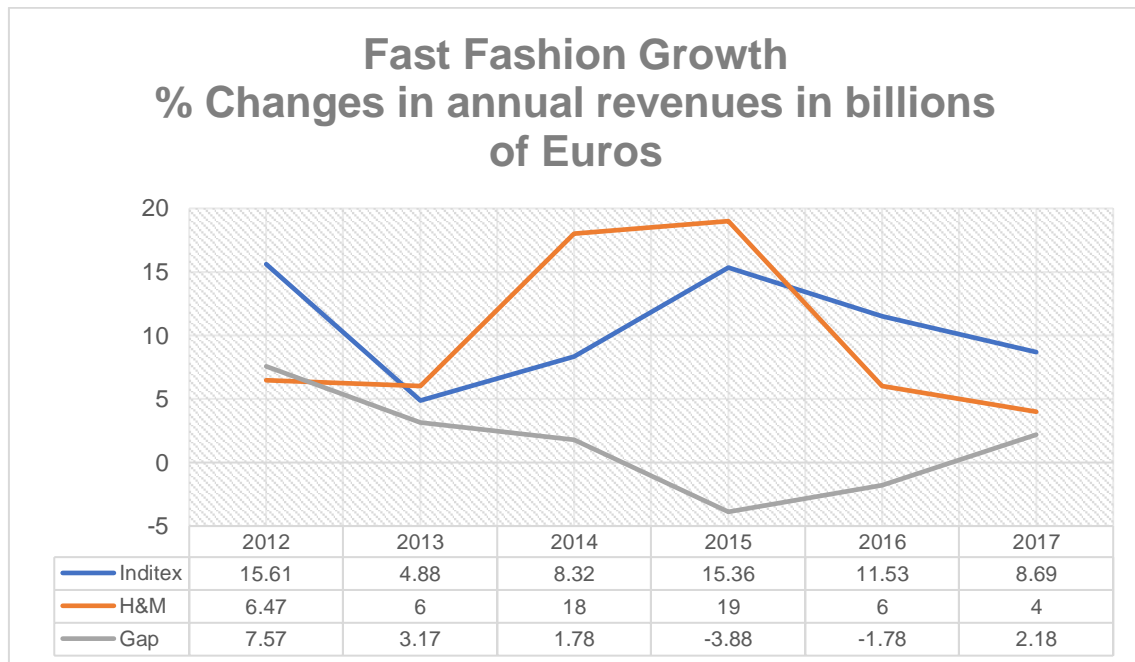
As we may observe in the previous graph, the quotation of inditex has been decreasing since its maximum point in May 2017, the las two years have not been the best years for the company. In fact, last august (2018), Inditex investors were alarmed when Morgan Stanley presented an inform where they affirmed that the company was showing some symptoms of depletion in its potential of growth, causing a fall in their actions of 5,6%, the second fall in Inditex's actions in 2018 (in February the fall was of 7%). In this inform Morgan Stanley forecasted net benefits at an annual rate of 4% for the following 5 years, a very low rate compared to the 12% that other analysts such as, the Royal bank, estimated that Inditex will experience till 2022. Morgan Stanley explain this estimation as they state that the firm is experiencing a gradual fall and an inevitable reduction in the long term in the sector of textile distribution (La Voz de Galicia, 2018). Now, the concerned Investors want to know where and which is Inditex's limit, for how long internalization will be enough to maintain this growth and above all, how are "internet sales" going to affect the Company (ABC Economía, 2018).

There are four main reasons that can explain this behavior:

1. Over time, margins and the expected growth are more modest.
2. Exchange rates arising from the strength of the Euro.
3. 2017 autumn and winter was anomalous, it was hotter and dry than usual, what reduced the sales in this season, which in the textile sector implies the 70% of the annual turnover.
4. Difficulties with the online channel. The group delayed the new collections of spring-summer, reducing the number of products with non-reduced prices during the last semester. This issue reduced the amount of sales and damaged the margin. (ABC Economía, 2018).

Unlike many stock market analysts usually affirm, Inditex believes that online sales do not dilute profits and do not necessarily have lower margins than physic shops'. In order to obtain the same level of online and physic sales margins, the logistic structure must generate synergies between the two channels, which is exactly what inditex has been preparing during the last five years (Riaño, P., 2018)

Figure 7. Fat Fashion growth.



Own elaboration from INDITEX (2019), H&M (2019) and GAP (2019).

As it was mentioned before 2017 has not been a great year for the company, which had an 8, 69% growth in sales while in 2016 and 2015 had a growth of 11, 54% and 15, 36% respectively. However, as we can see in the previous graph, it has been a rough period for the totality of the sector affected by the abnormal dry and hot autumn and winter - 4% growth in sales in H&M and 2, 18% in Gap- (Riaño, P., 2018).

Inditex was one of the first fast fashion firms to realize in the importance that online shopping will have in the following years, that's why it decided to reorganize its stores, and transform its webpages into online international stores (Delgado, C., 2018). This prompt reaction to the events let Inditex reaffirm its leader position in its sector, while other firms such as H&M were slow to see the opportunities that ecommerce offered or wrongly thought that their store network was enough to see off online competition. H&M sites did not only arrive late -2010-, but also were poorly designed and had usability and SEO (Search Engine Optimization) flaws, all this contributed to the failure of the site to achieve its full potential what led into the loss of many sales opportunities. As INDITEX was gaining online offering, due to being ahead of time and investing in order to compete with exclusive online firms such as ASOS, H&M delay left the firm with less time to learn and improve online (Charlton, G., 2018).

In 2017 the online sales increased a 41%, accounting the 10% of Inditex sales (2.530 millions EU.). Nevertheless, if we compare this figures with its main competitors GAP and UNIQLO we can observe that although INDITEX is the ultimate leader in terms of traditional sales (selling in stores), when we target the attention in online sales invoice, its leading position seems to be endangered, as the competitors tends to obtain higher percentages. Inditex billed in total (physic and online stores) in 2017, 25.336 millions of euros, 10% of which was obtained through online sales, -2.500 millions-. Meanwhile, GAP factures 12.822 millions in total of which 3.100 millions of dollars are made through internet sales. As we can see, even though the Spanish firms duplicates its global turnover, GAP has a bigger business online. Uniqlo, has not matched Inditex level of billing still, but, in terms of its accounting weight it does with a total turnover of 14.120 millions, 10% of it is obtained through online sales. The Japanese company expects to increase its online sales in a 20% in the following months what can lead to a surpass of Zara ranking position in the online market. H&M meanwhile does not show concrete data figures of its online turnover (Delgado, C., 2018).

4.2.1 Business model

The direction of Inditex is well aware that business models are not timeless, the multiple changes and adjustments of the company are the perfect example of how necessary renovation is in order to maintain the leadership position. Although it is a well-defined and stablished business in its sector, it counts with a flexible production –mostly subcontracted- and a minimum inventory that allows a constant and nearly immediate adjustment to demand in terms of quantity and type of clothing (López, F.)

Their presence in different markets allows them to deal better with economic crisis. Besides, as they are settled as affordable brands customers will vary depending on economic situation of the market and their budget -when it is a harsh economic period the medium-high class will be their customers while during the good economic periods their customers will be the low-medium class-.

Unlike other fast fashion companies, INDITEX designs the 15-25% of a line ahead of the season, while more than the 50% of the items are designed and manufactured in the middle of a season based on what is on demand. Meanwhile, H&M for example designs a 80%, and the majority of the retailers design the 100% ahead of a season, what leaves them with an excess of inventory that they then have to discount at season-end. (Uberoi, R., 2017).

4.2.2 Managing information

As it was previously mentioned, nowadays managing information can be decisive factor of a business success or failure, and this ability is one of the most distinctive attributes of INDITEX (Tuñas Matíña, A., 2015).

In order to make the best use of data, and keep its position in the market, the firm has invested over 1,000 million euros in technology and innovation to develop one of its biggest project, the creation of a technology center based in Arteixo (A Coruña). This 600.000 meters establishment remains open 24 hours a day during the whole year, and it is responsible of coordinating the websites of the different brands of the group and their respective Internet sales throughout the 96 different markets where they are present. (Juste,M., (2016)).

This unique space in the world, is expected to cover Inditex's technologic needs for the following 10 years, it has a technologic showroom, and spots dedicated to technology and distribution innovation, where the systems are in the process of implementation or in the phase of testing and development. These rooms have free Access for the commercial teams, what allows them to familiarize with the new technologies at the same time that technicians are testing them (Rodríguez-Somoza, E.P 2016). In the same floor there is a space dedicated for the recreation of the establishment and showcase design, and in the second floor there is the "Data Centre" - 4.000 servers and 1.300 kilometers of fiber- and the "Room of operations", in charge of managing and detecting the possible incidences in any of the infrastructures of the group. These are just some examples of how Inditex has made of these technological center its own testing laboratory, proving that it is not only a fast fashion company, but also, a highly innovative technology business that seeks for the perfection and offers a whole new experience to their customers taking into account every single detail (Tuñas Matilla, A., 2015).

The second floor of the Technology Center is divided in teams that control their assigned geographic areas and remain in contact with the stores permanently. They are in charge of examining data, analyze how customers react to the products, etc., and once all this information is gathered, they transfer it to the design teams that will take it into account when elaborating their designs (Villaécija, R., 2017). The company's system could be one of the main differential factors when it comes to managing information, as, while most companies establish a bureaucracy system that can interfere communication between departments, Inditex organization, operational procedures, performance measures, and even its office layouts are all designed to make information transfer very easily (Kasra F., et al., 2005).

Figure 8. Technology Center of inditex



Source: Expansión, 2018 “El gran hermano que controla Zara”.

If we take its signature brand, Zara, as an example, by analyzing how this brand system works we will be able to understand how any of the brands of the group does. In Zara’s case, it is divided in three sections—women’s, men’s, and children’s clothing— where design, sales, and procurement and production-planning staffs of each channel are separated, what enables them to achieve a reactive supply chain whose information flows faster, it is more direct, and it is not affected by problems of any other channels, this operation will eventually increase the quality and the speed of the design process. Moreover, these work spaces have cross-functional teams; designers, market specialists, store managers, procurement and production planners that not only share spaces but also work together and are in constant touch providing quick feedbacks to each other and even being able to take in situ decisions about the production prototype. This prototype can be turned into live “just” by sending the necessary instructions to the relevant machinery to then be distributed and sent to the stores where the communication cycle began (Kasra F., et al., 2005).

Another key feature of Inditex’s success that is due to their ability to manage information are its collections. While other brands change their collections when the season is over, Inditex adjusts them in real time according to its customer’s needs or tastes. (Tuñas Martilla, A., 2015). This constant adaptation to the gathered information is possible thanks to its flexible and effective production structure, it has one of the shortest cycles of

design, production and store exhibition and highly motivated and proactive employees. This high intensity dynamic can also explain why Inditex does not advertise, there is literally no time (Lopez, F.).

Their clothing is renewed every 15 days, during this period the creative team must be able to explore designs that are adjusted to customers' feedback. Therefore, Inditex does not impose trends, it is the own clients the ones who will determine which product will end up in the stores. Inditex works with small batches, this action allows the withdrawal of clothing that is not working without implying a damaging cost to the company. Nevertheless, clothes will not be in the stores for more than a month. When a product is successful it will not be repeated, instead, some of its features will be changed –the color, the cut, the material, etc.- maintaining the essence but giving it a turn. Its idea is to sell small amounts of multiple collections in a reduced period of time, what creates the aura of last chance and gives customers a sense of captivating exclusivity (Riaño, P., 2016).

This technique is not only applied to the production scenario, it is also present in the stores “exhibition”, all the stores of the same brand –Zara ,Pull&Bear, Oysho, etc.- have different products exhibited in them, a store located in a luxury area will not have the same clothes as a store located in a shopping center, it will all depend on the consumer demand, this information is analyzed every day which allow brands to correct any errors or unpredictable results, and to elaborate customized orders, which can be consolidated in two hours, and distributed in the third (Villaécija, R., 2017). In fact, on the contrary to the majority of its competitors that allow retailers to change a maximum of 20 percent of their orders once the season has started, Inditex admits a 40-50 percent, once again with the objective to avoid stocks which will lead to sales and overspending (Machuca et al., 2005).

Inditex providers are not located in the traditional centers of fabrication in Asia, instead, the great majority of them, 60%, are in Spain, Portugal, Morocco and Turkey for two main reasons:

- The company's central distribution politic –everything is distributed from Spain twice a week-. Stores demand what their customers consume, maintaining the products in one country will only accumulate stocks and in a way it will force customers to buy that garment, which is the complete opposite to the company philosophy (Villaécija, R., 2017).

Figure 9. Inditex's distribution politic



Source: Inditex, 2018.

- To reduce the shipping time. New competitors are growing fast, and most of them without the pressure of owning a physic store, what allows them to approach the production to the distribution, and have short delivery, which forces Inditex to look for new ways of reduce its own (Dowsett, S., 2018).

4.2.3 Logistic

One of the latest innovations in order to upgrade the logistic has been the internal development of the RFID, Radio Frequency Identification, which are located inside the alarms, and enable the firm to identify the garment individually since they are in the factory till they are sold. This system provides more agility in the distribution process and a greater precision of the clothes management while they are in the shops, resulting eventually as an increase in the quality of the customer support (INDITEX, 2014). It is mainly used by teams for inventory management, distribution, design and customer service improvements (Uberoi, R., 2017)

This idea was taken from large surfaces like Walmart and J. C. Penney who were the pioneers to use RFID in fashion to elaborate their inventories, but, their interferences with the anti-theft sensors cause their withdrawal. Inditex saw potential in this idea and started experimenting with microchips till obtaining their actual final result, this RFID will be removed when the product is bought, so that they can be reused and they will not interfere with the alarms (Valdés, V., 2016).

As it was mentioned before, each garment is linked to a unique RFID code. During its fabrication the alarms are attached without any information inside of them, once there are in the logistic center, they are given a code, their antenna starts working and it is charged with information including certain data such as the size, color or pattern, which will be very useful in order to provide updated information of its distribution process by allowing the company to track that piece from its exit from the warehouse to the moment when it is sold, facilitating its location, its need of reposition and its success in the market (this contributes to the decision making of the design department). (Delgado, C., (2016)). As a result, it reduces the time needed in order to undertake the tasks, and flatters the inventory accounting. (Juste, M. (2016)).

At the moment this technology is only used in Zara's establishments, but its objective is to expand it to the rest of the group's brands. The Wall Street Journal has defined Zara's inventory as the most intelligent among all the fashion enterprises, and considers that the brand is where it is today, thanks to the information provided by the RFID (Valdés, V., 2016).

Figure 10. Advantages of RFID



Source: Europapress 2015 (Translated)

Some common examples of how this procedure allows to save time can be seen in the following scenarios: If a customer needs a particular SKU (Stock-keeping Unit), traders are now able to localize the garments immediately in the store or even at any nearby (Uberoi, R., 2017). Another example could be that thanks to this system, when boxed items arrive to the store, the employees in order to identify them and avoid the process of unboxing the items and individually classify them, can simply obtain this information in a matter of seconds by using a laser gun (Delgado, C., 2016).

The RFID technology has been implemented in the new logistic organization plan, which consists in 19 stock rooms distributed in 17 different countries that will be used only by internet matters. In the long-term, the objective is that each country counts with a logistic warehouse for online purposes, thanks to the RFID technology implementation, when a online order could not be attended by its designed stock room, it could be send from the logistic centre in Spain or from any store (Riaño, P., 2018).

4.2.4 Innovation in stores

Inditex is known for investing in the best real estate assets of the most pertinent cities in the world, which are usually located next to high fashion brands that indirectly favours their status. It also pays special attention to the decoration of these stores –adjusted to the style of each of the firms of the group- so that they are used as giant showcases where customers can immerse and experience the brand’s culture, being this, their key feature in order to avoid advertising expenditure. Behind this decision there is a whole specific structure and technology dedicated to the inauguration and decoration of them (López, F.).

The group has made a deep transformation in its distribution network, while it used to be based on the capillarity and the vast presence of their stores in the cities, since 2012, Inditex has decided to reduce the number of stores and focus on the location and size of them (Riaño, P., 2018); although in comparison with its main competitor, the H&M group, who has admitted that its model is timed-out, the model of the Spanish company is originally more strong and purged and consequently, better prepared to the online. This “purged” can be observed in the following figure which compares the number of stores as a group (INDITEX and H&M group), and their most successful firms (ZARA and H&M), comparing them as well with the Japanese firm UNIQLO.

Table 2. Comparison of the number of stores in Inditex, H&M and Uniqlo

		INDITEX		H&M group		UNIQLO
		ZARA	INDITEX GROUP	H&M	H&M GROUP	UNIQLO
Nº OF STORES	SPAIN	306	1688	161	173	2
	UK	65	108	260	294	11
	USA	87	91	536	559	52
	CHINA	183	593	500	522	684
	Worldwide	2251	7475	4353	4841	1930

Source: Own elaboration from INDITEX (2019), H&M (2019) and UNIQLO (2019).

The Spanish group is closing a great number of its small stores in cities where they have many and replace them with larger ones that combine the traditional system with the new technology, experiencing better results. For instance, in Bilbao today they count with only one large store that is achieving greater results in sales than the combined results of the previous four stores that they used to have in this area (Verbo, M.,L., 2018). This technique is similar to the one that Banks have been implementing since the last economic crisis. As nowadays banks offer their clients the possibility to do many operations through internet and their smartphones, people tend to attend less to the office, and when they do is for an important reason (to ask for credits, mortgages, investments and more), therefore banks have decided to close many of their branch offices to replace them with a smaller amount of larger offices that are better connected to clients, with bigger timetables and more personalized services (Alegret, X., 2018).

Inditex stores are no longer working as the regular physic store, right now they are been used as a support system for the online shop, completing that way the omnichannel of the physic and the online and reducing costs such as the ones derived by online shopping returns (ABC Economía 2018). Today, customers can manage the returns of their purchases, buy online or collect –after 2 to 48h- their orders from the stores by using a QR code or a PIN code that appears in the e-ticket (López, D, 2017).

Figure 11. Zara Brussels Ave toison Store



Source: Dowsett, S., 2018.

New competitors such as ASOS, Missguided or Boohoo.com, are making an impressive debut in the online textile industry, becoming a threat for the Spanish company. They are able to produce and ship faster than many other companies in the industry and they update their website daily. In order to compete with them and make use of one of the assets that these competitors usually lack of –physic stores–, Inditex is betting on technologies like the “intelligence of location” which uses ultrasound technology to track the customers’ steps while they are in the stores. This technology also allows the company’s app to turn into the “instore” mode, so that customers are able to locate garments and receive offers. Another novelty is the alliance of Inditex with Jetlore, company that has developed a technology that is able to predict the behaviour of consumers and El Arte de Medir, which is focused on big data (Dowsett, S., 2018).

Regarding their most well-known brand, Zara, it has interactive fitting rooms that by now are only available in their flagship stores, they count with an RFID sensor that allows the identification of the garments that will be tried on just by getting inside the fitting room. The garments will be displayed in a screen inside that will be also shown in the attendants’ tablet so that they can help customers if they want counselling or another size (Rodríguez-Somoza, E.P., 2016).

The past 18th of April of 2018, Zara added a new innovative element in some of their stores that erases the lines between online and in-store operations, clients will be able to see through their phones models trying on the new collections, this action will be done with an app “ZARA AR”, just by steering the phone to specific spots around the stores or in the show cases. Although this new feature is in the testing phase, if it receives a good reception it is expected to install it in more of their stores (Vázquez, S., 2018).

Now it's a matter of waiting for the market decision on whether to maintain the business model that combines sells in line with a wide range of physic stores or the final transition to the low cost, massive, online business model (Dowsett, S., 2018).

Conclusions

Only after having done this analytic essay concerning the irruption of the economy of platforms in the textile sector and how firms have reacted to it, specially the group of INDITEX, I have come to the following conclusions:

- Since the appearance of digital platforms, their economy has not stopped growing. Its growth is closely related to the possibilities that they bring to consumers. Nowadays people are connected almost permanently, which supplies platforms with the required mechanisms to be able to use resources more efficiently, reduce its price, offer a wider range of goods and services, etc.

- The appearance of this new business model, called platform model, is causing multiples effects in the economy –job creation/distruction, growth, more efficiency, etc.-. After the bibliographic research a disagreement of different authors was detected; while there is an opinion stream that states that this is a common thing that has happened all through the years with the arise of any new business model, others argue that this time the circumstances are different and the future of the economy is not clear.

- The omnichannel value chain is nowadays the key in order to become successful as an enterprise. The multichannel culture demands clarity, comfort, speed and simplicity when shifting from one channel to another. To develop an exceptional omnichannel value chain, enterprises must be able to segment and define their channels, which requires a great understanding of customer's preferences, behaviours, habits, etc, and that is obtained through Big Data.

Concerning the business case of INDITEX most relevant conclusions are the following:

- Contrary to the common integration strategy of digital platforms, INDITEX has decided to create a closed model, by developing an internal platform committed to customer service, which at the same time obtains information supplied by the interaction with them. The implemented method is the opposite to the usual open platforms models very common in business such as Philips, Apple, General Electric or Amazon, which have decided to open their platforms to agents involved in their business model like clients,

developers, influencers, etc.. Therefore, these companies are able to take advantage from the sinergies provided by the economies of red.

Clearly, Inditex has decided not to follow the patterns of any other sectorial platform for a business matter. The firm seems to prioritize the exclusivity of their designs over any other advantage that may result from those platforms. Adopting any standart model of platform would have saved them from a considerable amount of costs coming from their portofolio design; but, this may be a perfect example that proves that the openness of platforms is not always the best option, and even less in sectors like fashion where in order to maintain their high costs of design they prefer to keep the ownership of their own designs.

Nevertheless, Inditex has included the opinion and behaviour of their customers in its Big Data, obtained through many systems such as social networks, customers' interaction in any of the websites of the group, or any track system such as RFIDs

All of this engine is held by a modern and private platform of the firm, which includes its own server's infrastructure that gives signal to the company's private cloud. The size and quality of the information that arrives to this platform is such that it enables them to decode, with a very low margin of error, the next fashion trends and the most demanded models in each corner of the global market.

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