Learning from the Failure of the EU Payment Services Directive (PSD2): When Imposed Innovation Does Not Change the Status Quo

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Abstract

Payment Services Directive (PSD2) regulations were introduced to stimulate growth and competitiveness in the EU financial sector by simplifying the sharing of the infrastructure and customer data between incumbent banks and other players, including new financial institutions and fintech startups. Alas, the new rules received a lukewarm or hostile response from the industry incumbents, who perceived them as additional costs and a possible threat to their competitive advantage. As such, PSD2 became an exemplar of the gaining attention in literature phenomenon of "imposed innovation," a change that does not make microeconomic sense to incumbent firms but is instead mandated by influential non-market stakeholders. So far, most of the imposed innovations cases were studied in corporate social responsibility, environmental or safety domains, with limited understanding of this phenomenon in other areas. Based on a detailed case study of PSD2 implementation failure in the German banking industry, we demonstrate that without certain identifiable contextual factors, the societally-important innovations within an established industry might not materialize. By studying the implication of PSD2 and its effect on the EU banking industry, for the first time, we provide practical suggestions for how to improve the effectiveness of imposed innovation, from the public policy and firm perspectives.

Banking Industry vs. an Imposed Innovation

Is it possible to stimulate societally-important innovations within an established industry when most incumbents passively ignore or openly resist these changes? The recent studies on imposed innovations point out that it is not uncommon to see implemented innovation projects that do not make microeconomic sense to incumbent firms (in terms of improving profitability or stimulating growth in the observable future) but are instead mandated by influential non-market stakeholders, such as regulators, NGOs, or pressure groups.[1,2] Examples of such imposed innovations are numerous: e.g., CSR initiatives, safety standards, or recent COVID-19 triggered changes in business processes across all consumer-focused industries. Of course, some of these changes are also instrumental in achieving corporate performance goals, but a major part of these initiatives become pure costs to the implementing firms, which must be paid to preserve the ability to operate. However, not all imposed innovations can stimulate changes in the industry that their developers hope for, as this study's case of the German banking industry demonstrates.

The advancement of information technologies (IT), particularly the development of networking and cloud services, has been the source of innovation challenging the status quo in many industries. The conventional banking industry has found itself profoundly affected by these changes, threatened by the rise of numerous IT-focused fintech startups. The newcomers challenge the traditional banking business model by introducing innovative ways to make banking more attractive, individualized, and customer-friendly. However, fintech growth has been severely hindered in some parts of the world (like the Eurozone) by the difficulty accessing a broader range of customer data, which is predominantly held by the financial incumbents (i.e., traditional banks).

To level the playing field and boost innovation in the European Union (EU) banking industry, EU policymakers introduced policies enabling and simplifying the sharing of the infrastructure and data between incumbents (banks) and other players (e.g., fintech startups). A crucial component of these policies hinges upon the release of Payment Services Directive 2 (PSD2) in October 2015, which enhanced the first directive, PSD1 (released in 2007). PSD2 creates the legal parameters to harmonize the payment landscape and thereby makes transactions easier, faster, and cheaper to execute. Technically speaking, according to PSD2 policy, financial incumbents active in the EU zone by September 2019 had to offer application programming interfaces (APIs) to third-party providers (TPPs), like fintechs and other technology companies ("BigTechs"), other banks, and financial startups, to exchange data with the prior consent of the account holder. In addition, PSD2 intended to improve security standards in terms of online payments, which has been a major concern for e-commerce. In other words, PSD2 had to remove the large bank's unfair advantage due to controlling the customer data while also making the transactions more secure.

The EU policymakers believed imposing PSD2 would facilitate innovation within the industry. The main idea was that the framework would provide an immense opportunity for fintech startups to grow their user bases, as their customers could now set up new standing orders, retrieve account turnovers, and execute their transactions via their online platforms. However, the policy fanned the incumbents' fear of a possible total loss over their banking activities and loss of their function as primary financial service providers to their clients. Furthermore, it also takes in non-industry related businesses to engage in new security standards, which is unknown territory for the incumbents.[3]

As we see here, the case of PSD2 is a vivid example of what is known as *"imposed innovation*," providing a unique opportunity to study this phenomenon in the context of the banking industry. Imposed innovations are innovative activities and projects initiated by for-profit firms as a result of pressure (e.g., policies and regulations) from external and non-market stakeholders, such as governments, NGOs, and activist groups. Imposed innovation has been mainly studied in the context of corporate social responsibility and environmental concerns. Therefore, there is limited understating of the consequences and effectiveness of the application of imposed innovations in other areas. By studying the implication of PSD2 and its effect on the EU banking industry, for the first time, we provide practical suggestions for how to improve the effectiveness of imposed innovation.

In this study, we focus on the PSD2 implementation process in recent years while having a closer look at the implementation in the German banking sector. We have conducted 23 interviews with experts in this area in the German banking industry, banking consultants, and academics, within a timeframe of 20 months, from March 2019 to November 2020. The first part explains the basic parameters of PSD2. The latter parts chronologically guide the reader through the different phases before and during the implementation. Important points, like the passing of PSD2, the identification stage of banks, and the postponement of strong customer authorization (SCA), are touched upon, ending in August 2020, after the first wave of the COVID-19 pandemic. The discussion forms the end in which the different stages are reviewed and critically analyzed.

PSD2 as a Game Changer

Payment transactions constitute up to 25% of a European retail bank's revenue.[4] In 2007, the EU decided to harmonize the payment landscape by introducing a payment service directive, also known as PSD1. The initial intention of the regulator was to implement new technical standards in the banking industry to allow the installment of the Single Euro Payment Area (SEPA). The ideas behind PSD1 were:

- ✓ Easier and safer cross-border payments within the participating countries
- ✓ Lower access barriers for new payment providers to increase competition
- ✓ Higher transparency in terms of transaction fees and execution times
- ✓ Stronger customer protection.[5]

However, rapid digitalization and technological innovations such as mobile payments quickly made part of PSD1 obsolete and ineffective. Consequently, legal adjustments to the first directive needed to be done to serve the constantly changing digital environment optimally. Hence, the EU rewrote the first regulation to fit the new circumstances and introduced the second version, so-called PSD2, in 2015 (with the compliance date of 2019). The goals of PSD2 are:

- ✓ Higher security standards
- ✓ Extension of reach
- ✓ Creation of a more efficient payment landscape
- ✓ Increased competition in the sector.

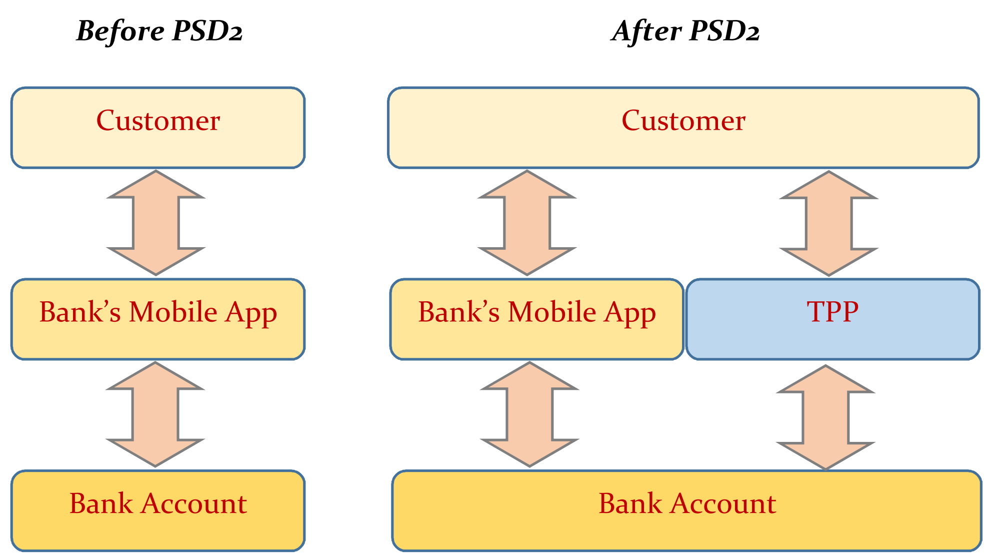
To achieve these goals, incumbent financial institutions need to allow fintechs access to their customer data through APIs. As a result, the policymakers believed that the imposed collaboration between incumbents and fintech startups would result in higher innovation within the traditional banking industry and, ultimately, better services for customers.

Although PSD2 was designed to facilitate innovation and create a better environment for customers, in the short term, PSD2 would create significant challenges for the incumbents, including (1) a significant cost of compliance with PSD2, (2) increased competition between incumbents and fintech who are going to provide similar services, (3) the loss of customer data without additional revenue for providing it, and (4) an overall withdrawal of the banks' monopoly status over their client base, which could potentially lead to a revenue loss.[6]

New Competitors with New Possibilities

PSD2 allows new competitors, such as tech-giants, to step into the banking industry by legally enabling TPPs to implement their services into the incumbents' data setup. Hence, simple banking tasks, like transferring money, monitoring spending habits, and initiating payments, could be accomplished by the payment service user (PSU) without interfering with the credit institution's banking app or website (see figure 1 and figure 2). In other words, by providing a new option to customers, TPPs could offer faster, smarter, and cheaper banking than the traditional banks.[7] As mentioned by one of the interviewees who has an in-depth working experience with PSD2: "*PSD2 is a threat as it opens the door for global tech giants.*"

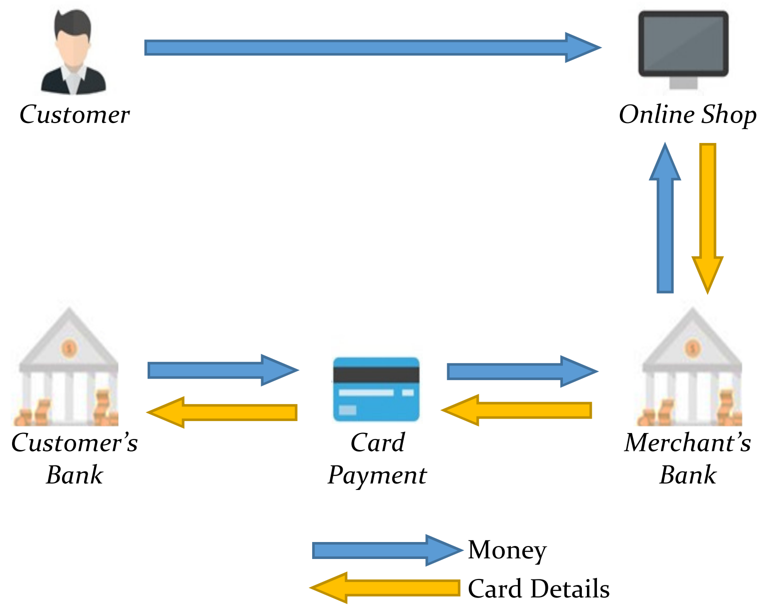
Figure 1. The impact of PSD2 on the banks value chain



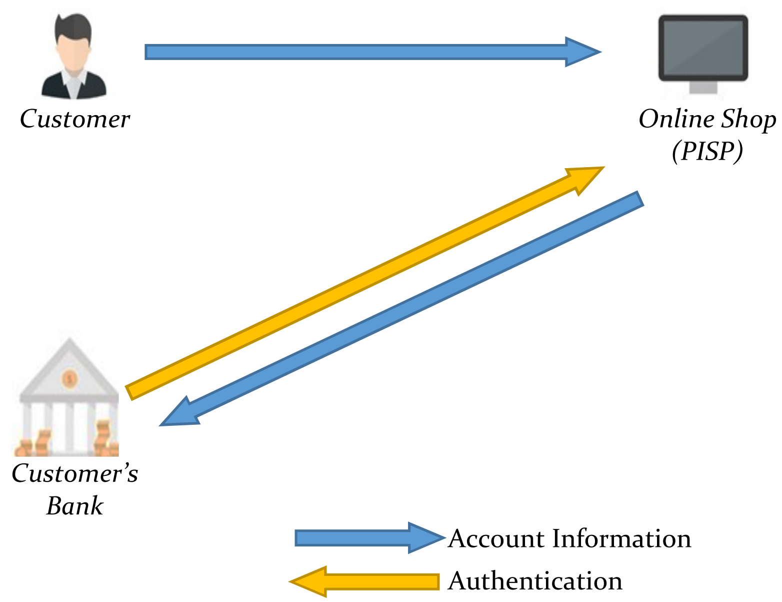
Thus, imposing PSD2 was anticipated to be a major risk to the banks, since TPPs had an advantage regarding costs while providing the same or more advanced services. In the long run, it was expected that financial incumbents might lose customer interactions, cross-selling opportunities, transaction volumes, market share, and revenues to the emerging competitors.[8]

Figure 2. Comparing the payment system before and after PSD2

Before PSD2



After PSD2



Legislation and Scope of PSD2

After the regulator passed PSD2 in 2015, the majority of banks were not sure about the nature of the newly imposed policy, as one of the interviewees, who is the country head of payments in a multinational bank, recalled the moment he heard about PSD2 for the first time:

> "*When I think back to the first round, then no one understood what [PSD2] really was.*"

Thus, the first step was to interpret the new policy to establish a plan of action. However, the policy lacks standards that everyone needs to fulfill. This issue results in different implementations in each country or, respectively, every credit institute. Hence, the actual implementation has been taking longer, which is inefficient, as every concerned party has to deal with the interpretation individually. A participant of the Berlin Group mentioned to us:

> *"The problem is that there was no technical standard in the past. It was intended to foster innovation by not setting standards, but this led to confusion as the interfaces could not be used as foreseen. A [binding] standard would have been great for scalability to deploy the interfaces and then connect all the banks in Europe"*

Furthermore, PSD2 concerns not only banks and fintechs but also online retailers and service agents that face a high amount of online payments and have little to no knowledge about implementing a payment directive. As mentioned by one of the interviewees who is a banking consultant:

> *"The introduction [of PSD2] has shown that it went sub-optimally. This is because the regulator did not manage and communicate the PSD2 program well enough, which led to uncertainty."*

Getting Ready to be Compliant

From 2015 until mid-2019, banks worked on understanding the impact of PSD2 and planned an adoption strategy. Considering that implementing new policies can be challenging, the 26 major players within the industry founded the Berlin Group in 2004, whose goal is to set standards and harmonize processes in payments in the EU. In the matter of PSD2, the Berlin group also developed non-binding guidelines and standards to facilitate the implementation of PSD2. An employee working for a payment service provider who also played a part in formulating the non-binding technical framework of PSD2 told to us:

> *"75% of the banks use the Berlin Group standard. But it is a framework which has to take care of many national specifics. Banks can still deploy various scenarios within this framework."*

Although the parameters laid out by the Berlin Group are helpful for the incumbents and are used by many, the banks face still face two major challenges:

- ✓ Becoming compliant (i.e., develop and implement APIs, etc.)
- ✓ Choosing a strategy

First, becoming complaint by developing APIs under time pressure (i.e., banks should have been compliant by September 2019) was proven to be very difficult and expensive since the majority of European banks' IT-infrastructure is built upon core systems that date back to the last century.[9,10,11] Second, banks needed to consider a strategy for PSD2, as the industry understood the threat but also the opportunity that the new policy bears. As one of the interviewees, who has over 30 years of banking experience and currently is the country head of payments in a multinational bank, mentioned in the interview:

> *"Through overthinking, we came to the first conclusion: this is a risk scenario, but this could also become a great opportunity."*

Generally, the incumbents could choose between just being compliant or using PSD2 to their advantage for long-term gains. Just being compliant means fulfilling the requirements of the policy and giving TPPs full access to customer data. As most banks struggle financially, this strategy looked like the most cost-effective one. However, as this strategy implies a passive approach to PSD2, it holds the risk of losing customer interaction to the new competitors and ending up as a payment processor without any extra revenues, loss of market share, and a reduction in workforce. In the long run, this strategy could lead them to be less innovative in comparison to their competitors. Thus, some bankers argued that in the long run, going beyond the basic requirement of PSD2 seems to be an acceptable long-term strategy. As the regulator offers TPPs participation in the market-out field of payments, it does not exclude financial incumbents from the new possibilities and to actively engage with disrupters as well. Hereby, the financial incumbents could have used it as a strategic tool for sharing and acquiring knowledge and also partnering up with TPPs.[12]

In general, full-service banks could seize PSD2 opportunities from three options by coping with TPPs and embracing open innovation:

1. Outsourcing of front-end functions and allowing TPPs to offer their services to the customers,
2. Building front-end services themselves, or
3. Combining both options.[13]

However, active engagement is an expensive undertaking. Besides the monetary resources, also collaborating with fintechs in terms of open innovation and transferring knowledge is crucial for later success. Up to now, no traditional full-service nor any regional bank is known that laid out a strategy fully focused on being a pioneer in the new era. Most chose mere compliance by September 14, 2019.

The Postponement and the COVID-19 crises

Though at first appearance, PSD2 looked like it would only affect the financial sector, its effects spanned across all industries using online payments. Thus, to the disappointment of the regulators, not all links of the process chain were ready when the due date came closer. Most German banks have had PSD2 on their mind since its announcement, so the APIs were constructed, tested, and ready on time. The same goes for the fintechs that had been waiting for this day. However, the payment directive did not have the same importance in the online retail industry, as some online shops did not see the urgency or just did not understand the legal requirements. Eventually, they realized the importance of PSD2, but the lost time was too big to accomplish the installment since the e-commerce spectrum ranges from one-man-businesses to global retail players. One of the interviewees, who has more than 10 years of experience as a cash manager at a multinational bank, stated:

> *"Especially, retail, travel, and event service agencies did not understand the scope of PSD2; the same goes for the SEPA implementation of PSD1 that was also postponed."*

Consequently, this problem not only appeared in Germany but also across Europe. Therefore, in June 2019, the European trade association asked the European banking authority (EBA) to postpone the compliance date. Indeed, EBA granted the prolongation and assigned it to the national authorities. On August 21, 2019, the German Federal Financial Supervisory Authority (BaFin) passed it on and prolonged the installment with the agreement of the EBA until December 31, 2020.[14, 15]

Subsequently, opinions about the EBAs and BaFin's reactions were mixed across the financial industry. For some banks, however, the prolongation was a gasp of relief, as it bought them more time to fine-tune their APIs and potentially establish a more advanced strategy on how to cope with the new regulation. Other incumbents were neutral, disappointed, or in a rage, as the postponement came quite unexpectedly. Furthermore, it casts the regulator in a poor light, as it usually takes vigorous actions when it comes to banks not complying with regulations. As one of the interviewees, who has over 30 years of banking experience, mentioned:

> *"Since the gate to "everyone can do what they want to do" was opened, the sharpness [of the regulator] has decreased."*

As a consequence, some did not take the policy as seriously as they did initially, which also led to a new prioritization of the directive's urgency in some banks. As mentioned of our interviewees:

> *"Due to the postponement, many banks stopped pushing PSD2 internally. Which is sad, but it is human."*

> *"PSD2 was overhyped in the beginning and now lost in priority."*

Though the postponement by one year was initially intended to give more time to retailers to implement SCA for credit card payments and to players, like banks and fintechs, to continue working on their APIs and open banking strategies, no one expected a global crisis of this dimension to happen. As the COVID-19 fanned out from Wuhan, China, all over the world, measures had to be put in place to protect society and slow down the spread to prevent a potential failure of the health care system. Since many countries, like Germany, decided to go for a total lockdown as their measure of choice, closed shops, restaurants, and schools, as well as social distancing in general, had a great impact on Germany's and the global economy. Hence, many goals, like the full implementation of PSD2 (and subsequently fulfillment of SCA), moved straight to the bottom of their business agenda.

Due to great losses in revenue, many enterprises feared bankruptcy and, therefore, contacted their banks to get liquidity and governmental aid. However, higher lending volumes also mean higher costs on the other side, e.g., due to regulation, potential credit defaults, and the current negative interest policy.[16] An easy way to reduce costs is to cut expenses on ends where success is not necessarily promised in the short-term, like in the case of PSD2. Currently, the final implementation of all PSD2 requirements is not expected any time soon due to the crisis.[17]

What Can We Learn?

In 2015, PSD2 was introduced with the official due date of September 14, 2019, on which European banks had to provide APIs to allow fintechs access to their customer data, and SCA had to be installed to ensure safer credit card payments online. With this regulatory action, the EU regulator imposed innovation on the incumbent industry. Overall, PSD2 was seen as a threat to the traditional banking sector, at least in the short-term.

> *"Before PSD2, our expectations were clearly more compelling. We thought banks will not exist after PSD2." – An executive with over 30 years of banking experience.*

> *"For most banks, PSD2 is a threat, since they do not have enough money to see it as an opportunity."- A banking consultant.*

Soon after the national law was written, German banks got started on interpreting and then implementing the new directive. PSD2 also gives them the opportunity to actively engage with other banks, fintechs, or transform themselves into a TPP. Since they have been financially shaken, run on an outdated IT system, and are managed by a less innovation-friendly generation, many traditional banks only chose to be compliant by building APIs and ensuring SCA as their strategy of choice.

> *"To implement something 'any new processes,' we would have to reinstall the whole core system. As banks want to prohibit those huge costs, it results in a patchwork." - A cash manager with over a decade of banking experience at a multinational bank.*

> *"The managing generation has an outdated mindset and is hierarchically influenced. One challenge is the management structures, whereas it is not clear what the managers' motivations and strategic directions are. Especially when a company is stock-listed, they usually have short term goals, under which innovation suffers. Innovation spirit exists also in big multinational companies, but it is not as present as that it would push the banks."- A banking advisor of large corporations in area of payment services, cash management, and other cash related strategic topics.*

> *"At top management, there are many people that only have three to five years until retirement. Usually, they will not establish a new business model." - A product manager at an international financial service provider.*

As September 14, 2019, approached, banks and fintechs were in the last stages of preparation, when the commercial trade realized that the majority of online retailers would not be compliant by the due date. Many other European countries already postponed the relevant PSD2 requirements. Germany followed its peers by releasing a postponement on August 21, 2019. Then the whole innovation movement ran out of steam. The expected run on APIs did not happen. This effect can be traced back to the following aspects. Firstly, though PSD2 should make payments easier, smarter, cheaper, and more user-friendly to customers, the concerned party, European banking clients, were not involved in the legislation.

> *"Up until today, I am confident that many consumers have not fully understood the advantages of PSD2. Also, the consumer was not incorporated [in the idea of PSD2]." – An academic scholar in area of banking.*

Secondly, fintechs did not come up with disruptive new products. For instance, most banking websites generally analyze their clients' spending habits and allow an overview of bank accounts also held at different banks.

> *"I don't see any huge fintech innovations that our customers could use right now. They all have nice ideas, but when you look at them closely, then it is old wine in new bottles." – A cash advisor for financial institutions.*

After the weak start of PSD2, March 2020 marked the beginning of the global COVID-19 pandemic and the first lockdown in Germany. The need for financial help significantly increased due to the lockdown measures. Hence, individuals as wells as corporations approached traditional banks, which has put them in a key function during the crisis. On the other hand, many Fintechs got into a downward spiral as the funding of investors was canceled, and they ran out of money because they have not become profitable yet. Therefore, the future of PSD2 has become unclear at the time of writing this paper. However, as the pandemic recedes, the well-performing financial institutions and fintech startups might rethink PSD2 and its potential advantages when the crisis is over.

What can we learn from the current failure of the EU PSD2? The primary conclusion is that not all innovations – no matter how societally important they are – can be successfully imposed on an industry to change its current status quo with respect to its structure, key players, and established business models. The positive intention of regulators and policymakers can lead nowhere unless the imposed innovation is implemented properly. How to achieve this?

- ✓ First and foremost, the imposing pressure must be maintained consistently and long enough: any postponements or relaxations of rules derail the efforts of proactive innovators and support the resisting or procrastinating companies.
- ✓ Second, there must be no uncertainty about the future of the imposed innovation (i.e., this requirement "is here to stay," and the companies must adjust), or about the nature of the requirement (consider, e.g., the initial uncertainty about PSD2 implementation).
- ✓ Third, the pressure to innovate must be applied to all firms, regardless of their size (e.g., small companies should not be able to hide under the radar screen) or place in the industry value chain (e.g., financial institutions versus retailers, in the focal case of this paper). This element becomes particularly important when the success of the imposed innovation depends on the collaboration of numerous diverse actors. Without this pressure, the players will engage in blaming each other, which will substitute for the actual implementation.
- ✓ Fourth, it is crucial that the industry incumbents perceive the innovation not only as a threat (e.g., costly projects in the short term) but also as an opportunity to achieve competitive advantage and improve performance in the long run. The possibility to benefit from the changes, in this case, will turn the resisting or ignoring players into proactive promoters of the change.

In addition to the above consideration for policymakers and regulators to effectively impose innovation, the incumbents also should adopt the best practices in strategizing how to respond to imposed innovation. The priority for incumbents facing an imposed innovation project is finding a way to share the cost and risk of such projects with other industry participants. Based on this priority, Radnejad and Osiyevskyy (2019) suggested that the first action that incumbents need to identify is whether they can create an industry-wide response. To be able to create an industry-wide response (either to resist the imposed innovation or to comply), there are two conditions: first, the imposed innovation project should be considered as an industry-wide threat. Second, the imposed innovation project should have the possibility of creating a long-term competitive advantage for the incumbents.

As demonstrated in our study of the German banking industry, the implication of PSD2 was perceived as an industry-wide threat. In addition, some incumbents identified possibilities of some long-term benefits in the application of PSD2. Thus, the conditions to create an industry-wide collaboration was met. However, although the German banks had formed a consortium (the Berlin Group) to help them to apply different policies, it did not include the other crucial players in the value chain (e.g., retailers). Not surprisingly, the banks themselves were not able to fully implement the PSD2 standards in the system that was much broader than their sector. Therefore, there is a need in this industry to rethink their industry-wide collaboration. There are great examples of such collaboration consortiums in other industry such as the Canadian Oil Sands Innovation Alliance (COSIA), The Petroleum Technology Alliance of Canada (PTAC), and the Canadian Urban Transit Research & Innovation Consortium.[18,19]

To sum up, to effectively apply imposed innovation within industries, both stakeholders (e.g., policymakers, regulators, NGOs, etc.) and incumbents need to adopt some best practices. In this paper, we suggested four actions be taken by the stakeholders to impose innovation projects effectively that do not have short-term benefits to incumbents. In addition, we critically analyzed how the reaction implemented by the incumbents was not effective and needed to be revised.

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