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COVID-19 HAS REALLY AFFECT ON DIGITAL BANKING SYSTEMS OR JUST A RESULT OF DIGITAL TRANSFORMATION

Covid-19, Dijital Bankacılık Sistemlerini Ya da Dijital Dönüşümün Bir Sonucunu Gerçekten Etkiledi

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Dr. Serdal GÜNDÜZ
Kıbrıs Sağlık ve Toplum Bilimleri Üniversitesi, Bankacılık ve Finans Bölümü, Guzelyurt - Cyprus

ABSTRACT

Digital transformation has opened the financial services market to new types of providers: startups known as fintechs and, more recently, big tech companies. The latter have a great disruptive potential for the competitive landscape due to their size and the characteristics of the digital ecosystems in which they integrate financial services. This article explores how the scope of this integration is partly conditioned by the financial regulatory framework, data access rules, and competition policy.

Keywords: financial services, digital markets, financial regulation, data, competition policy.

ÖZET

Dijital dönüşüm, finansal hizmetler pazarını yeni tür sağlayıcılara açtı: fintech'ler olarak bilinen girişimler ve daha yakın zamanda büyük teknoloji şirketleri. İkincisi, boyutları ve finansal hizmetleri entegre ettikleri dijital ekosistemlerin özellikleri nedeniyle rekabet ortamı için büyük bir yıkıcı potansiyele sahiptir. Bu makale, bu entegrasyonun kapsamının kısmen finansal düzenleme çerçevesi, veri erişim kuralları ve rekabet politikası tarafından nasıl koşullandırıldığını araştırmaktadır.

Anahtar Kelimeler: finansal hizmetler, dijital piyasalar, finansal düzenleme, veriler, rekabet politikası.

1. INTRODUCTION

The generation, storage and transmission of information is a core element of the functioning of the financial sector. In pieces of information the financial rights and obligations of clients are recorded; in information flows, payments and asset exchanges materialize; and the analysis of information allows evaluating the risk of potential borrowers. These are just some examples that show how far the financial industry has been based on information processing since its origins, which explains why it is one of the sectors that has historically invested the most in information and communication technologies (ICTs). Since the late 1960s, with the introduction of the first mainframe computers in central services, and later personal computers in branches, financial institutions have progressively mechanized internal operations and processes that were highly paper and labor intensive. (Ontiveros et. Al, 2012). This first wave of adoption of ICTs made it possible to process increasingly complex operations and to do so more efficiently. In addition, greater economies of scale as a result of automation pushed the financial sector to merge operations to take better advantage of efficiency gains. If there is something that distinguishes the most recent wave of digital transformation, it is that, in addition to introducing new efficiency gains in the operations of entities, it has significantly altered the way of interacting with customers, has given rise to new services and models business and has lowered some of the barriers to entry that made the financial sector a relatively tight market. The result is an ongoing disruption that is transforming the competitive landscape and structure of the financial services market. Behind these changes are mainly three major technological advances: i) broadband networks and smart mobile devices, ii) cloud computing services, and iii) the exploitation of large amounts of data (big data) and artificial intelligence. The expansion of fixed and mobile broadband networks and the widespread adoption of smart devices has led to the emergence of new channels for the attention and distribution of financial services: electronic banking portals, first, and mobile banking applications later. Consumers, accustomed to the immediacy, ubiquity and simplicity of digital services such as social networks or electronic commerce, have embraced these new channels for their daily operations,

especially the new generations. From a competitive point of view, e-portals and mobile applications allow providers to target broader markets and benefit from economies of scale without the need to deploy and maintain an extensive physical office network. An opportunity that is being taken advantage of by new financial service providers with an eminently digital distribution model. Furthermore, digital channels tend to increase comparability between the products and services of different providers and to reduce the costs of switching from one provider to another for consumers. Along with the permanent connectivity provided by networks and mobile devices, another of the great changes behind the digital transformation is the increase in computing capacity and its reduction in cost, necessary conditions to be able to process a volume of operations that has multiplied dramatically. exponential in the digital environment. In this sense, cloud computing or cloud computing offers more efficiency, flexibility and scalability than traditional centralized systems. Businesses can consume computing capacity or computer applications (software) on demand and thus benefit from the economies of scale of the cloud regardless of their individual size. This substitution of capital investment for operating expenses reduces entry barriers in markets such as financial services that are intensive in the use of ICTs.

The third great technological advance behind digital transformation - the exploitation of large amounts of data (big data) and artificial intelligence - is directly related to the previous ones. The interaction between companies and consumers through digital channels has generated an explosion in the amount of available data, and the greater computing capacity has allowed it to be processed and exploited with new predictive tools. The applications in the financial sector are multiple and will increase over time: use of new data sources in the analysis of credit risk, identification of suspicious transactions of fraud or money laundering, greater customization of commercial offers, automated financial advice, etc. The effects on competition can, in theory, be of different sign: on the one hand, current market providers have large amounts of data on their customers, which could give them an additional advantage; but, on the other hand, the exploitation of new data sources allows obtaining relevant information by alternative means to compete in the financial services market. Hence, the concentration or distribution of data in the digital economy as a whole and the conditions of accessibility and usability of the same greatly condition the competitive landscape. As we have already explained, the use of digital channels and cloud computing services has reduced some entry barriers to the provision of traditional financial services. But, in addition, the set of technological advances described above has allowed the emergence of new business models that satisfy the financial needs of consumers with a different structure. Digital platforms or marketplaces are a clear example of this. Digital communications have reduced transaction costs (search for counterparties, contract negotiation, monitoring, etc.) between geographically dispersed individual agents and thus platforms have emerged that put financing bidders and applicants in contact and that facilitate transactions between them through trust mechanisms that reduce information asymmetries (Coyle, 2016). This transformation is key for an industry such as finance, where information asymmetries have traditionally been the source of added value for many business models and have justified some of the regulations. In conclusion, new digital technologies have been decisive in opening up the financial services market, historically relatively tight, to new providers, which has generated a new competitive environment that is boiling over.

1.1 From The Unbundling Of The Value Chain To Integration In Digital Ecosystems

Startups that have taken advantage of digital transformation to break into the financial sector are commonly referred to as fintechs, a concept that refers to the English words finance and technology. These start-ups are usually specialized in a specific financial product or service and sometimes also in a customer segment (Arner et al., 2016). In general, they operate in those areas of the financial sector that are not subject to a heavy regulatory burden and are not capital intensive, such as payments and transfers. This is where most of the fintech activity is concentrated, along with financing services not based on the capture of deposits (such as crowdfunding platforms) or applications that help to manage personal finances (such as account aggregators or automated

counseling tools). By specializing in a specific financial product or service, these fintech companies have disaggregated the value chain of the banking sector, traditionally unified under the universal banking model that tries to satisfy the set of financial needs of customers (Ferrari, 2016). In the new environment, banks and new entrants compete on individual elements of the value chain and at the same time increasingly collaborate on others. In some cases, fintech companies provide technology or solutions to banks; and in other cases, banks have integrated third-party products and services into their value proposition and offer them to their customers. In recent years, another very different type of new players are making their foray into the financial sector: large technology companies with already consolidated positions in digital markets. This is the case, for example, of Amazon, Facebook or Apple in the United States and Europe or of Alibaba or Tencent in China. Like fintechs, these companies also offer specific financial products and services, disaggregated from the banking value chain, but what they do is integrate them into their own value proposition. A movement that is consistent with the general strategy of these companies: to build around users an ecosystem of products and services (social networks, e-commerce, search, operating systems, application stores, etc.) that are connected to each other. The integration of financial services into digital ecosystems has the potential to substantially alter the structure of the financial sector. The reason is that the digital ecosystems of large technology companies already have millions of active users and, in addition, they have a series of characteristics that give them power in the markets in which they operate and help them enter new markets. These characteristics are basically three: (i) they develop network effects, (ii) they act as gatekeepers or gateways to related markets, and (iii) they generate and exploit large amounts of data. The network effects of digital ecosystems are often both direct and indirect. The former arise in those services that allow users to connect and interact with each other, such as social networks. The latter appear on platforms or marketplaces that act as intermediaries between different types of agents, such as consumers and providers in an e-commerce site or developers and users in a mobile application store. Network effects mean that when a service reaches a certain critical mass of users it benefits from a positive feedback loop that facilitates market concentration (Evans and Schmalensee, 2007). Second, digital ecosystems have products and services that, by their nature, play the role of gatekeepers or gateways to other related markets.

This is the case, for example, of mobile operating systems, which establish the conditions to create and distribute applications, or of search engines, through which users access digital content or e-commerce sites. This allows digital ecosystems to exercise a certain degree of control over other products, and to be able to take advantage of that position to enter and compete themselves in those related markets. This is what, for example, some mobile operating systems have done when developing their own mobile payment services. The third key element to understand the power of digital ecosystems is that their products and services generate, aggregate and exploit large amounts of data about users. This gives them a competitive advantage for several reasons. On the one hand, the accumulation of relevant data allows them to benefit from dynamic economies of learning or economies of scale and increasingly improve the quality of their services. On the other hand, as the data obtained in the provision of a service can be reused to develop and / or distribute other products and services, they also benefit from economies of scope (Autorité de la concurrence and Bundeskartellamt, 2016). In addition, data can have blocking effects for users, as personalization and storage of personal data within a service can increase the cost of switching from one provider to another. These characteristics of digital ecosystems generate multiple synergies between the different products and services that comprise them. For this reason, ecosystems not only add new services as direct sources of income, but also to strengthen the ecosystem as a whole: attracting new users and linking them more, achieving control over key markets or generating new sources of data. This explains why ecosystems extend their activity to products and services traditionally offered by different types of companies, something that is reducing barriers between different economic sectors. In the case of financial services, these can perform different functions - not exclusive - within a digital ecosystem: i) transactional services (means of payment) for the interactions that

occur in the ecosystem; ii) complementary services to other ecosystem products, such as the offer of credit or insurance to users (consumers or providers) of an electronic commerce platform; and iii) financial services can be a relatively autonomous component of the ecosystem, such as a mobile payment service in physical stores or a personal finance management tool. The integration of financial services in digital ecosystems that, by their nature, tend to concentration can radically alter the current structure of the financial sector. Not so much because ecosystems replace current providers - at least not in all financial products and services - but because of the control that ecosystems can exert over the relationship with customers and, therefore, over the commercialization of financial services and the distribution of margins.

"In any case, the impact will depend on the degree of integration of financial services in the digital ecosystems of large technology companies, the level of involvement of these companies in the provision of financial services, and the ability of financial institutions to develop their own differentiated value propositions, emulating some of the characteristics of digital ecosystems previously described. These variables depend, in turn, on some relatively exogenous factors, such as regulation and competition policy. On the one hand, the burden of financial regulation deters the entry of digital ecosystems into those services subject to more strict regulation, which also has implications for the entire organization that provides them. At the same time, new regulations in the field of payments and access to data facilitate the entry of new competitors in some financial services. The role that competition policy can play is explained by the dominant positions that large technology companies occupy in some digital markets. This makes them subject to scrutiny by competition authorities and may limit the practices with which they intervene in new markets. In the next sections we develop the discussion on these regulatory and competition aspects.

1.2. The Role of Regulation

Banking is a highly regulated sector, which is explained by its key role in payment systems and the financing of the economy and its vulnerability to the loss of public confidence, which has prompted a series of public interventions with in order to ensure financial stability, including deposit insurance, last resort loans and prudential regulation. Deposit insurance seeks to give security to the liberating power of payments against bank accounts and to limit the incentives to withdraw deposits by clients at the first sign or rumor of weakness of an institution (bank runs), as well as limit contagion . The insurance is generally covered by the financial institutions themselves, with the implicit guarantee of the state. For its part, the last resort loan provides emergency liquidity to solvent but illiquid entities. The central bank is the only institution that is in a position to grant it in the amounts and with the necessary speed. Finally, prudential regulation seeks to limit the risks of losses for the safety nets described above, by ensuring sufficient levels of capital, provisions and liabilities with loss-absorbing capacity, as well as adequate risk control systems. This set of interventions aims to ensure that financial institutions authorized to use the "bank" label have high solvency standards and solid safety nets in the event of problems. The crucial difference between banks and other financial intermediaries lies in the collection of deposits from the public, on which the retail payment system revolves. As noted above, the liberating power of deposit-linked payments requires high public confidence; hence the authorities establish a clear barrier between what is and what is not a deposit, and therefore between what is and is not a bank. Regulatory obligations and the supervisory control involved in crossing this barrier have kept new entrants away from attracting deposits from the public.

Banks are also subject to other regulations not directly related to their role as deposit generators, but which can be equally demanding and burdensome from a compliance point of view. An example is all the regulation against money laundering and financing of terrorism (AML / CFT for its acronym in English), which takes advantage of the central role of banks in financial flows to limit or control illicit economic activities, through very demanding customer knowledge requirements. It is important to understand that these regulations are not related to the concern for financial stability that permeates all banking regulation, nor are they inherent to financial activity, but rather that the

authorities take advantage of the banks' infrastructure and their central role in payment flows. of the economy to pursue different objectives, not especially related to the banking sector. For this reason, as new ways of moving money in the economy emerge, AML / CFT regulations have incorporated new obligated subjects, such as electronic money issuers or virtual asset exchange houses.

In this article we are interested above all in a third line of regulations that affect the financial sector and that pursue competition and consumer protection objectives. Its nature is different from regulations related to financial stability and money laundering prevention. In this case, it is a matter of ensuring that financial service providers perform their function efficiently and that they do not benefit abusively from the information asymmetries inherent in the work of financial intermediation. Of course, all these regulations are related, complement each other, interact and require balances. For example, financial stability contributes to consumer protection (insofar as consumers are the main victims of financial crises), and the prevention of money laundering benefits both efficiency and financial stability in the long run . Financial stability and competition are apparently contradictory goals: an excessive emphasis on competition can put weaker competitors on the ropes, leading to bankruptcies and financial instability; an excessive preponderance of stability objectives can cause inefficiencies that end up paying the bank client, both the saver and the borrower. But this exchange relationship between both objectives is limited to the short term. In the long term, only an efficient financial system is truly stable, in the same way that artificial stability, at the price of a barely competitive market, generates weaknesses that end up undermining solvency in the long run. Regulations with competition and consumer protection objectives are generally specific to the different financial products or services and do not usually affect the entire entity that provides them, unlike prudential banking regulation. In this sense, as the digital transformation has given rise to new services or business models, the regulatory framework has evolved and expanded to address the risks and information asymmetries inherent in the different activities. The new regulations that regulate participatory financing or crowdfunding platforms are an example of this evolution. A regulatory framework proportional to the risks of new activities can favor their development by providing certainty and confidence to both suppliers and potential customers.

In some cases, beyond reacting to changes in the market, regulation has played a proactive role in opening up the financial sector to new competitors, especially in the field of retail payments (González-Páramo, 2016). The most notable case is probably the new European Payment Services Directive (PSD2), which has forced banks to open their systems to other players who, with customer authorization, can access accounts. banking services to provide payment initiation or account information services2. The new directive establishes the authorization requirements for new providers who want to offer this type of service. An opportunity that can be taken advantage of by fintechs specialized in one or more financial services or by companies with broader digital ecosystems, as we explained in the second section of the article. The openness required by PSD2 has various implications for the competitive landscape of the financial sector. On the one hand, payment initiation services have a direct impact on the retail payments market. The possibility of a third party initiating bank transfers on behalf of a client allows new payment instruments to emerge, based on the movement of funds account to account, that compete with cards in payment in shops, especially electronic ones. Although the movement of funds continues to occur within the banks' infrastructure, they lose the direct relationship with the customer at the time of payment and become providers of the underlying infrastructure.

On the other hand, account information services - which aggregate the transactions of a customer in different entities - increase comparability between payment account services and reduce the cost for the consumer of switching from one provider to another, by being able to maintain a repository of your transactions. In addition, like payment initiation services, they act as interfaces or intermediaries between clients and financial entities, which contributes to diluting the direct relationship between the two (González-Páramo, 2017). Last but not least, account information

services access customer transactional financial data, the value of which transcends the account and payment services market itself. These data allow to know the habits and consumption patterns of a client, infer their savings or credit needs or analyze their risk profile. Because PSD2 makes that data easier for other banks and new players to access, it can increase competition in various financial products and services. At this point, it is important to remember that, as we explained in the second section of the article, the accumulation and exploitation of large amounts of data is one of the key characteristics to understand the power accumulated by digital ecosystems. Therefore, the relationship between data access and competition in digital markets deserves special attention in the next section.

1.3. Competition Policy

As we have already explained previously, the expansion of digital ecosystems towards financial services is conditioned by regulation, which in some cases acts as an obstacle (prudential regulation) and in others as a facilitator (new payment regulations). Another determining factor of this expansion, which is increasingly important, is competition policy. As large technology companies have acquired dominance positions in various digital markets, such as search engines or mobile operating systems, their behavior has come under scrutiny by competition authorities.

The objective is to prevent them from abusing their dominant position and excluding competitors by means other than the merit of their products. Although each case of competition requires a detailed analysis of the specific circumstances and effects, some possible anti-competitive practices of digital ecosystems have to do with the connections they establish between the different products and services they offer, usually with the aim of taking advantage of their dominance in one market to extend it to others. These connections can be the linking or bundling of products (that is, conditioning the sale of one product to the purchase of another or selling several products only in a package or with advantageous conditions) or the use of the position of the ecosystem as an intermediary or door access to other markets to give preferential treatment to their own products and discriminate against those of third parties. The range of possible anticompetitive practices is wide and subject to many nuances, so we do not pretend to offer an exhaustive explanation here. Furthermore, some characteristics of digital markets (multiple sides, zero prices, data as a central input for production, etc.) pose technical challenges for competition authorities in identifying relevant markets and properly analyzing anti-competitive practices (OECD , 2016). Especially in the European Union, the competition authorities have already imposed some notable sanctions on digital ecosystems for the type of practices described above.

In June 2017, the European Commission fined Google 2.42 billion euros for abuse of dominant position as a search engine for giving an illegal advantage to its own comparative shopping service (Google Shopping), and in July In 2018, the tech giant received a second fine of about 4.34 billion euros for illegal practices in relation to Android mobile devices. Both have successively set historical records as the highest fines ever imposed by the European Commission on a single company. However, it is difficult for the cessation of anti-competitive practices - required by the Commission together with the fines - to be able to reverse the impact they have already had on the structure of the markets, with consolidated dominance positions. Hence, more drastic proposals arise to introduce ex-ante regulations of neutrality or non-discrimination in the treatment that digital platforms give to their own products and services and those of third parties. At the moment these are discussions at the theoretical level, but the climate of growing concern about the power accumulated by large technology companies and the fear of possible regulatory interventions could persuade them to adopt from now on strategies more open to competition in the expansion of their digital ecosystems.

2. THE PAST INHERITANCE GIVES US THE BASIS FOR A NEW CIVILIZATION

Times will never be the same again, especially because pandemics will be uncontrollable. We will overcome one pandemic and fall into another. We will return to our work and after a few months a

new quarantine will be declared. Nothing is said. Globalization has been extroverted and has accustomed us to big shows, show business and consumerism. The abrupt transition to quartering without anesthesia presents a human species unprepared for a long quarantine and the healthy habit of meditation. There are many empty and meaningless lives. Globalization has flattened existence, makes it tacky. This quarantine has shown many the inability to be alone, to support themselves. There is a possibility that the population will seek their national governments rather than a hyperglobalized system. It is the time of the current nation states, those that know how to live with the global as they have done so in the last thirty years. We are witnessing the decline of neoliberal globalization and the structural crisis of the capitalist system. Difficult and risky to predict the future when the waters are so rough. The poor, however, are the most affected sectors and the middle classes are not sure of them. These are times when nation states must use their savings to withstand the crisis. Because it is a global issue, getting out of this pandemic requires global solutions where Latin America has a lot to say given its potential in resources, population and behavioral way of being. Although there will be a recessive global contraction, the world will know how to get ahead. Humanity must assess the role of transnational corporations that have industrialized on the basis of fossil oil and destroyed the environment. Faced with the paralysis of industrialization, the planet has been decontaminated. The human species appears as the most predatory in the history of the planet. No more bloodthirsty and more bloody species will be remembered. On the other hand, another sector of humanity worships life, eros. There the encyclical "LAUDATO SI", by Pope Francis, an excellent text with sociological, geographical, ecological explanations, a true hymn calling to take care of our house on the verge of being liquidated by thanatic forces. In the cult of creation, youth and women play a central role as they have been showing in their mobilizations. Greta Thunberg is the youth emblem of the fight against climate change, epic of our times. Finally, it must be considered that these are times when Asia is emerging at the forefront and awaiting its time. Suffice it to see that it is the region that best controls the virological pandemic while Europe is lagging behind, as well as the US and Latin America reacting divided.

A friend who works in Tumbes, in a civil organization helping Venezuelan brothers who leave in exodus fleeing hunger in their country, wrote me alarmed and surprised to see in our country the provincial walkers who desperately seek to leave the city of Lima to return to their towns of origin. They are also fleeing hunger, as social immobility has surprised them. depriving them of the temporary jobs they had. "So it was ... So they walked by, with their children and luggage. And many Peruvians saw them pass by like weirdos. Now the same is happening, without food and living on the solidarity of the people… "She tells me that she never thought to see this sad scene again and less in our territory, with protagonists who are our provincial countrymen. Walking the roads and train rails. Some to the center, others to the north and south: sleeping in the open for several days; Living from the solidarity of some people who, overcoming the fear of possible infections, support them. And lately of the humanitarianism of some local governments. Like her, this phenomenon surprised us all. The Academy had not registered that population movement from the provinces to the capital that takes place temporarily, in the months of January to March each year. Rest period from the field and student vacations. Therefore, young people and children migrate to the city to "resort" to later return to their villages. The fewest come to the capital to vacation and for medical attention. State institutions and regional governments do not have a record of these temporary migratory flows, which little by little make thousands, as we have now been able to verify.

2.1. Digital Transformation

Digital transformation is the integration of digital technology in all areas of a company, fundamentally changing the way it operates and provides value to its customers. It is also a cultural shift that requires organizations to constantly challenge the status quo, experiment, and be

comfortable with failure. Digital transformation can involve reworking products, processes, and strategies within the organization by leveraging digital technology.

As such, digital transformation requires an examination and reinvention of most, if not all areas within an organization, of its supply chain and workflow, the skills of its employees, as well as board-level discussion processes. directive, customer interactions and their value to stakeholders. Digital transformation helps an organization keep pace with emerging customer demands, keeping them going into the future. Digital transformation enables organizations to better compete in an economic environment that constantly changes as technology evolves. To that end, digital transformation is necessary for any business, nonprofit or institution looking to survive in the future.

In a data-driven world, an organization can reconsider many of its old assumptions. When Airbnb, for example, separated itself from processes and focused on data, it realized that the company does not need to own physical assets (hotels). The aspects of a hotel business that made it competitive in a process-driven world came to a standstill in a data-driven world. People who have apartments in great locations are a different option than hotels and offer a different value in the customer experience.

By rethinking the old assumptions about a business, we can get to the different places where value or opportunities arise differently from the world defined by the process.

Another example of rethinking assumptions in a data-driven world is HR processes. Companies built their employees' expertise around human resource processes that serve employees, such as payroll, benefits, employee communications, and recruiting. When we move to a digital and automated experience, the data focuses attention on the employee experience. Instead of asking what the organization does for an employee, the data shows the needs and what is happening to the employee.

Speed is the new currency in business. Organizations must be quick to meet the needs or expectations of customers and employees in a competitive market. There are no shortcuts in digital transformation to reach this speed. But as an organization moves further and further into an automated software-defined world, it moves faster and faster as data and its important associations emerge. That allows the transformation of what the company does.

In a process-driven world, processes must be routine and allow the defined result to be consistently obtained. Digital transformation transforms processes, making it faster and more reliable to focus on what needs to be done rather than getting caught up in the effort to get the processes right.

A data-driven world enables you to deliver a complete customer experience, "on time and in full." From the customer experience, it is not how fast the organization answers the phone, but how quickly the customer can complete an order. The customer experience and satisfaction lies in the fact that the customer does not need multiple conversations with the organization. The need for a meeting can be done quickly and done only once. The same experience expectations apply to employees. In a process-driven world, a salesperson needs to make sure the company calculates commissions properly while in a world, the Internet of Things (IoT) makes it possible for us to have smart homes, smart factories, and smart cities. Autonomous vehicles are beginning to change the transportation industry. Artificial intelligence and machine learning enable predictive approaches to decision making and drive business insight.

This digital transformation sweeping industries by storm would not be possible without data. Data is the enabler of new technologies and solutions. Data is where important and actionable business insights are derived. However, most executives and decision makers are concerned about the quality of the data on which their solutions and insights depend. Many companies and decision makers do not understand what constitutes quality information and how it can be obtained, generated, collected and used.

Data, or more specifically, quality data, is the critical differentiator driving digital transformation and what constitutes quality information.do based on data, the information can be viewed by the employee.

The potential to reach new customers is a critical factor in the adoption of digitization. But the digitization of sales channels or digital transformation is simply a response to changing customer preferences. For example, the widespread use of smartphones and faster internet speeds changed the way consumers buy products and use services. Companies had to respond by transforming their sales channels and adding e-commerce websites and mobile applications to their traditional channels, such as physical stores.

Data is key to understanding customers and their preferences. Structured data, such as that coming from CRM systems, helps organizations generate information about their customers based on their past purchases and historical transactions. Organizations can also collect unstructured customer data from social media and hear what their customers want through their online posts, comments, and sentiments. This increased understanding enables organizations to optimize their sales channel strategies to suit the needs and preferences of their customers.

Additionally, customer data helps organizations tailor their sales channels for more personalized services and engagements. For example, a customer's purchase history allows an organization to give that customer some personalized recommendations based on their past actions, thus maximizing opportunities for cross-sell and upsell.

Another key to digitalization adoption is product and revenue innovation. Digital transformation enables organizations to create products that customers want rather than creating products and forcing customers to buy them.

Data on when, how, where and why products are used gives product engineers, designers and manufacturers information on how to improve and innovate their products. For example, one company used social listening to understand why its sales were falling. By listening to and analyzing the unstructured sentiments of their customers on Facebook and Twitter, they discovered that a competing product featured new functionality that it lacked. When the structured data was analyzed in their CRM systems, it revealed the same reason why customers were abandoning the product. The company responded by adding that same feature to its product, and its sales rebounded. To create truly innovative products, companies must analyze data and find the gaps between what customers want and what they and other companies are already offering.

In addition to innovating with new and existing products, data helps organizations discover and capture new opportunities. The data allows organizations to predict trends, from consumer spending patterns to macroeconomic trends, allowing organizations to pool their resources and position themselves to be the first to move in emerging and future markets.

As the business landscape becomes increasingly competitive, more and more companies cannot afford inefficiencies that cost them time and money. Driven by data, digital transformation enables organizations, especially those with high-value assets, to improve operational efficiency.

For example, more and more aircraft are being equipped with sensors that measure operational performance. A single aircraft can be equipped with sensors that can generate 20 terabytes of data after one hour of flight. This allows airlines to draw up preventive maintenance plans and extend the life of their aircraft. The same goes for manufacturing companies. Data gathered by sensors on machines and other equipment in the factory enables them to determine their own maintenance schedule and automatically alert the supply chain and service engineers to ensure correct service is being performed and that the right personnel and parts The right ones come at the right time.

Data also enables organizations to optimize the utilization of their assets. Historical data analysis provides manufacturers with information on optimal equipment settings, such as temperature, pressure, electricity, and workload. It also helps manufacturers predict demand for their products,

allowing them to perform critical maintenance procedures during periods of low demand, so that outages can be prevented during periods of high demand.

As digital transformation continues, businesses are beginning to understand that more needs to be done with data. Raw data alone does not generate information to drive business growth. Rather, it is the insights derived from the data that create true value.

IoT offers new sources of data, and technology is evolving to collect, process and store this information. Analytics of IoT data, particularly when combined with other business data, provides insight into the business, helping organizations better understand their customers' wants and needs and ultimately differentiate themselves from their customers. competitors.

In order to effectively harness the value that can be derived from data analytics, a cultural shift must be made in the way organizations approach analytics. This cultural shift can be described as the three "I's" of big data:

Invest in collecting, analyzing, and using data to help businesses avoid extinction during digital transformation.

Innovate with previously unexplored data to create new products and services, along with better customer experiences.

Improvise by exploring data and finding new meaning, which will then become actionable information in a continuous cycle of data.

3. CONCLUSION

The digital transformation of the economy has profoundly altered the structure of a good number of business sectors, from the content industry to retail. The impact is also making itself felt in the financial sector, albeit more gradually, partly due to the weight of financial regulation. New companies known as fintechs have entered to compete in specific financial services and, more recently, large technology companies have begun to integrate some financial products into their digital ecosystems, an expansion that presents great disruptive potential for the financial sector due to the size of these companies and by the characteristics of the digital ecosystems they build. However, the final scope of this expansion is uncertain and is conditioned by the regulatory and competition framework. Without intending to go into predicting the future, digital ecosystems are more likely to be actively involved in the distribution and commercialization of financial products than in their final provision, at least in those areas that are more regulated, such as deposit taking. In any case, the integration of financial services in digital ecosystems that tend to achieve dominance positions in the markets in which they operate poses challenges for financial stability, competition, and consumer protection. On the one hand, some risks could be concentrated in a very small number of players, with an importance similar to that of critical infrastructures. On the other hand, the separation of production and distribution of financial services could misalign some incentives and generate moral hazard problems in granting credit, or dilute some consumer protection responsibilities. Financial regulators and supervisors should closely monitor market developments, identify emerging risks and, where necessary, adjust the regulatory framework, in a way that ensures financial stability and consumer protection while promoting equal competition conditions. In an environment in which different types of suppliers and business models increasingly coexist, this implies moving towards a regulatory and supervisory framework based more on activities and risks than on the type of entity that develops them. Promoting competition under equal conditions also requires regulations on portability and access to data that are reciprocal and do not generate asymmetries between different types of players. Otherwise, they can have the unintended consequence of contributing to the trend in digital markets towards concentration in a few large companies that accumulate large amounts of data and spread their power from one market to another. In this sense, the role of data protection authorities and competition authorities is vital to

prevent them from undermining the rights of users as data owners and from abusing their dominance position to restrict competition.

One problem that authorities face in this new environment is how to deal with companies and digital ecosystems that are global with national policies. It is difficult to regulate and control from national authorities to services that circulate freely on the network and cross borders. Some countries have intrusive policies that try to isolate their digital markets, as is the prominent case of China, but in general national authorities feel a certain powerlessness. Europe is a pioneer in this sense, since it has an institutional framework in which an authority such as the European Commission has powers to protect the internal market, which are cross-border to the extent that this term can be used within the EU. Some European standards tend to be taken as reference in other countries or regions. That is why the approach that the EU is giving to data protection or competition policy has great relevance for the global discussion on digital markets. A debate that raises the question of whether there would be a need for an international body - perhaps sponsored by the G20 - to promote greater coordination on issues related to privacy or competition.

REFECENSES

Arner, D.W., Barberis, J., and Buckley, R.P. (2016). "The evolution of Fintech: A new post-crisis paradigm". Georgetown Journal of International Law, vol. 47, no 4, pp. 1271-1319.

Autorité De La Concurrence and Bundeskartellamt (2016). Competition law and data, Paris and Bonn.

Coyle, D. (2016). Making the most of platforms: a policy research agenda. Toulouse School of Economics - JeanJacques Laffont Digital Chair Working paper.

Evans, D., and Schmalensee, R. (2007). "The Industrial Organization of Markets with Two Sided Platforms". Competition Policy International, vol. 3 no 1, pp. 151-179.

Ferrari, R. (2016). “FinTech Impact on Retail Banking - From a Universal Banking Model to Banking Verticalization”. The FinTech Book: The Financial Technology Handbook for Investors, Entrepreneurs and Visionaries. London: Wiley, pp..

González-Páramo, J.M. (2016). Reinventing Banking: From the Great Recession to the Great Digital Disruption. Admission Speech at the Royal Academy of Moral and Political Sciences.

OECD (2016): Big data: bringing competition policy to the digital era. Background note by the Secretariat, Daf/Comp (2016).

Ontiveros, E. et al. (2012). ICT and the financial sector of the future. Barcelona: Fundación Telefónica.

Prufer, J. and Schottmüller, C. (2017). Competing with Big Data. Tilburg Law School Research Paper