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# The platformisation of digital payments: The fabrication of consumer interest in the EU FinTech agenda

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## ABSTRACT

This paper investigates, through a qualitative analysis of official documents, how certain imaginaries about technology filter into EU policymaking, allowing or accelerating the transformation of payment infrastructures into the platform economy.

One of the ways in which socio-technical imaginaries filter into policymaking is, it turns out, by informing an image of the consumer which serves to justify measures for the realization of a desired future. In particular, the documents offer a view of the consumer as an actor that is empowered by digitisation. The thesis of this paper is that this view of the consumer is partial: the rhetoric of consumer technological empowerment outweighs and conceals much needed considerations about the vulnerability of consumers vis-a-vis data-intensive payment technologies. Ultimately, the fault lies with the future imaginaries upon which such image is grounded. The vision of the digital payment infrastructure portrayed in the documents is in fact problematic for two reasons. First, the technologies that are portrayed as desirable are chosen based on industry interests and trends rather than considerations of benefits and risks that these technologies entail. Secondly, the assumption that a liberalized market will offer more and better choices is flawed, as platformisation entails risks of monopolization and abuses of market power. We suggest that policymakers in this domain should be more critical of the risks entailed by platformisation, and open their imagination to alternative technological futures.

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## 1. Introduction

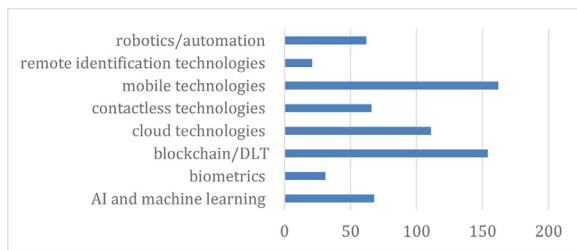
The financial sector is undergoing a fundamental digital transformation (King and Nesbit, 2020). New kinds of mobile financial applications sit between consumers and traditional banks: social payment platforms, mobile banking and digital payment services constitute the interface through which consumers interact with their finances (Westermeier, 2020).

Transaction data is the main driver of the new digital payment industry. European policy enables this trend: the 2nd Payment Services Directive (PSD2) favours market liberalization and posits the platform model at the core of future banking and payment infrastructures (Westermeier, 2020). Under the PSD2, banks are required to allow third party service providers to access payers' accounts information; this favours the entrance of new types of service providers: technology companies that provide payment intermediation services, acquiring "customer ownership" and control of data flows (Zetzsche et al., 2019).

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**Image 1 – Technologies: number of mentions.**

Organized around banks' APIs and mediated by tech companies, payment infrastructures are reshaped as digital platforms aimed at maximising data production and valorisation. Such process of 'platformisation' of financial services is likely to bring about issues typically associated with platform business models (Poell et al., 2019) and information capitalism (Cohen, 2019). Yet, while financial innovation is widely discussed from advantaging business perspectives, it is rarely scrutinized in terms of information control-related risks, power asymmetries and negative externalities of platformisation (Image 1).

The present paper uses discourse analysis to investigate how sociotechnical imaginaries influence the fabrication of the notion of consumer interest in policymaking around digitalization of payments, and how the latter is mobilized to justify policy choices.

Section 2 introduces the issue that is central to the policy agenda here analysed: the process of platformisation of digital payment infrastructures. Specifically, it draws a critique of platforms as infrastructures (2.1); it explains how payment services are becoming a new digital industry (2.2) and it illustrates the European policy that is enabling this change (2.3). Section 3 explains the notion of 'socio-technical imaginaries' and its relevance in the exploration of policy discourse (3.1). Section 3.2 outlines the role of 'consumer interest' as justification in policy discourse. Section 4 explains the methodology, which consists of a systematic qualitative analysis of policy documents issued by EU institutions (Commission, EU Parliament, European Banking Authority, European Central Bank and two technical bodies) in the area of FinTech and, more specifically, digital payments, starting from the 2017 Fintech Resolution and the following 2018 Fintech Action Plan until today.

Section 5 reports the findings of the qualitative analysis, illustrating, in 5.1, the sociotechnical imaginaries of digital payments as they emerge from the corpus of selected documents, and, in 5.2, the notion of *consumer interest* that is mobilized in the policy discourse to justify the process of platformisation of payment services. Finally, Section 6 provides a critical analysis of such findings, arguing that the notion of consumer interest portrayed in the documents is based on a assumptions – identified through the discourse analysis as part of the sociotechnical imaginaries – that are partially constructed.

The thesis of this paper is that there are two main fallacies in the policy-makers discourse on digital payments. The technologies that are portrayed as desirable are chosen based on industry interests and trends rather than on a scrutiny of

the benefits and risks that these technologies imply for consumers. Moreover, the assumption that a liberalized market will offer more and better choices is flawed, as the platformisation of the digital payment industry entails the risk of monopolization and abuses of market power. The mobilized notion of consumer interest – anchored to the rhetoric of consumer technological empowerment – outweighs and conceals much needed considerations about the vulnerability of consumers in the context of data-intensive technologies and platform economy.

We conclude by suggesting that policymakers in this domain should be more attentive to the risks that are emerging in adjacent digital industries, and open their imagination to alternative technological futures.

## 2. The platformisation of the digital payment infrastructure

### 2.1. Infrastructures as platforms

The present paper is concerned with the *platformisation* of the digital payment *infrastructure*. The term 'infrastructure' is generally used to refer to sociotechnical systems, or technological assemblages, that underlie or support public interest, universal or quasi-universal services (Plantin et al., 2018). The traditional notion of infrastructure sees these systems as centrally created and controlled, organized as public or semi-public monopolies. This so called "modern infrastructural ideal", however, collapsed in the 70s with the liberalization and deregulation of many infrastructures based on neoliberal stances on free competition and market efficiency (Plantin et al., 2018, p. 300). This meant the replacement of public, centrally organized infrastructures with "fragmented, privatized yet interoperable systems and services" (Plantin et al., 2018, p. 300).

The design and the governing model of infrastructures reflect particular political-economic choices. The notion of "infrastructure" is in fact scrutinized across various academic disciplines – including Sociology (Mukerji, 2010), International Political Economy (Bernards and Campell-Verduyn, 2019; Bellanova and de Goede, 2021), and Anthropology (Larkin, 2013) – as the domain of power exercised through invisible, untransparent technological devices and architectures. They are investigated as material assemblages in which political choices, dynamics of oppression and exclusion are embedded and transferred upon social and economic exchanges. A specialized domain of study – Critical Infrastructure Studies – has emerged which brings infrastructures within the domain of humanistic enquiry, understanding them not only as technical skeletons but also as conditions and vehicles for cultural experiences and expressions in late modernity. This latest conceptualization becomes salient in the context of expanding information infrastructures and cyberinfrastructures which, in the past three decades, came to organize and define all areas of cultural and economic interactions.

The concept of 'platform' shares some features with that of 'infrastructure', but it's useful, from an analytical point of view, to distinguish between the two. Both concepts refer to a technical system which serves more salient activities per-

formed on top of it. Platforms have been defined across a variety of disciplines as firms, markets, or data infrastructures. Poell et al. describe them as “(re)programmable digital infrastructures that facilitate and shape personalised interactions amongst end-users and complementors, organised through the systematic collection, algorithmic processing, monetisation, and circulation of data” (Poell et al., 2019). From a technical point of view, they are technical systems composed of low variability core components which allow to build applications on top of it, using complementary components. From an economic point of view, “platforms constitute two sided, or increasingly, complex multi-sided markets that function as aggregators of transactions amongst end-users and a wide variety of third parties” (Poell et al., 2019).

The platform ecosystem expands quickly with the inclusion of third-party service providers abiding by the platforms technical and economic standards (Plantin et al., 2018). Centralizing control over data across multiple services and unilaterally setting rules across entire portions of the market, platforms gain competitive advantage and power; exploiting global scale network effects, they easily establish market monopolies across multiple industries and jurisdictions (van Dijk et al., 2019).

The expansive nature of platforms determines the enclosure of more and more substrata of infrastructural systems within the platform ecosystem. Scholars point out that many infrastructures are undergoing a process of platformization (Plantin et al., 2018). The process of ‘platformisation’ has been defined as the “penetration of infrastructures, economic processes and governmental frameworks of digital platforms in different economic sectors and spheres of life, as well as the reorganization of cultural practices and imaginations around these platforms” (Poell et al., 2019, p.1). The concept is mostly deployed to criticize the increasingly central role uptaken by globally operating businesses platforms - such as Google, Facebook, Amazon and Uber - in all aspects of social, economic, cultural and political life. While the latter is more accurately referred to as “infrastructuralisation of platforms”, “platformisation” also refers to the specular phenomena of the reorganization of existing infrastructures in the form of platforms.

A critical approach anchored on platform studies looks at the relationship between agency and architecture, against the background of a particular political economy. Understanding the ongoing changes in the digital payment ecosystem as a shift at the infrastructural level, and, more specifically, as a process of platformisation, directs the attention towards the power relationships that are typical of platforms economies, and it demands to consider technological affordances and design options in light of the logics of accumulation and expansion which characterize the latter.

## 2.2. The emerging digital payments ecosystem

The platformization of the payment infrastructure is the substitution of a pre-existing assemblage of actors, material infrastructures and processes with a digital platform ecosystem (Langley and Leyshon, 2021). This entails the representation

of money in the form of digital data (Mejias, 2019) that can be captured and valorised within the platform digital architecture (Sadowski, 2019), and the reorganization of financial interactions around digital platforms (Mattila et al., 2018).

Payment services are increasingly bundled within platforms ecosystems which leverage integrated data pools to establish dependencies across large portions of markets and scale across jurisdictions. On one side, banks allow this penetration providing technology companies access to financial data networks (through APIs) and outsourcing services and functionalities to technology providers. On the other, technology companies expand their businesses by adding payment functionalities which allow them to “embed financial transactions within their data streams” (Westermeier, 2020 p. 2).

Established digital platforms position themselves between payers and financial institutions, incorporating in their ecosystems payment functionalities (Westermeier, 2020; Mattila et al., 2018). This is the case of, for instance, Apple Pay and Google Pay. In this model, the digital service provider collaborates with incumbent payment institutions; offering users frictionless, seamless, convenient means to initiate transactions, tech companies ensure that transaction data are produced within the platform. The key element here is that of authentication: users do not need to go through additional steps when paying with their smartphones, as the platform has already the means in place to certify their identity. This raises concerns about power and information concentration in the hand of few big global corporations; such concerns are particularly worrying in light of the huge data analytics potentials of transaction data when interlinked with other data points held big digital platforms (Ferrari, 2020).

Tech-driven companies also provide intermediation between the financial infrastructure and businesses. Westermeier makes the example of solarisBank, a so-called banking-as-a-Service platform which allows non-bank businesses to provide financial services to end customers, using solarisBank as a bridge to financial infrastructures (Westermeier, 2020, p. 8). This model is incentivized by the PSD2, which enhances the role of APIs as points of access to financial data streams for third party service providers (Berber and Atabey, 2021). This paves the way to a financial service industry where interaction with costumers is shifted from banks to non-bank digital service providers; while the latter capture costumers data, banks fall into the background, remaining invisible to consumers.

Finally, the penetration of the tech industry within the financial domain comprises initiatives that, completely bypassing existing financial infrastructures, introduce newly built networks on top of which users can transact digitally-native currencies. Digital currencies based on blockchain technologies have initially been developed by tech-savvy individuals and groups of developers with anarcho-libertarian aims. Around cryptocurrencies, a market has developed including digital currencies exchanges, investment firms and a continuous stream of software and hardware releases. The hype around blockchain-based financial technologies has also stimulated experimental adoptions of national digital currencies (so called Central Banks Digital Currencies), as well digital currencies backed and controlled by private parties. A notable

example of the latter is the *stablecoin*<sup>1</sup> Libra (now renamed Diem), a currency designed by Facebook and intended to be used for payments within and outside the platform's ecosystem. The project, announced in 2019, received a push back from regulators and is under re-evaluation from the side of the company. However, the idea of leveraging on blockchain technologies for the creation of digital payment infrastructures is still popular in both the public and the private sector (Westermeier, 2020, p. 8).

### 2.3. The European policy on FinTech and digital payments

European policymakers have been explicit about their intention of opening the financial sector to tech-driven companies. In 2016, the European Commission set up a Financial Technology Task Force "to help FinTech innovation reach its full potential" (Commission, 2016). The European Parliament, in its 2017 Resolution on Fintech, acknowledged the potentials and risks of "the influence of technology on the future of the financial sector and called the Commission to "to draw up a comprehensive FinTech Action Plan" to foster the development of FinTech" (European Parliament, 2017). Following a Public Consultation in 2017, the Commission launched its Fintech Action Plan in 2018: a broad policy agenda whose aim is to "enable the EU financial sector to make use of the rapid advances in new technologies that are transforming the industry and revolutionizing the way people access financial services" (Commission, 2018). In particular, the Action Plan has a threefold goal: 1) enabling innovative business models to scale up at the EU level using common standards and interoperable solutions; b) supporting the uptake of innovation in the financial sector by ensuring the absence of legal obstacles to the adoption of new technologies; c) enhancing the security and integrity of the financial system.

A central pillar of the broader FinTech policy agenda is the promotion of a European digital payment market. The PSD2 is the key legal instrument setting the conditions for the liberalization of this market; entered into force in 2018, it expanded the scope of PSD to new types of internet-based payment intermediaries, and it established banks' obligations to share customer data with third-party service providers (Donnelly, 2016).

The technical steps for the promotion of a European digital payment ecosystem are directed and supervised by the Euro Retail Payments Board (ERPB), a "high level strategic body" chaired by the ECB. Created in 2013, the ERPB comprises representatives "from the demand side" (consumers, retailers and corporations) and "from the supply side" (banks and payment and e-money institutions), as well as representatives from national central banks.<sup>2</sup> Since its launch, it works on the promotion of: (1) pan-European instant payments; (2) payment initiation services; (3) peer-to-peer mobile payments; (4) contactless payments. From 2017, the ERPB meets the chairs of

EU national payment committees in the European Forum for Innovation in Payments (EFIP),<sup>3</sup> another informal forum initiated by the ECB and the Commission to facilitate the exchange of information between the various stakeholders involved in the restructuring of the digital payment ecosystem.

In January 2020, the Commission published an updated Work Programme titled "A Union that strives for more", announcing its intention to launch a new action plan on FinTech before the end 2020. On 24 September 2020, following a consultation with stakeholders during the same year, the Commission released a Communication on a digital finance strategy, confirming its commitment to support digital transformation in finance. In the document, particular attention is given to digital payments, as it is recognized that they play a "key role amongst digital financial services, being at the cutting edge of innovation and instrumental to support the digital economy" (Commission, 2020). Beside the ongoing efforts to consolidate and standardize existing payment schemes, the Commission and the European Central Bank (ECB) announced, in early 2021, their cooperation on the development on a digital euro (ECB, 2021). The digital euro project was officially launched in July 2021 with the aim of investigating, for the first 24 months, "key issues regarding design and distribution" of the digital euro architecture (ECB, 2021).

## 3. Sociotechnical imaginaries and justifications as analytical discursive elements

### 3.1. The role of socio-technical imaginaries in highly technical fields of policymaking

Formulating policy always requires, to some extent, making predictions about the future. This is particularly true when the aim is to regulate technologies that are yet to be materialized, or that are in the process of transformation. The design of policy agendas demands the mobilization of a certain vision of the future: an expected threat, a desired outcome. When policymaking regards complex scientific issues or technological developments, the delineation of that desired outcome is highly dependent on the imaginaries, hopes and fears that are attached to the technology or scientific phenomena in question.

According to Katzenbach and Mager, "evocations of possible or fantastic, desirable or dystopian futures are necessarily genuine sociopolitical processes with material consequences in the present" (Mager and Katzenbach, 2020). Visions of the future are not only imagined but, when properly located and promoted, they are "concretely constructed"; imaginaries are *performative* in as much as they induce the materialization of future prospects in the present.

The concept of "socio-technical" or "future imaginaries" has been deployed in several studies as analytic tool to identify the "collectively held and institutionally stabilized" (Jasanoff and Kim, 2009) visions of the future that mobilize the coproduction of technoscientific projects and policy. When the development and regulation of digital technologies

<sup>1</sup> 'Stablecoins' are virtual currencies the value of which is asset-backed (in physical collateral or crypto-assets) or algorithmically controlled in order to avoid price fluctuations typical of non-fat digital currencies.

<sup>2</sup> See: <https://www.ecb.europa.eu/paym/groups/erpb/html/index.en.html>.

<sup>3</sup> See: <https://www.ecb.europa.eu/paym/groups/efip/html/index.en.html>.

is concerned, studies have shown that influential tech companies propagate assumptions about technology which reflect the design of their products (Mager and Katzenbach 2020; Markham, 2020).

Recent studies have explored the role of industry-driven sociotechnical imaginaries in the ongoing development of digital payments infrastructures (Mützel, 2021; Vidan 2020). These studies, as well as similar studies conducted in other fields (Haupt, 2021; Liao and Iliadis, 2021), demonstrate that sociotechnical imaginaries are largely produced by corporations promoting specific technological design and functionalities. In my analysis, I identify and offer to the reader the vision of the future of payments as it emerges from the words of policymakers. Linkages between this vision and external sources that might have influenced the institutions' imagination (such as private actors' promotion of technological choices) are not established, nor they can be extracted directly from the text; yet, deploying the concept of sociotechnical imaginaries already implies the possibility of that link.

The policy-making agenda that is the object of the present study is highly future-orientated. The digital payment infrastructure presented in the policy documents is in large part yet to be materialized. The policy agenda that is analysed in this paper is, therefore, partially a story about a future to be built, and partially a manual of instructions for its realization. For this reason, I deploy the concept of "sociotechnical imaginary" as a thinking tool to highlight the speculative nature of certain descriptions and expectations, and to recall the notion that the prospected vision of the future is determined by a given discourse, chosen amongst other multiple possible futures.

### 3.2. Consumer interest as justification in processes of liberalization

For the purpose of the textual analysis, this paper identifies policy 'justifications' as a distinctive discursive element that intersects with, but performs different functions from, the sociotechnical imaginaries. While the latter consists of narratives, imaginative visions about what the digital payment ecosystem will look like, justifications are articulated as normative arguments. Appealing to considerations of necessity, efficiency and benefits, justifications are pragmatic considerations which motivate and corroborate the idea that a particular future *should* materialise.

In EU policymaking discourse – particularly in relation to processes of market liberalization and deregulation (Cseres, 2008; Reisch and Micklitz, 2006) – a central justification for policy action is the realisation of consumer interest (Lynggaard, 2019). Adopting regulation requires balancing rights of consumers/citizens with prerogatives of businesses; in such balancing exercise, a precise notion of consumer is developed. Such image is necessarily fictional: it is a simplification of reality which collapses together a heterogeneous mass of individuals which in fact differ in terms of preferences, needs and capabilities (Mak, 2015, p. 381). Such fictional image of the consumer permeates and influences policy-making processes as an agent that benefits from, promotes or participates in economic and social exchanges that are object of regulation.

In EU consumer law, two main conceptualisations of the consumer inform the rules that govern the relationship between "persons acting as consumer in the marketplace and their counter-parts, the businesses" (Wilhelmson, 1998). On one side, the "paternalistic model", developed in the 60s and 70s (Cseres, 2005, p. 321), sees the consumer as a vulnerable subject who needs legal protections against violations of their rights, interests and safety in the context of asymmetrical contractual relationships with businesses. On the other, the neoliberal, rational, empowered consumer acts as a "sovereign market actor" (Helberger et al., 2013, p. 7), as long as she is granted the necessary information and bargain power to do so. The latter assumes that free market competition produces the best conditions for consumers to exercise their economic decisions, and invokes a *laissez-fair* approach with minimal state intervention, as opposed to the more interventionist paternalistic approach (Cseres, 2005, p. 322).

Recent developments in EU law demonstrates that the digital economy induced a reappearance of the earlier conceptualisation, revealing the shortages of the neoliberal dogma according to which free market competition and consumer interest go hand in hand. The EU Commission 2020 New Consumer Agenda<sup>4</sup> stands in sharp contrast to the previous 2012 European Consumer Agenda<sup>5</sup>: whereas the older document cites the "digital revolution" as a source of economic gains for consumers, the 2020 document recognizes how digital transformation limits the effectiveness of consumer protection rules. The latter, in fact, states that in digital commercial applications "the underlying data collection and processing combined with analysis of consumers' behaviour and their cognitive biases can be used to influence consumers to take decisions that may go against their best interests" (EU Commission, 2020, p. 10).

The need for a more interventionist agenda resulted in the adoption of several consumer protection-related legal instruments specifically addressing issues of the digital economy. The specificity of the position of consumers in the digital space was recognised with the Digital Content Directive<sup>6</sup> (Helberger et al., 2013, p. 8) and the Directive on Better Enforcement and Modernisation of Consumer Law.<sup>7</sup> Recently, a decisive signal has been given with the proposal for a Dig-

<sup>4</sup> EU Commission, Communication From The Commission To The European Parliament And The Council New Consumer Agenda Strengthening Consumer Resilience For Sustainable Recovery Com/2020/696 Final (New Consumer Agenda).

<sup>5</sup> EU Commission, Communication From The Commission To The European Parliament, The Council, The Economic And Social Committee And The Committee Of The Regions A European Consumer Agenda - Boosting Confidence And Growth /\* Com/2012/0225 Final (European Consumer Agenda).

<sup>6</sup> Proposal for a Directive of the European Parliament and of the Council on certain aspects concerning contracts for the supply of digital content. COM/2015/0634 final - 2015/0287 (COD).

<sup>7</sup> Directive (EU)2019/2161 of the European Parliament and of the Council of 27 November 2019 amending Council Directive 93/13/EEC and Directives 98/6/EC, 2005/29/EC and 2011/83/EU of the European Parliament and of the Council as regards the better enforcement and modernisation of Union consumer protection rules (OJ L 328, 18.12.2019, p. 7).

ital Services Act,<sup>8</sup> aimed at creating “a safer online experience for citizens [...] and ensuring the protection of fundamental rights” online. Importantly, the DSA recognizes the power imbalances between platforms (especially “very large online platforms”) and their users (including both business users and consumers); hence, it establishes a “transparency and accountability framework for online platforms”, setting out oversight and enforcement mechanisms to contrast manipulative and unfair practices of digital intermediaries.<sup>9</sup>

The peculiarity of users’ status in digital environments depends on the conditions under which users interact with and within digital ecosystems. Digital environments work in ways that are obscure and non-transparent to their users, creating inherent information asymmetries. Users engage with digital environments based on technical affordances, tasks and patterns that are predefined by the provider of the digital ecosystem; the algorithmic processes that determine the provision of services are concealed behind friendly interfaces.<sup>10</sup> This inherent information asymmetry, cumulated with the informational power that digital companies derive from data, creates opportunities for service providers to speculate on users’ personal vulnerabilities. Personal and behavioural data, in fact, is used to nudge users behaviour and influence users’ decision-making through, for instance, personalised offers and prices (Janssen et al., 2020, p.13).

Information asymmetries and risks of manipulation – which are inherently present in commercial digital applications (Sax, 2021) – undermine the image of the consumer which is foundational to a liberal approach to consumer protection. The consumer as a sovereign, rational, active market actor gives way to a vulnerable, passive user in need of protection. Updating existing legal frameworks as to address the challenges of digitisation requires, therefore, a reconceptualisation of the digital consumer as an agent whose choices are nudged and technically pre-determined by the techno-social system that surrounds him.

The push toward the digitalization and platformisation of the payment ecosystem is a push toward both the liberalization of the market and the integration of the new service industry at the EU-wide level. Processes of liberalization are traditionally justified as means to realize the interest of consumers (Micklitz and Weatherill, 1993): according to the neoliberal axiom, increased competition will bring down prices and increase the possible choices for consumers. Not surprisingly, the realization of consumer interest is a core justification in the policy agenda here analysed. But what image of the consumer is mobilized? A strong, free market player or a vul-

nerable actor? Which needs, priorities and interests are taken into consideration?

The present paper investigates which image of the consumer is mobilized by European policymakers to justify the liberalization of the digital payment industry, and which sociotechnical imaginaries influence the fabrication of such image.

## 4. Methodology

Discourse analysis as a method of enquiry is aimed at looking at “discourse” as a “specific ensemble of ideas, concepts, and categorizations that are produced, reproduced and transformed in a particular set of practices through which meaning is given to physical and social realities” (Hajer, 1995). This methodology is devoted to the question of how collective systems of meaning are built, which power relationships they constitute, which knowledge, practices, literacies they imply and produce.

The boundaries of discourse as an object of analysis are fluid. Identifying the material which forms the object of the analysis and selecting one way of reading and interpreting such material are choices which remain open to criticism. Whichever variation of the method we select, it can never exhaust the possible paths of interpretation, association, deconstruction and contextualization and even delimitation of what we identify as discourse. In my analysis, I choose to focus on official documents produced and published by European institutions and publicly invested bodies involved in the making of the European payment infrastructures.

### 4.1. Corpus of documents

The methodology of this paper consists in a systematic qualitative analysis of policy documents issued by EU institutions in the area of FinTech and, more specifically, digital payments. The most significant policy documents setting a general agenda for Fintech developments within the EU are the European Parliament 2017 Fintech Resolution and the Commission 2018 Action Plan on Fintech, with annex publications. Moreover, I analyse a selection of documents produced by the European Banking Authority (EBA) and by the ECB, both of which are involved in the design of the digital payment infrastructure and its legal framework. The latter documents have been chosen either by reference from other documents, or through a snowball search on the institutions websites using the keyword “digital payment(s)”. The results of the search (which produced 403 results for EBA; 1224 for EBA) have been automatically sorted by relevance and manually scanned in order to select a manageable and representative sample of relevant documents representing the positions of the two institutions on the issue at stake in the years taken into consideration for the purpose of this study. As it concerns EBA, particular attention is paid to the Working Group (WG) on APIs under the PSD2.

The corpus also comprises documents produced by two expert groups specifically tasked with “fostering the integration, innovation and competitiveness of euro retail payments in the European Union” (ECB, 2021): the Euro Retail Payments Board

<sup>8</sup> Proposal for a Regulation of the European Parliament and of the Council on a Single Market for Digital Services (Digital Services Act) and amending Directive 2000/31/EC.

<sup>9</sup> For instance, by establishing transparency obligations regarding online advertising (Art. 24) and regulating the use of recommender systems (Art. 29).

<sup>10</sup> The relevance of information exposure on platforms’ interfaces is recognized by the DSA, at Recital 62: “A core part of a very large online platform’s business is the manner in which information is prioritized and presented on its online interface to facilitate and optimise access to information for the recipients of the service”.

(ERP) <sup>11</sup> and the European Forum for Innovation in Payments (EFIP) <sup>12</sup>. These two multi-stakeholders technical bodies are relevant as forums where substantial, technical issues concerning the development and governance of the digital payment infrastructure are discussed.

The PSD2 is the legal instrument which regulates the provision of digital payment services within the EU. The current debate and policy-making activities regarding digital payments, consequently, evolve around the implementation and the potential need to update the PSD II and/or implement other regulatory measures to facilitate a pan-European, integrated digital payment infrastructure. Notwithstanding its importance within the regulatory framework, the PSD2 has been excluded from the corpus as the goal of the study is to investigate the discourse *after* and *beyond* the PSD – how the industry and the institutional discussion seeks to move further.

The corpus is therefore composed of 41 documents, from 6 institutions, covering the period from 2017 until the first half of 2021 (see [Annex 1](#)). With this selection, the intention is to provide a representative picture of the dominant discourse on digital payments as it is made publicly available by the institutions that are involved in designing its legal framework. To be comprehensive of all the relevant documents is beyond my capabilities and resources; therefore, I acknowledge the limited scope of the enquiry and the possibility of having overlooked material that should have been taken into consideration.

#### 4.2. Coding

All the documents have been analysed using the qualitative content analysis software Atlas.ti. The process involved the full reading of each document and simultaneous manual annotation and coding of the text. After all documents have been analysed, the codes have been reorganized, merged into groups and put in relation to each other to find patterns of associations and threats within the discourse. This exercise implied a process of repeated back and forth reflection between the authors' annotations, the codes and the text itself. The list of the code groups, and the relative sub-codes associated with each group, can be found in [Annex 2](#).

Circumscribing narrow areas of discourse and identifying key terms, the coding process helped understanding the structure of the discourse across the various institutions and document types. Using the coding tree, it was possible to find discursive patterns, overlaps or interrelations of concepts and terminology to identify the various issues around which the analysis is structured. A limitation of this methodology is the unavoidable influence of the researcher's goals and perspective, her sensibility to some topics, or words, rather than others. This limitation is partially overcome by coding the text as comprehensively as possible, regardless of whether the information is deemed to be more or less relevant for the analysis.

<sup>11</sup> See: <https://www.ecb.europa.eu/paym/groups/erpb/html/index.en.html>.

<sup>12</sup> See: <https://www.ecb.europa.eu/paym/groups/efip/html/index.en.html>.

## 5. Findings

In this section I expose the findings of the analysis. First, I illustrate the sociotechnical imaginaries of digital payments as they emerge from the corpus of selected documents (5.1). I organize this section by identifying the most relevant issues emerging from the corpus of documents and systematizing them under different subsections; the organization under separate topic areas serves the clarity of the exposition; these topics areas are, in reality, intertwined and co-dependant from each other. In 5.2, I retrace the notion of consumer interest that is mobilized in the policy discourse to justify the process of platformisation of payment services, identifying two main conceptualizations of such notion (empowered vs weak consumer/user).

### 5.1. Socio-technical imaginaries of digital payments

#### 5.1.1. Data commodification

European institutions have put the construction of a European digital payment infrastructure at the core of the digital finance strategy. This is stressed in several documents which highlight the strategic role of digital payments for the contemporary EU economy.

*“Once relegated to the back-office, payments have become strategically significant. They are the lifeblood of the European economy”* (CommComm2020).

The value of the digital payment industry is boosted by the monetisation of transaction data; this implies that the payment service industry is reorganising itself as a data-intensive technological industry, with the breaking up of pre-existing value chains. Regulators understand that technological companies, interested in the data generated by financial transactions, have infiltrated and reshaped the market. As the technical infrastructures and the logics of value production governing the digital payment market evolve around data monetisation, the networks of actors involved in the provision of payment services moves dynamically and beyond the agency of regulators, remodelling services through new technologies:

*“Technology is contributing to breaking up previously integrated value chains [...] as new entrants adopt new business models leveraging technology such as application programming interfaces (APIs) and platforms”* (CommCons2021).

Data produced in the context of financial transactions is highly informative on people private life, taste, behaviours, movements. Because of the sensitive nature of financial data, its strategic role for law enforcement, and the economic opportunities attached thereto, the governance of the technological system underpinning payment networks becomes a primary concern for policymakers. For this reason, the structuring of the backbone infrastructure, the licensing rules for service providers, and the data-access requirements governing financial networks are to be determined by the policy agenda.

The need for institutional control, however, is counterweighted by a highly neoliberal attitude aimed at exploiting the economic opportunities offered by digital payments data flows.

*“to scale up innovative finance in Europe a free flow of data within the Union is needed”* (EPRes2017).

**Annex 1 – List of analysed documents.**

Institution	Year	Document title	Code name
EU Parliament	2014–2019	FinTech: the influence of technology on the future of the financial sector	EPFin2014-19
EU Parliament	2017	Resolution on Fintech	EPRes2017
EU Commission	2018	Press release: Payment services: Consumers to benefit from cheaper, safer and more innovative electronic payments	CommPress2018
EU Parliament	2021	Legislative Train (Action plan on fintech including a strategy on an integrated EU Payments market).	EPTrain2021
EU Commission	2017	Communication from the Commission to the European Parliament, the Council, the European Central Bank, the European Economic and Social Committee and the Committee of the Regions Consumer Financial Services Action Plan: Better Products, More Choice	CommCons2017
EU Commission	2018	Fintech Action Plan	CommFin2018
EU Commission	2018	Press release: FinTech: Commission takes action for a more competitive and innovative financial market	CommPress2018(2)
EU Commission	2018	Press Release (Fintech Action Plan)	CommPress2018(3)
EU Commission	2018	Factsheet (Fintech Action Plan)	CommFacts2018
EU Commission	2018	Annex to Fintech Action Plan	CommAnnex2018
EU Commission	2018	Payment services: Consumers to benefit from cheaper, safer and more innovative electronic payments	CommPay2018
Eu Commission	2019	Your rights when making payments in Europe (leaflet)	CommRights2019
EU Commission	2019	Payments Services Directive (PSD2): The European Commission welcomes the adoption of a Joint Statement by three European Credit Sector Associations (ECSAs) <sup>1</sup> and representatives of two Third Party Providers organizations <sup>2</sup> on PSD2 implementation.	CommPSD22019
EU Commission	2020	Communication on a Retail Payments Strategy for the EU	CommComm2020
EU Commission	2021	Consultation on a new Digital Finance strategy	CommCons2021
EU Commission	2021	Request to EBA, EIOPA and ESMA for technical advice on digital finance and related issues	CommReq2021
EU Commission, ECB	2021	Joint statement by the European Commission and the European Central Bank on their cooperation on a digital euro	CommECBjs2021
EBA	2017	Report on innovative uses of consumer data by financial institutions	EBAREp2017
EBA	2019	Opinion of the European Banking Authority on the elements of strong customer authentication under PSD2	EBAOp2019
EBA	2019	EBA responses to issues XXI to XXVI raised by participants of the EBA Working Group on APIs under PSD2	EBAResp2019
EBA	2019	EBA clarifications to issues I to III raised by participants of the EBA Working Group on APIs under PSD2	EBACla2019
EBA	2019	EBA responses to issues IV to VII raised by participants of the EBA Working Group on APIs under PSD2	EBAResp2019(2)
EBA	2019	EBA responses to issues VIII to XIII raised by participants of the EBA Working Group on APIs under PSD2	EBAResp2019(3)
EBA	2019	EBA responses to issues XIV to XX raised by participants of the EBA Working Group on APIs under PSD2	EBAResp2019(4)
EBA	2019	EBA report on the impact of fintech on payment institutions and e-money institutions' business models	EBAREp2019
EBA	2021	Opinion of the European Banking Authority on supervisory actions to ensure the removal of obstacles to account access under PSD2	EBAOp2021
ECB	2020	Press Release: ECB welcomes initiative to launch new European payment solution	ECBPress2020
ECB	2020	Interview Christine Lagarde: The future of money – innovating while retaining trust	ECBInt2020
ECB	2021	Interview Fabio Panetta: Evolution or revolution? The impact of a digital euro on the financial system	ECBInt2021
ECB	2021	The Eurosystem's retail payments strategy	ECBStra2021

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**Annex 1 (continued)**

Institution	Year	Document title	Code name
ECB	2021	Eurosystem report on the public consultation on a digital euro	ECBRep2021
ERPB	2014–2015	Annual report	ERPB2014-15
ERPB	2015–2016	Annual report	ERPB2015-16
ERPB	2016–2017	Annual report	ERPB2016-17
ERPB	2017–2018	Annual report	ERPB2017-18
ERPB	2018–2019	Annual report	ERPB2018-19
ERPB	2020	ERPB reaction to the Commission's consultation on a retail payments strategy for the EU	ERPBreact2020
EFIP	2017	Statement following the first meeting of the European Forum for Innovation in Payments held on 29 November 2017	EFIP2017
EFIP	2019	Statement of the second meeting of the European Forum for Innovation in Payments held on 25 November 2019	EFIP2019

**Annex 2 – Codebook - code groups and the relative sub-codes associated with each of the groups.**

Feelings/attitude	acceleration, acceptance, awareness, boosting innovation, complexity, confidence, convenience, fitness/preparedness/readiness for digital age, good will, impetus/momentum, need for action, reassurance (need of), reluctance, uncertainty, urgency, welcoming new developments.
Change/transformation	becoming the new normal, Brexit, catalyst for change, change of market structure, change of payment instruments, changing business models, changing consumer habits/preferences, changing our lives, COVID-19, digital euro as natural evolution, digitalization, digitalization of economy, digitalization of payments, digitalization of public services, future (-orientated/-proofness), impact of technology in finance, innovation, modernization, momentum, natural evolution of PSD2, new technologies, new types of actors, shift in payment preferences, socioeconomic changes.
Risk/obstacles	biases and errors, concentration of power, counterfeiting and technical mistakes, dependency on technologies governed elsewhere, disabilities and old age, financial disruption, geographical limitedness, illicit activities, instability, internet coverage, obstacles/barriers, protection of central bank money, risks, speculation, stablecoins, targeted pricing, tax evasion, threat to sovereignty, vulnerability to international developments.
Benefits	fintech investments, businesses interests, consumers/citizens/societal interests and needs, cross-border payments, efficiency, EU financial autonomy, improve contractual terms for customers, inclusion, increase consumer choice, lower costs, meeting the mutual interest of stakeholders, opportunities of fintech innovation, stability, strengthening the banking industry, sustainability, targeted pricing, trust.
Market	acquisition of fintech firms by institutions, capital market union, change of market structure, changing business models, competing with cash and cards, competition, concentration of power, customer ownership, digital single market, e-commerce, economic impact of CBDC, global competition, global reach and impact of digital euro, impact of technology in finance, international role of the euro, investment, network effects, open asset sharing economy, open banking, open finance, private money, PSP's independence from banks.
Regulation/enforcement/supervision	adaptation of regulation to innovation, AML/CTF, authorization and licenses, balancing of interests, best practices, boosting innovation, breaking of supervisory silos, certificates, clarity of technical requirements, competition law, compliance, compound risk/holistic approach to regulation, consent, consistency of implementation, consolidated supervision, consumer and investor protection, consumer rights, cross-border cooperation, cybersecurity, data localization rules, difference of rules for banks and tech companies, DMA, e-IDAS, European Financial Transparency Gateway, formalization of payment security requirements, GDPR, governance arrangements, green deal data/environmental data, incentives, industry-led solutions, ISO, market-led standardization, money as a public good, no regulatory intervention, proprietary standards, PSD2, regulatory sandboxes, Regulatory Technical Standards, regulatory uncertainty, regulatory updates (need of), risk-based approach, same business same rule, sectorial regulation, service providers responsibility, spending limits, supervision/monitoring, technology neutral regulation, testing, uniformity of rules across EU, voluntary commitment.

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**Annex 2 (continued)**

Feelings/attitude	acceleration, acceptance, awareness, boosting innovation, complexity, confidence, convenience, fitness/preparedness/readiness for digital age, good will, impetus/momentum, need for action, reassurance (need of), reluctance, uncertainty, urgency, welcoming new developments.
Knowledge	awareness of disadvantages, consumer awareness, education, engagement with companies, familiarity, financial and digital literacy, information gathering, knowledge/understanding of technology, list of service providers, public consultation, research/preparatory work, supervision/monitoring, take-up of technical solutions.
Technological design	access to payers' account, access to payment systems, accessibility of payment infrastructure, anonymity, attractiveness, availability (to users), cash-like features, confidentiality, consumer-centric, efficiency, frictionless, integration, interoperability, large-scale processing, offline usability, openness, personalization, programmability, PSP's independence from banks, safe/secure, seamless (user experience), simplicity, speed, transparency, trust, usability, user-friendliness.
Actors	API evaluation group, ASPSPs, banking sector, BigTech, EU fintech laboratory, EU forum for innovation in payment, EU observatory and forum on blockchain, expert groups, financial institutions, intermediaries, mobile service providers, national authorities, new types of actors, NGOs, out of EU jurisdiction service providers, Payment Information Management Systems (PIMS), Payment Initiation Services (PIS), platforms, social media, start-ups, tech companies, third-party payment service providers.
Services	account information services (AIS), additional features and services, authentication, cloud services, cross-currency payments, crowdfunding, electronic signatures, instant payments, insurance, marketing, out of EU jurisdiction service providers, outsourcing of services, P2P mobile payments, payment initiation services (PIS), remittances, value-added services.
Infrastructure	access to payment accounts, accessibility of payment infrastructure, additional features and services, API, authentication, banks stepping in the back, cash (availability of), CBDC/digital euro, cloud computing infrastructure, communication infrastructure, complementarity (of payment methods), cross-border payments, decentralized infrastructure, dematerialization (of money), digital identity, distribution networks, easy provider switching, fragmentation (avoidance of), geographical limitedness/local solutions, information exchange, information repository, integrated data pools, integration, intermediation, interoperability, large-scale processing, multi-party infrastructure, open banking, outsourcing of services, pan-European reach/interoperability, pan-European data access, platforms, point-of-sale /point-of-interaction, request-to-pay functionality, SCT Inst scheme, SEPA, SEPA API access scheme, SEPA Proxy Lookup, standardization, technical migration, technological barriers (absence of).
Technologies	AI, algorithms, automation, behaviour prediction, big data analytics, blockchain/DLTs, Bluetooth, cloud computing infrastructure, crypto-assets, cryptography, generic QR code, hardware solutions/devices, interfaces, IoT, mobile technologies, plastic cards, proximity technologies, RegTech, remote identification techniques, risk-based authentication, robo-advice, stablecoins, strong customer authentication.
Data	abuse of personal information for commercial purposes, access to consumer data, automated data processing, biases and errors, big data analytics, biometric data, common financial data space, consent, data-driven innovation/business models, free flow of personal data, GDPR, green deal data/environmental data, integrated data pools, money as (digital) memory, pan-European data access, personal data, privacy/data protection, selective privacy.

European policymakers are, therefore, first and foremost concerned with creating the conditions for European technology companies to profit from this growing data market; this market-orientated attitude is reflected in the PSD2, the aim of which is to enable data flows from banks to technology companies.

### 5.1.2. Liberalisation and competition

EU institutions envision a competitive market where fintech companies can grow and provide users *better and cheaper* pay-

ment services, interoperable and reachable across national borders.

"[...]enhancing competition and leading to more choice, better services, as well as lower prices for over 500 million consumers" (CommCons2017).

Payment services' EU-wide reach is a central prerogative for the policy agenda: enabling cross-border transactions without additional fees, and generating EU-wide data value chains is necessary for EU companies to compete with non-European large platforms serving European citizens. To this aim, the policy agenda seeks to eliminate national

constraints to cross-border transactions and facilitate pan-European reach with the imposition of common standards. For example, the documents stress the need to guarantee technology companies access to payers' accounts data according to rules and mechanisms that are valid across the whole Union.

The policy documents emphasize the role of the private sector, in particular technology companies, in shaping the digital payment ecosystem of the future. Private entities are tasked with developing critical technological infrastructures providing payment functionalities to users and businesses across the EU.

*"The Eurosystem will continue to support private initiatives for retail payments [...]"* (ECBPress2020).

The documents are confident in the development of European payment solutions through the establishment of a liberalized, innovation-friendly market which would leverage on the potentialities of platforms' - i.e. the bundling of multiple services and service providers within a single technical infrastructure. While guaranteeing European autonomy from foreign actors in the short term, a competitive European digital payment ecosystem can, in the long run, gain global reach, increasing European geopolitical influence.

*"[...] five key objectives: pan-European reach, customer friendliness, cost efficiency, safety and security, European identity and governance, and, in the long-run, global reach"* (ECBPress2020).

The role upheld by EU institutions is, therefore, that of facilitating this privately-led "digital (re)evolution", coordinating and supervising the development of the industry, while safeguarding the fundamental interests of the Union. Bringing payment services up to date with the digital transformation occurring in other domains demands efforts to ensure that various risks - *"in terms of money laundering, financing of terrorism, cyber-attacks, as well as operational and liquidity risks for financial institutions"* (CommComm2020) - are tackled with supervision and adequate legal safeguards, including consumer protection and risk mitigation measures. This precautionary approach is needed to establish consumers' trust in technological solutions, as necessary for their widespread uptake.

*"If not appropriately identified and addressed, these risks may undermine the confidence of consumers and merchants using instant payments, potentially hindering their full rollout as the new normal"* (CommComm2020).

### 5.1.3. Platformisation

As organisational structures that conjoin a plurality of services and markets, the concept of platform is central to the policy agenda on Fintech. European policymakers envision the realisation of a pan-European digital payment platform, capable of connecting EU-based financial and non-financial service providers operating across member states.

In today's global internet-based economy, payment services must be able to interconnect multiple services, industries and markets; they must be infrastructures with a tentacular reach, giving users the ability to interact (purchase, transact, receive money) with any party from a single interface and mobile device. Being by definition two-sided or multi-sided markets, payment services in the digital commerce ecosystem are prone to be organized as platforms.

*"According to the EBA, a digital platform/platform enables at least one financial institution directly (or indirectly using a regulated or unregulated intermediary) to market to customers, and/or conclude with customers contracts for, financial products and services within the EEA"* (CommReq2021).

The documents acknowledge that the payment industry is undergoing a process of platformisation; this is intended both as the organisation of financial data networks around banks' APIs, and as the merging of payment services with the broader ecosystem of technology platforms - and their data streams - that operate in and structure digital markets in other domains.

*"[...] importance of APIs, as a complement to other tools that can be used by the consumer, in providing new actors with access to financial infrastructure"* (EPRes2017).

Platformisation is, therefore, a change occurring at the infrastructural level: an organisational model shaping networks of relationships and distribution of power amongst the actors moving in the financial sector. It also entails the centrality of data as main revenue source of the industry, with data access being the first requisite for market entrance, and data availability the condition to compete. By positioning mobile applications between financial networks and users, moreover, platformisation entails a particular type of literacy and affordances for the users of payment services.

The infrastructural precondition for the realisation of a digital payment platform connecting the European market is EU-wide standardisation of tools and processes for digital payments. This requires ensuring service providers' compliance to common standards and adherence to uniformly applied rules, under the supervision and control of financial supervisory authorities. Key for cross-European standardisation is the uniform development and implementation of APIs. An API is defined as *"a set of rules and specifications followed by programmes to communicate with each other, and an interface between different programmes that facilitates their interaction"* (CommReq2021). The role of APIs is that of linking services and applications and establishing connectivity of products with customers and partners by managing data access. APIs are key nodes in platform ecosystems whereas they enable the *"bundling of various financial services, often from various service providers such as payments services, payment accounts, lending, investment, and insurance products"* (CommReq2021).

Determined to *"unlock the potential of open banking beyond PSD2"*, the ERPB seeks to concretize the vision of a pan-European digital payment platform bundled through the establishment of a *"Single Euro Payments Area (SEPA) Application Programming Interface (API) access scheme encompassing services beyond the (mandatory) scope of PSD2 by following a non-regulatory, coordinated approach aim at addressing the mutual interests of the stakeholders"* (ERPBreac2020). As infrastructural, non-regulatory intervention providing concrete benefits for industry stakeholders, this is considered by institutions, including the Commission and the EBA (CommComm2020) a key instrument for the removal of obstacles to the realisation of open banking as envisioned by the PSD2.

APIs are the gates that define rules of access to service providers' databases. Which data is transmitted depends on the components of digital identity and authentication require-

ments standards – another priority area of the policy agenda. Also on this matter, the primary concern is to establish pan-European harmonisation: cross-national and cross-sectorial recognition of authentication requirements and techniques. Financial institutions are called to ensure interoperability and ease of use of digital identity and authentication techniques (CommComm2020). The interoperability requirement is necessary for the uptake of mobile payment services and for the linkage of payments to other services within digital platforms: users must be able to interact with their finances using, instead of IBANs, credentials that are readily available through third parties' services (EFIP2019).

The uptake of European payment solutions, however, faces one fundamental obstacle that the free-market logics followed by the Commission are not able to circumvent. The Commission recognises that large technology companies located abroad are already ahead in the process of introducing payment functionalities within their platform's environments. Non-European large technology companies can exploit their market dominance to overtake the provision of payment services within the EU, further consolidating their platform monopolies. The Commission voices the concern that these companies might establish themselves as dominant players in the field of digital payments in the EU. They could, in fact, profit from network effects and global reach to gain a dominant position in the EU market, stifling competition with European technology providers.

*"Large technology providers can use their customer data and network effect advantages to enter the payments sector, leveraging their market power from social media or search services"* (CommComm 2020).

According to the European institutions, large technology platforms pose regulatory challenges for two reasons: first, they are likely to pose competition issues; second, as they perform both regulated and unregulated activities, they require the supervision of different authorities and cross-sectorial, coherent oversight efforts

*"Need to break down supervisory silos across sectors, and recommends close cooperation by financial sector supervisors with other relevant national and European bodies that have the required technological expertise"* (EPRes2017)

Developing a domestic digital payment ecosystem is, therefore, also a protectionist, defensive strategy against the spectrum of foreign BigTech and "technologies governed abroad", which threaten to undermine European sovereignty and the protection of individual rights.

*"The expansion of big tech companies could make us dependant on technologies governed elsewhere"* (ECBInt2021)

However, little is said about how domestic companies will effectively be favoured over foreign ones. Promoting wide scale and transnational reach, in fact, the policy ultimately favours bigger technology providers over smaller local ones, and does nothing to challenge the strategic position held by US-based companies (PayPal, Google, Apple) which already provide payment functionalities to EU citizens. The dependence on US-based companies might turn out to be a hard-to-eradicate feature of the payment industry (think of plastic cards as well).

*"In a world increasingly dominated by digital platforms, large technology providers are taking advantage of their vast customer*

*base to offer front-end solutions to end-users. Their entry into finance may consolidate the network effects and their market power"* (CommComm2020).

#### 5.1.4. Technological transformation

Technological development is depicted as an exogenous, unstoppable phenomena which will inevitably impact the way financial transactions are performed and managed. The technological revolution has already started: the technological affordances provided by dominant market players are here to stay, and they already inform the needs of citizens, as well as the future direction of the industry.

*"Customers' expectations of 'seamless' payments, ongoing consolidation and the redesign of payment platforms and market infrastructures contribute to a transformation in payments"* (EBARep2019).

The digitalization of money and payments is depicted as a "natural evolution" in the context of a ubiquitous digitalization of commerce and communication.

*"A digital euro represents a natural evolution in response to this transformation"* (ECBInt2021).

Changes in business models and market structures, entrance of new actors (technology providers not previously engaged with the financial service industry) and shifts in the governance of money are unavoidable, as means of payment need to adapt to the surrounding socio-technical ecosystem. Policy makers can only acknowledge and participate as facilitators of the process; try to steer it within the parameters of what is deemed desirable according to European regulatory principles. In this perspective, incentivising the emergence of a European digital payments industry through liberalisation and regulatory incentives is a strategy to bring technological development in the proximity of EU institutions, to keep it closer to their domain of agency.

There is a considerable dose of techno-solutionism in the way policymakers surrender to the imperative of technological evolution. Their view seems to subscribe to an ageless Californian ideology according to which governments should "stay off the backs of resourceful entrepreneurs" (Barbrook and Cameron, 1996) who will enable useful technological progress in a competitive marketplace. The struggle, then, is to reconcile this ideology with European values and the commitment to make technological services inclusive and democratic.

The goal of the liberalisation process is to pave the way to an innovative and competitive digital payment market providing services based on cutting edge technologies:

*"A number of factors are expected to contribute to a further acceleration of this innovation [...] the development of new technological innovations such as Big Data analytics, artificial intelligence and robo-advice"* (EBARep2017).

Technological development will allow the creation of a digital payment ecosystem that is accessible, inclusive, and interoperable across borders. A number of technologies are expected to reshape the ways we transact and interact with our finances: AI, robotics, blockchain, cloud and mobile technologies are amongst the most quoted. These technologies are meant to support faster, cheaper, safer means of payments and enable frictionless interactions with financial incumbents.

Technological applications will provide cash-like functionalities; they will be consumer-centric, user-friendly, seamless.

Payments are foreseen to be performed mostly via mobile devices, through proximity and contactless technologies. Authentication techniques will increasingly rely on biometrics rather than passwords. Automation and robotics will improve compliance processes and multiple aspects of the relationship with consumers. Institutions are also enthusiastic about the possibilities of data analytics to personalise products, financial offers and service conditions based on the specific needs of consumers.

This enthusiasm for technological innovation is not always counterbalanced with inquiries about the limitations of these technologies. No mention is made, for example, of the well documented technical limitations of blockchain and distributed technologies.<sup>13</sup> Institutions mention, rather superficially, issues associated with the application of AI for automated decision-making for the management of personal finances,<sup>14</sup> including discrimination and unfair pricing, but their potential benefits seem to outweigh such risks. The political and legal problems related to the international nature of technological artifacts' supply chains (for instance, that mobile technologies are mostly produced in China and in the US) are omitted from the discussion, as well as the effects of digitisation on labour conditions (Jones, 2021) and policies.

#### 5.1.5. Regulation and supervision

The policy-making agenda collected for the purpose of the present discourse analysis is highly future-orientated: it envisions and depicts a digital payment infrastructure that is yet to be fully materialized. The role of regulation is that of facilitating the materialization of that vision.

The declared goal of European institutions is that of ensuring that the Union will benefit from the affordances of cutting edge, data-intensive technologies and the economic possibilities offered by them. Policymakers are committed to enable, through various regulatory and technical interventions, the growth of the digital payment industry. Institutions' intent is to set the direction for the private sector to modernize and optimize the ways payments are performed through information technologies, riding the momentum of fintech, pursuing a vision of development and change. Their approach is aimed at ensuring the preparedness, fitness, readiness of Europe for the digital age. Technological progress is unstoppable and unavoidable; hence, the task of institutions is to set a framework within which new technologies can flourish.

"Today's Action Plan envisages to enable the financial sector to make use of the rapid advances in new technologies, such as blockchain, artificial intelligence and cloud services" (Comm-Press2018).

<sup>13</sup> See: Monrat et al. (2019) "A Survey of Blockchain from the Perspectives of Applications, Challenges, and Opportunities," in *IEEE Access*, vol. 7, pp. 117134-117151, reporting the shortages of blockchain technologies in terms of scalability and performance, interoperability, privacy, energy consumption, security and legal compliance.

<sup>14</sup> See: Eubanks (2017). *Automating inequality: how high-tech tools profile, police, and punish the poor*. New York: St. Martin's Press, about the far-reaching negative consequences of automated decision-making in public services.

"Importance of boosting financial innovation in Europe" (EPRes2017).

The policy agenda is characterized by a pressing tone, resembling an accelerationist manifesto stressing the need to harness, reap, untap, boost, accelerate, fuel the benefits of FinTech and of digital transformation of finance. Urgency and speed are the core temporal elements in the policy-agenda. Institutions must catch up with the technological revolution, moved partially by genuine optimism about the affordances of new technologies, partially by a "fear of missing out" on changes that will overwhelm them.

One could wonder about the rationale of this strategy: delegating digital payments to a liberalized marketplace of technology companies equates to the self-destruction of pre-existing legal structures and of the national monopoly on money circulation. At a closer look, the chosen policy direction must be read within the frame of a presupposed technological determinism which forces institutions to adapt to an ongoing technological disruption. Digitalization and liberalization are unavoidable choices if the EU economy wants to survive the fierce global competition amongst tech corporations to harvest the data of a globally wired population.

The need for regulation to "reap the benefits of fintech innovation" translates into precise regulatory principles and key actions. First of all, regulation in the financial domain needs to maintain an innovation-friendly outlook, encouraging industry-led solutions and allowing spaces for self-regulation.

"The purpose of the digital finance strategy is to ensure that the EU regulatory framework for financial services is fit for the digital age. This includes enabling the use of innovative technologies and making the framework compatible with prevailing best practice in software production and deployment" (CommComm2020).

This translates in soft regulatory measures such as innovation hubs and regulatory sandboxes, as well as in regulatory frameworks for the use of specific technologies such as AI and Cloud Computing – all measures aimed at favoring the adoption of new technologies from financial sector's service providers. Importantly, key for the realization of the policy is the correct implementation and appropriate amendment of the PSD2. The EU Commission, in fact, is committed to facilitate, with legal and technical guidance, the correct implementation of the rules regarding data flows as set out in the directive.

"The Commission aims to ensure through regular legislative reviews and interpretative guidance that the EU regulatory framework for financial services neither prescribes nor prevents the use of particular technologies while also ensuring that regulatory objectives continue to be met" (CommComm2020).

Another principle that is often mentioned is that of technological-neutrality, meaning the idea that regulation must tackle activities and services, not technologies. In other words, "same activity, same risks, same rules" (CommComm2020).

"Ensuring a technology-neutral and innovation friendly EU financial services regulatory framework" (CommCons2021).

This principle seems to be at odd with some of the proposals of the policy agenda, such as that of issuing a regulation on crypto-assets and blockchain-based tokens – technologies

which still have to stabilize their use, function and legal relevance.

The issue with regulating rapidly changing technological solutions for the financial sector, as it emerges in several documents, is, first of all, a temporal one. It is, in fact, often stressed that rules, guidelines, interpretations cannot be static, but must be updated on a regular basis. This is the so called “future-proofness” of the regulatory agenda: in order not to hamper innovation, regulation must be constantly re-tailored and re-clarified based on the latest, ongoing technological developments.

*“Through regular reviews, the Commission will ensure that potential material regulatory obstacles to innovation stemming from legislation on financial services are removed. It will regularly provide interpretative guidance on how existing legislation on financial services is to be applied to new technologies”* (CommComm2020).

One of the elements imposing regular regulatory updates is the rapid change not only of technologies but also of the actors and their functions within the ecosystem: “the financial ecosystem is becoming increasingly complex with a more fragmented value chain. The payments chain involves many players (some regulated, others not) and increasing levels of complexity and inter-dependency” (CommComm2020). A crucial point in the policy agenda is, therefore, that of establishing clear licensing and authentication schemes, bringing up to date the list of actors that are covered by the PSD2.

*“As payment services increasingly rely on the provision of ancillary services by or on outsourcing arrangements with unregulated entities, the Commission considers it indispensable to assess, in the context of the PSD2 review, whether some of these services and providers should be brought into the regulated sphere and be made subject to supervision”* (CommComm2020).

A counternarrative to the “boosting innovation” approach incorporated in these regulatory principles is the emphasis on the risks brought by technological change. Without abandoning the innovation-friendly mindset that illuminates the whole agenda, institutions recognize that the complexity and variegated nature of the emerging ecosystem requires to balance different interests:

*“While regulation must guarantee a level playing field, promote fair competition and low barriers to entry and spur innovation, it must also uphold users’ rights and protect the overall ecosystem from financial and operational risks. To achieve these objectives, the regulatory perimeter needs to be well balanced”* (CommComm2020).

Specifically, it is argued that “the increased use of customer data or big data by financial institutions” and “the increasing combination of personal data and algorithms”, while they “may lead to benefits to consumers”, can also cause “systemic risk and harm consumers, for example through increasing exclusion” (EPRes2017). To such risks, and to issues deriving from “errors or biases in algorithms or in the underlying data”, as well as the “misuse/non-disclosed use of data”, the main solution that is identified is “to ensure that adequate regulation was in place and enforced to protect individuals” (EPRes2017). Mention is particularly made to the GDPR, and to the rights enshrined thereto:

*“The provisions of the GDPR, which grant the data subject the right to obtain an explanation of a decision reached by automated processing and to challenge this decision; [...] guarantee that incorrect data can be changed and that only verifiable and relevant data*

*are used; calls on all stakeholders to increase efforts to guarantee the enforcement of these rights; [...] consent given to the use of personal data needs to be dynamic and that data subjects must be able to alter and adapt their consent”* (EPRes2017).

The prudential approach is translated in enhanced supervision and oversight of the payment ecosystem; because of the pace of technological change – the Commission explains – supervision requires appropriate skills and constant training of the supervisors.

*“Supervision and oversight of the relevant actors in the payments chain has become increasingly complex, taking into account the emergence of many new business models and group structures. The potential supervisory implications became apparent in a recent case involving a technology company providing payment-related services”* (CommComm2020).

Such skills and training critically require cooperation between “regtech providers, financial players and regulators” (CommComm2020). Supervision becomes complex because the entrance of non-financial actors in the industry breaks up traditional supervisory silos and causes different areas of competences to spill over each other.

*“Players in the payments chain may be under the supervision or oversight of different entities”* (CommComm2020).

*“Large technology companies offer a wide range of services and have elevated intra-group dependencies, for instance on integrated data pools, operating systems and processes, and customer access. They may use their vast amount of customers’ data to support the provision of financial services giving rise to questions about conduct and prudential risk management, which have not been present so far in traditional mixed activity groups. These taken together suggest that they pose risks of a more systemic dimension. Hence a holistic approach to their supervision may be necessary”* (CommReq2021).

This cooperative and cross-sectorial approach, referred to as “multidisciplinary supervision” (CommCons2021), implies supervisors’ dependence from the tech industry expertise. Supervisors’ training needs to rely on the private actors responsible for technology development and implementation. This raises questions regarding the capacity of supervisors to critically assess, for example, the real necessity of a technological feature, the risks it entails and its future development.

## 5.2. The fabrication of consumer interest

Beside appeals to future imaginaries, policy choices are motivated through arguments of necessity and benefits, pragmatic considerations which justify the efforts towards the materialisation of that particular future. Justifications are key to institutional discourse as they legitimise policy choices. By identifying both future imaginaries and the arguments that are deployed by policymakers to justify a given direction of action, this analysis serves to highlight the links, the overlaps and mutual influences between the two discursive elements. In the policy documents, we identify the realization of consumer interest - declined either as consumer empowerment or as consumer protection - as central justification for policy choices.

### 5.2.1. Consumer technological empowerment

The policy agenda encourages the entrance of technology companies within the financial domain, so that, though fair

competition, a digital payment industry can develop and offer products which best meet consumers' needs and expectations with regard to digital payments.

Mobilising the realisation of consumer interest as a justification for policy action implies developing a precise notion of what is needed or desired by a hypothetical model of consumer. In the documents, there seem to be precise assumptions on which technological features correspond to consumers' needs and desires when it comes to payment technologies: "faster, cheaper, more tailor-made, more inclusive, more resilient and more transparent and better financial services" (EPRes2017). These expectations are shaped by the technological affordances that digital technology providers have established as default options for digital environments: personalization, friendly interfaces, interoperability amongst services within a single platform.

"Customers now demand fast, cheap, easy, smooth and secure payments at any time and from anywhere, and seek more options and choices" (EBARep2019)

Consumers are assumed to desire the latest, most advanced technological solution offered by the market. Meeting consumers' needs, therefore, amounts to enabling them to make use of the technological solutions offered by tech companies, establishing a co-dependency between the latter and the traditional financial sector. In other words, technology companies are better suited to provide what consumers need. There is, therefore, an assumption that a liberalized market populated by competitive tech companies, making the best use of financial data, will produce what is in the best interests of consumers.

This line of reasoning serves as a justification for the promotion of collaborations between new technology providers (such as Account Information Services and Payment Initiation Services) and banks ("Access to more customer data would also enable service providers to offer more personalised services that are better tailored to customers' specific needs" - CommComm2020). It is also the rationale behind the transition of "consumer-ownership" from the banks to technology providers: the latter provide the interfaces, defining users' modes of interaction with their finances, determining the types of literacies that are necessary for using financial technologies.

But the rhetoric of consumer empowerment through increased datafication responds to well to the interest of technology companies. Many fintech applications adopt *freemiums models*<sup>15</sup> and exploit data for various commercial purposes (marketing, insurance, credit scoring, etc.) (Ferrari, 2020). The 'user-experience' in digital apps is designed with the goal of multiplying the data points linked to users, and informed by the algorithmic personalisation of services and advertising (Janssen et al., 2020, p.13). A "better", personalized user experience, therefore, is not only aimed at responding to consumer's needs - as policy-makers seem to understand - but it is, first of all, functional to the data-intensive business models that technology companies adopt.

### 5.2.2. Consumer protection

The consumer/user plays a central role in the rhetoric used to justify the policy agenda in two ways: on one hand, as seen above, as market actor interested in market efficiencies and empowered by innovations; on the other hand, as vulnerable actor to be protected from the negative externalities of digital services.

While companies claim to be using data analytics to optimise the digital environment in order to respond to the needs of individual users, "data could be mis-used to target vulnerable consumers; companies can exploit data in non-transparent ways to apply dynamic pricing techniques or encourage, through personalised offers, frivolous spending or hyper-consumerism" (EBARep2017).

The main threats demanding a focus on consumer protection in the development of the digital payment industry relate to data protection, cybersecurity and digital illiteracy. With regard to the first, it is acknowledged that digital financial transactions entail the production and management of highly informative personal data, and these data are likely to be abused for commercial purposes.

"The abuse of personal information for commercial or other purposes could endanger privacy and harm competition" (ECBInt2020).

This position seems to be at odd with the rest of the agenda, which promotes data-intensive business models as essential economic strategies. Moreover, the line between legitimate commercial use and abuse of personal data is not clearly drawn. Linking to the GDPR *modus operandi*, mention is made to the necessity of user consent to the processing of personal data. However, in the context of an essential service such as digital payments, using consent as discriminating criteria for legit data processing misses the point. In fact, as digital means of payments are increasingly becoming the exclusive option for financial transactions, users will be left with no alternative but disseminating sensitive data points across digital payment intermediaries.

Similarly to data protection, cybersecurity risks are framed as potential technical issues, untangled from the political, institutional, trust-related questions that they arise. In the emerging digital payment industry, cybersecurity matters are assigned to a "public-private partnership [...] launched by the Commission with the participation of the industry" (EPRes2017). The goal of increasing cybersecurity translates, once again, into incentives for companies to develop and implement more advanced technologies; for example, with regard to authentication, the Commission stresses that payment service providers "should rely on the most secure authenticating factors", i.e. biometrics, "moving away, where possible, from transmittable elements (e.g. static passwords) and from older technologies and communication channels that are prone to attacks (e.g. SMS text messages)" (CommComm2020). Cybersecurity, therefore, becomes an industry within an industry, which further strengthen the role of private actors in determining design, affordances and data protection standards of digital payment networks.

A proposed solution to these data protection and security risks is the promotion of consumer awareness, literacy and education about the functioning of financial technologies. There is awareness that regulatory frameworks might not suf-

<sup>15</sup> Monetization models in which the app is free to download and use, but users can pay to enhance their experience through in-app purchases or subscriptions; often, this model also relies on advertising as source of revenue. See: Sax, 2021.

face to protect consumers from potential abuses of data. To avoid risks of manipulation leading, for instance, to “hyper-consumerism” and “misselling practices” consumers must be aware of how their personal data are used for profit maximisation.

“raise consumer awareness as regards both the opportunities and the risks related to innovative uses of consumer data (such as the risk of hyper-consumerism or misselling practices)” (EBARep2017).

While recognising the vulnerability of consumers/users of digital payment applications, institutions shift the responsibility of protection from the legal framework to users themselves. In the analysed policy agenda, the recognition of the consumer/user as an actor to be protected does not translate into regulatory measures; the policy, in fact, favours data-intensive business models without questioning its long-term harm on individual choices and social dynamics. The awareness of potential threats, in fact, merely motivates the need to re-educate the consumer for her to fit the ideal of the free and informed market player who can benefit from competition and innovation.

## 6. Critique

The analysis provided in this paper highlights how, according to policymakers, the digitisation of payments realises and, at the same time, threatens the interests of consumers. The dominant image – the one that is coherent with the future imaginaries depicted in the analysed documents – is, however, that of a consumer who is empowered by technological innovation and benefits from a competitive digital market. While the goal of protecting consumers falls in the background, the mission of institutions is that of facilitating competition and the uptake of new technologies, creating a regulatory environment that allows technology companies to penetrate the financial sector, first and foremost opening access to financial data.

The notion of *user empowerment* is grounded on the rhetoric – promoted by the private sector – that through digital technologies individuals can better themselves and their lives. Hence, the consumer/user plays a role as a market player that is interested in the development of a fertile market for financial technologies, for the sake of its own self-empowerment. This interpretation implies conceptualising the consumer as a free and rational actor which can enjoy full autonomy in her economic decisions and benefit from the opportunities provided by the tech-industry. Also, it is based on the assumption that further digitisation and technological development is desirable and necessary.

In the reasoning underlying the policy agenda, specific technological features – speed, usability, seamless experience, personalization, etc. – and technologies – AI, big data analytics, biometrics, etc. – are assumed to correspond to what consumers desire and need when it comes to digital payments. In a nutshell, the interest of consumers is tightly tied to a notion of technologically-empowered consumer which in turn is grounded on a very precise sociotechnical imaginary about the future of payment technologies – one which mirrors the characteristics of emergent business models in the industry and disregards important consideration on con-

sumers/users’ vulnerability vis a vis digital applications (see: Dieter and Tkacz, 2020).

The technologies that are painted as desirable or necessary in the evolution of digital payments are the same in which – based on data reported in the 2019 EBA “Report on the impact of fintech on payment institutions’ and e-money institutions’ business models” – technology companies have been investing and experimenting the most in recent years (EBARep2019). In the 2021 EU Commission Consultation on a new Digital Finance strategy, the involvement of citizens in determining what is desirable for the future of digital payments is scarce if not completely absent; only 5 responses came from EU citizens, while 125 came from representatives of the industry (Commission, 2021, p.3). Hence, it can be affirmed that – notwithstanding the centrality of consumer interest as rhetorical catalyst for change – consumers had little to no role in the definition of what is deemed desirable and needed in terms of technological change.

Arguably, features such as speed, personalization and user-friendliness are far from being an obvious preference for users of payment services. Banks’ costumers, for instance, might appreciate their institutions based on matters of trust, loyalty, interpersonal trust, familiarity; they might be reassured by prudent, accountable bureaucratic procedures for handling financial transactions. Crypto-assets users, on the other hand, priorities confidentiality over usability; they value technological creativity and the possibility of avoiding marketing and financial surveillance. Therefore, the technologies that are here portrayed as desirable seem to be the product of a rather partial view, reflecting particular economic interests and discursive strategies.

“Consumer associations fear that algorithms may discriminate against those who are less willing to share their data online” (EBARep2017). Close monitoring of users’ financial history and credit trustworthiness can lead to financial exclusion and prevent financial mobility. “Non-transparent dynamic pricing techniques” and “personalised offers [that] encourage frivolous spending or hyper-consumerism” make it questionable whether the cost reductions generated through data analytics and automation “would be passed on to consumers” (EBARep2017). The dominant argument of consumer empowerment could then be well turned around: the transformation of payment services into a data-intensive platform-based industry, may – rather than empowering them – make consumers more vulnerable, less informed, less autonomous than the classical market player assumed in EU consumer law.

Technological companies, on the other hand, have tools at their disposal to “nudge” users’ preferences in terms of products and technological choices (Thaler and Sunstein, 2008). We move in a dangerous area in which the biopolitics of money can merge with the biopolitics of data. Hong masterfully exposes the “contradictions between technologies of datafication and the liberal ideal of open and transparent information”, as well as the power of digital technologies to intimately reshape our relationship with ourselves and our needs. Highlighting how technologies of surveillance are also technologies of self-surveillance, Hong denounces how mobile health applications shape new sensibilities and new forms of self-judgment, and self-obsessions, which in turn demand more tools for continuous self-tracking. The arguments he brings



forward in relation to health apps can well be transposed to the mobile financial applications that are the focus of this policy agenda. Digital technologies offer us new epistemological tools through which we monitor and manage our selves; self-exposure as data subjects, thus, is made compulsory by the inner push toward self-empowerment, and by the external conditions of wealth distribution systems which make it unaffordable to stay untracked and unoptimised (Hong, 2020, p. 110).

Another critical point is the monopolistic and ever-expanding tendencies of platform economies. The possibility to choose amongst a variety of services is often prevented by the winners-take-all consequences of platforms network effects, which is likely to leave users little chance of opting out from mainstream dominant payment applications. Hence, the market-based assumptions that free competition will ultimately favour consumers may be far-fetched. The traditional neoliberal axiom on the efficiency of market competition is gainsaid by the platform logics; “the competitive struggle amongst surveillance capitalists produces the compulsion toward totality” (Zuboff, 2019, p. 497). The payment data market is not an exception to the tendencies shown by platform economies in other domains of activities: network effects are likely to hamper competition, with bigger technological companies establishing hard-to-eradicate monopolies.

The documents recognize the need to “address conduct and competition risks” (CommReq2021); reference is made to the applicability of the Digital Market Act legislative proposal<sup>16</sup> (“most of the large technology companies which are currently offering financial services are likely to fall into the scope of the proposal” - CommCons2021) which specifically addresses issues deriving from excessive market power gained by dominant digital platforms. Yet, in the policy agenda, the business models and the economic paradigm of platformisation is not put into question, its unwanted externalities are not critically analysed.

The banking sector is likely to undergo the same process occurred in the telecommunications in the early 2010s, whereas globally dominant mobile platforms, iOS and Android become dominant players of the mobile sectors, transforming telecoms “from the mediators of commerce to what are often called the “dumb pipes”” (Steinberg, 2019, p. 16). Similarly to national telecoms giants, banks are likely to fall into the background of the payment ecosystem, leaving customer relationship and “data ownership” to fintech companies providing digital services and mobile interfaces. The alternative is for banks to become themselves digital platforms capable of providing competitive user interfaces; this option would ensure a more decentralised market, but the evident obstacle remains that of interoperability, whereas a unifying payment service infrastructure should bound together all banks’ payment applications.

The evident risk, looking at the telecoms example, is to end up with a “de facto global regime of standards and shared operating systems” (Steinberg, 2019, p. 16) delivered and controlled from elsewhere. The issues deriving from this shift

in the governance of financial networks can hardly be overstated; they range from the geopolitical oddness of delegating powers to survey and censor financial transactions to foreign large technology providers, to more subtle, long-term effects on individuals’ financial behaviour (e.g. hyperconsumerism), shifts in privacy perceptions and social norms around money.

In conclusion, the policy agenda portrays a vision of the future of digital payment infrastructures that – whilst being painted as inevitable and necessary – is informed by precise narratives of user technological empowerment, which in turn reflect the interests of technology companies entering and shaping this new industry. The image of the consumer that is mobilised in the policy agenda is tied to arguments that reinforce the desirability of that future. The fixation with digitisation and innovation can, at a closer look, be read as the intention to refurbish a declining service industry as a data industry, resorting to data commodification and AI to reinvigorate revenues.

As more and more service industries are transformed into immense infrastructures of data extraction, the desirability of platformisation as dominant organisational model needs to be questioned more thoroughly; market regulation must be informed by considerations on the impacts of platformisation on geopolitical power balance, labour conditions and individuals rights, to name some.<sup>17</sup> Yet, in the policy agenda, the negative externalities of platformisation, as well as alternative sociotechnical imaginaries, remain into the background, not urgent enough to inform political and legal reform.

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## 7. Conclusions

This paper investigates through a qualitative analysis of official documents how certain imaginaries about technology filter into policymaking, allowing or accelerating the transformation of payment infrastructures into the platform economy. One of the ways in which socio-technical imaginaries filter into policymaking is, it turns out, by informing an image of consumer interest which serves to justify measures for the realization of a desired future. Attributing to consumers the need and desire for particular technologies and technological affordances, and portraying competition as the best way to ensure them, policymakers appeal to consumer interest to justify their policy choices.

The thesis of this paper is that the policy agenda in question relies on a notion of technologically-empowered consumer which is grounded on partially constructed sociotechnical imaginaries about the future of payment technologies, and conceals important consideration on consumers/users’ vulnerability vis a vis digital payment platforms/infrastructures.

The image of the future digital payment infrastructure portrayed in the policy documents is problematic for two reasons. First, the technologies and technological affordances that are assumed to meet consumer interest mirror emergent busi-

<sup>16</sup> Commission, 2020, Proposal for a Regulation of the European Parliament and of the Council on contestable and fair markets in the digital sector.

<sup>17</sup> See: Panel for the Future of Science and Technology (STOA) (2021), Online platforms: Economic and societal effects, [https://www.europarl.europa.eu/stoa/en/document/EPRS\\_STU\(2021\)656336](https://www.europarl.europa.eu/stoa/en/document/EPRS_STU(2021)656336).

ness models and products offered by the industry. Second, the assumption that more competition leads to the availability of more and better services – central to the whole policy agenda – is flawed, as the platformisation process that the digital payment industry is undergoing entails the same risks of monopolization, dominance from foreign companies, and consequent geopolitical imbalances that are occurring in other domains. The notion of technologically-empowered user which is linked to this vision is, therefore, partial. Important considerations on the negative externalities of platformisation, and their implications for individuals, must be given greater consideration when determining the desired future of digital payments. Policymakers should look at other digital industries to better understand the risks entailed by the platformisation of critical infrastructures, and open their imagination to alternative possible futures.

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### Data availability

Data will be made available on request

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Annexes

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### Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

### Data Availability

Data will be made available on request.

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