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Consumer Perceptions to Friction in the Context of the Privacy vs Convenience Trade-Off – The Case of an Open Banking Consent Journey

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ABSTRACT

It is widely considered that 'friction' in user experience and digital journeys leads to a negative user engagement, drop off rates, and ultimately impacts profits for business in the digital space. The aspect of individuals' perception to risk, privacy and convenience is brought in as it directly pertains to the context within which this study occurs.

Here, friction is studied in the context of Open Banking solutions, where to allow for the service to be provided, customers need to consent their data to be shared. Mocked-up digital journeys of a consent model are presented and discussed with participants in focus groups. This paper aims to explore what user perceptions are about friction and how these perceptions and behaviours are impacted by their preferences and expectations about privacy, and convenience. Expectancy Theory dimensions – Expectancy, Instrumentality and Valence - are used to analyse and discuss the findings.

This paper is an abridged adaptation of the author's Masters' Thesis Dissertation, for the Management of Information Systems and Digital Innovation course at the LSE, with an original word count of 11,000 words. Thus, findings have been summarised in a table and representative quotes have been omitted due to the wordcount constraints in the iSChannel journal. Appendices and visual representations of the digital journeys, have also been omitted in this publication (link to full thesis: https://bit.ly/2N2MGeQ).

Introduction

Industries, markets and even human behaviour, are being changed and transformed in modern societies with ever-so-pervasive connected services, and an on-demand and data driven economy. As such, there has been an increased focus by researchers, businesses and public institutions on understanding issues and concerns related to the vast amounts of data that is being generated: social, personal, financial, data from 'wearables'. Debate and discussion in extant literature focuses on privacy, security, trust, and control of our data, with a shift to a more user-centric view (Elahi, 2009; Whitley E. , 2009). This is reflected in regulatory changes that aim to put the control of personal data, including consent for granting access, and the mechanism of revocation, and the value it holds in the hands of individuals (Whitley E. , 2009).

At the same time literature and industry findings have shown that in a fast paced, and on-demand accelerated by innovation society, user experience (UX), and a seamless one at that, is proving ever more important. Organisations have measured the negative impact and resulting loss in profit of this type of friction of slight delays, interruptions and ambiguity within a digital or online customer journey. These have found that this sort of 'friction' in a user experience journey can lead to higher drop-off and bounce rates. This paper explores how this has been exhibited in the new Open Banking ecosystem, and how nuanced levels of friction are perceived by customers in a digital consent journey.

Background

1. Open Banking, and getting it right

As of January 2018, the UK financial services industry started implementing substantial and disrupting changes to the way it offers products and services to consumers and SMEs – commonly referred to as Open Banking. Enabled by the second Payment Services Directive, Open Banking is believed to lead to a more open and secure banking ecosystem, new business models and services (Zachariadis & Ozcan,

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2017; PWC, 2016), as well as more market competition and choice (Reynolds, 2017). It can even become a lens "through which to reassess how we share our data […], and help us regain control over how we share all our data better" (Reynolds, 2017).

The successful uptake of Open Banking will likely be reliant not only on technological excellence and regulatory rigour, but also on successful mitigation of perceived risk factors for consumers, as was seen with e-payment solutions (Ho & Ng, 1994). Its success depends on positive initial uptake from the first-adopter customers – which includes them having understood its potential value and overcoming fears pertaining to the adequate handling of their data, security and safeguarding their identity (The Open Data Institute, 2016).

The EU General Data Protection Act (GDPR), will undoubtedly contribute to easing consumers' fear and instil some confidence in the Open Banking process, as well as other digital experiences which require their consent to gather data. The law clearly states that when individuals share their data, informed, unambiguous and an affirmative action (deliberate, i.e. having to opt-in) must be present when the individual agrees to give consent (ICO, 2017). However, as with other digital journeys, within the Open Banking ecosystem, instilling certain protections could become an element of 'friction', as the process of acquiring such consent may add steps and additional actions on behalf of users.

Literature Review

2. The Role of 'Friction' in Digital Customer Experience

A concept that originates in the study of physics, 'friction' is used to describe diverse phenomena in an array of disciplines. - from kinetic energy and war battle performance (von Clausewitz, 1873), to a trading environment in market economies (FT. com, 2006; NASDAQ.com, 2011) and institutions as a constraint-creating factor in societies (Sjöstrand, 1993, p. 17). In user experience, digital journeys and 'flow', friction has not been as clearly defined, but is largely viewed as something negative, something to minimise if possible.

Author Denis Hauptly argues that "any technology or product that significantly reduces the steps to complete a task will enjoy high adoption rates by the people it assists". Removing steps in the journey required to accomplish a task or reach a goal, can be part of product innovation as well (Hart, 2009). Similarly, Evan Williams co-founder of Twitter and Blogger echoes that that is the secret to establishing a successful tech business in this age: "Take a human desire, preferably one that has been around for a really long time...Identify that desire and use modern technology to take out steps." (Wired, 2013). Tech giants like Google, Amazon and Facebook are constantly looking for ways to optimise their digital revenue streams. They understand that friction, in the form of 'profitable but irritating' mechanisms to target and advertise, leads to abandonment behaviours along the digital journey (Harvard Business Review, 2016). As little as 100 milliseconds leads to a seven per cent drop in conversion; a two second delay leads to a 103 per cent increase in abandonment rate on a website. At the same time 53 per cent of mobile device users will leave a web page if it has longer than a three second delay when loading (DoubleClick, 2016; Akamai, 2017). Delays in the online experience affect the long-term relationship and trust built with customers (Harvard Business Review, 2016), and can result in loss of profit and unaccomplished business objectives, as well as the inability to make use of user and traffic data analytics (DoubleClick, 2016; Facebook Business, 2016).

Banks are now having to compete with industry disruptors, such as FinTechs and challenger banks, for customer acquisition and retention, with the new battlefield being the digital customer experience. Complexity caused by multiple touch-points, regulatory compliance, and multiple interests increases the prospect for interruptions and friction in the customer journey, which may result in higher drop-off rates (Finextra, 2017). In fact, a seamless digital experience and smooth flow that reflect consumers' preferences will lead to "improved satisfaction, loyalty and referral scores" (Digital Banking Report, 2017). The Technology Acceptance Model theory explains the uptake and use of new technology as a dependant on two primary factors – perceived usefulness and ease of use (Davis, 1989). The latter, more pertinent to this study, is defined as ''the degree to which using the technology will be free of effort.'' (Davis, 1989). 'Ease of use' also has an impact on user adoption of technology, and significantly more so with riskier technology than with less risky technology (Im, Kim, & Han, 2008). The inverse correlation has also been found - products and services perceived to be too complex and difficult to learn to use, are likely to also be perceived as risky to adopt and use (Featherman & Pavlou, 2003). While privacy and security concerns at the top of 'risk factors', another dimension of risk is 'time-risk', defined as "consumer assessment of potential losses to convenience, time, and effort caused by wasting time researching, purchasing, setting up, switching to, and learning how to use the E-payment service" (Featherman & Wells, 2010). Or similarly, in e-payment risk perception studies, the 'risk' of a transaction online taking up more time to complete than completing it by other means. Time-risk has been explored as one of several perceived risks that impact on consumer buying and adoption behaviour (Ho & Ng, 1994; Darley, Blankson, & Luethge, 2010; Featherman & Pavlou, 2003). Adding time delays or steps can inhibit the adoption and use of a new service or technology – they cause friction in the commonly perceived context.

3. Privacy, Convenience and Friction

Information privacy concerns matter in this context, as they too add a level of risk, inhibitive to adoption to technology. However, trying to mitigate privacy concerns can equally increase friction user journey.

Consumers' information privacy concerns are complex, encompassing corporate information practices including information gathering, handling, transfer and data accuracy (Stewart & Segars, 2002) and affecting perceptions of risk when factoring them in to other decisions (Png, Hui, Lee, & Hann, 2007). Demonstrating this, is the widely observed phenomenon and debate over the trade-off between privacy and convenience seen in the context of social media and Internet of Things (Fusion, 2016; Social Media Today, 2014). People mostly do not read privacy policies on websites as it would be time-consuming, counterintuitive and costly - it would take 201 hours/annum to read privacy policies word for word on every website we visit (McDonald & Cranor, 2008). Convenience seekers will also be the first to sign up to a service if it simplifies their experience (Png, Hui, Lee, & Hann, 2007). Equally, not only are people more likely to purchase from websites that offer higher levels of privacy and more informative privacy policies, but that they are willing to pay a premium to purchase from them (Tsai, Egelman, Cranor, & Acquisti, 2011).

However, it was also found that privacy concerns in the advent of e-banking services – around supplying personal information as a prerequisite of use - may inhibit their adoption. (Kolodinsky, Hogarth, & Hilgert, 2004). Not surprisingly, user adoption and use of e-payment services has similarly been found also impacted by the way various design attributes reduce various perceived risk (financial, privacy, time-risk), consequently effecting consumer choice for payment method (See-To & Ho, 2016). In other words, if consumers perceive a level of convenience, time saved and ease of use of an e-payment journey, it will reduce their perception of risk, and thus positively affect its adoption.

This is congruent with previous research highlighting that finding a sufficiently compelling offer, benefit or utility, is conducive to "unquestioning adoption", indicating a reduced consideration for privacy and sharing personal data (Ipsos Mori, 2015; Reynolds, 2017).

Research Design

1. Objective and Methodology

The aim of this paper is to answer the following question:

What are consumer attitudes toward added 'friction' in the user experience of a consent journey of an Open Banking Solution?

It attempts to validate previous findings about friction in user experience, contribute to this through a unique new context of the advent of the Open Banking ecosystem, and discuss the findings within an information-processing theory of motivation. The research question was chosen due to its significance in the context of the technological shift in the banking sector and the availability of raw current data. A qualitative approach was selected due to the nature of available data, as part of an ongoing larger research project conducted by Ipsos Mori market research organisation, for a report commissioned by the OBIE. A qualitative approach allows for a more in-depth investigation of a niche question, the possibility to discover subtleties and nuances pertaining to the topic, and a flexible and guided approach to the questions in real time by the researcher (Anderson, 2010).

2. Data Gathering

Permission was sought and granted for the use of focus group data from the OBIE research project, conducted by Ipsos Mori market research company. I contributed additional questions to the research brief and discussion guide. I chose tape-based analysis (audio and video), which allows researchers to "focus on the research question and transcribe sections that assist in better understanding of the phenomenon of interest" (Onwuegudzie, Dickinson, Leech, & Zoran, 2009). The full Ipsos Mori research comprised of 10 two-hour focus groups, with three to five people each. Participants were shown several 'stimuli' - mocked–up mobile app/website consent journeys, reflecting what the potential consent journey could look like in an Open Banking ecosystem - and asked a series of questions pertaining to the stimuli they have just seen.

The original OBIE research brief included 16 mocked-up journeys, with respective objectives. I selected the relevant Journey 1 and Journey 2, which are as follows:

Journey 1: Friction on Journey

This journey aims to test *if* adding a delay, results in what is defined as positive friction - as a way for people to stop and think further about the process, their data and the consent mechanism.

Control Journey 1 (CT1) – An 'account aggregation' journey on a Third-Party Provider (TPP) app, taking the consumer from a Consent Page, to a Bank-side page (within the app), for authentication; finally, to an Authorisation page, to authorise the bank to release their Account/Transaction data.

Test Journey 1.1 (TJ1.1) – This is the same account aggregation journey, but includes redirect screens and messages when the customer is redirected from the TPP to the bank and vice versa. Customers are held on the redirect screen for 3 seconds, with an animated graphical 'spinning wheel' icon, or 'throbber' (Soon, 2016).

Test Journey 1.2 (TJ1.2) – The same as Journey 1.1, except that the customer is held on redirect screen with the throbber animated icon, for 5 seconds.

Journey 2: Efficacy of the three-step Authentication and Authorisation Models

Journey 2 tests the preference and attitudes of three different consent models, thus indirectly testing perceptions to friction to different extents in each of the

consent models. As explored in the literature review, an additional journey step could be considered added friction in the digital journey, whereas the hybrid and circumvented models could theoretically preferred by participants.

Control Journey 2 (CT2): The 3-step consent model where authentication and authorisation are distinct steps

Test Journey 2.1 (TJ2.1): The circumvented consent model where there is an authentication step but no authorisation step

Test Journey 2.2 (TJ2.2): The hybrid consent model where the authentication/authorisation steps are combined into one step (OBIE, 2017).

3. Conceptual Framework

Because this study deals with people's perceptions of user experience and value of a theoretical future ecosystem, and it requires them to take into account privacy and security concerns pertaining to their financial and personal information – I utilised a theoretical lens that explains people's behaviour through motivation. Open Banking uptake by the public is considered partially dependant on the perception of trade-offs between merits and risks. This aligns with the basic belief in this theory: motivation, seen as the driving force of behaviour, addresses the question of choice between alternatives, and their respective value and consequences.

According to Victor Vroom's Expectancy theory (Vroom, 1964), motivation is the driving force for behaviour, and explains that people make choices between opposing alternatives, by estimating if the expected results from their behaviour will match their desired outcome. Motivation is a product of the multiplicative relationship between Expectancy, Instrumentality and Valence. Expectancy is the belief that if an individual exerts enough effort it will lead to the desired performance, known as the effort-performance relationship. Instrumentality is the performance-outcome relationship, characterizing the belief that if a person meets the expected performance it will result in the desired outcome. Finally, Valence represents the value placed on the desired outcome (Lambright, 2010; Png, Hui, Lee, & Hann, 2007). It is dependent on the person's personal values, beliefs and preferences, and can be related to a positively or negatively valued expected outcome. In the context of online privacy, and related to this research, positive Valence would also incorporate the feeling of security due to specific mechanisms in place like a privacy policy on a website (Png, Hui, Lee, & Hann, 2007). In other words, the value they place on the benefits of the outcome is high enough.

Findings and Analysis

Table 1 summarises some of the attitudes, feelings and observations across the different consumer groups, for Journeys 1 and 2. In addition, Expectancy, Instrumentality and Valence, are used as a lens for perceptions of friction and its impact on the motivation to consent, and successfully use these services. The findings about TJ1.1 and TJ1.2 are presented together, as they were extremely similar, only differing in a three- versus five-second delay. 'N/A' indicates no specific discussions occurred on that section.

Discussion and Conclusion

First, findings point to 'throbber' delays in redirect screens, not being perceived as 'negative' friction enough to lead to higher drop-off rates or journey abandonment. However, too much of a delay could be mistaken for crashed or frozen service. Second, delay wasn't perceived as 'positive friction' either. However, other positive outcomes were observed in the less tech-savvy groups - delays symbolised a more secure and robust process, and interpreted as two organisations communicating with each other. More tech-aware participants on the other hand, merely related this delay to the internet connection, or as a function of the process. Third, the 3-step consent model was found to be a clear way for people to map out the consent model digital journey in their minds, which implicitly signalled this to be part of a robust secure process. This is congruent with extant literature findings that where consumers have 'low mental-intangibility', i.e. journeys are mentally tangible and easier to grasp, they perceive the ease of use of an e-service as a risk-reducing factor (Featherman & Wells, The Intangibility of E-Services: Effects on Perceived Risk and Acceptance., 2010).

Expectancy Theory lens helps explain why perception of friction within a journey can be diverse, due to varying weight placed on the effort-performance and performance-outcome relationships. People understood the effort exerted to overcome friction to signify different things, depending on how tech-savvy, and financially-aware they were. Even more importantly, Valence helps explains this complexity, as people will place different value on convenience vs privacy/security, and therefore, on the service that they attain. Less tech- and financially-savvy users expressed that the service didn't directly interest them at present, and found that the process itself, while straightforward and familiar, is still a lot of effort for the benefit offered. Conversely, CG3 (looking for finance/credit) didn't feel deterred by the 'throbber' delay, and were more willing to go through this 'effort' – attributable to their higher financial needs, thus more willing to disregard friction. Similarly, more tech-savvy users, assumed privacy measures are already in place, as this occurs within the financial services sector, or that the onus is on the banks to protect them – because they value convenience and time-saved more.

The Expectancy Theory lens helps us see why across different groups there was a common perception when it came to the 3-step consent model. Early adopters felt they would not be going through the 'effort' or be in the app, had they not wanted to. They saw it as their firm choice to try a new service/app and didn't need the extra Authorisation step; some even went as far to say that if they had decided to use

JOURNEYS	General sentiment across multiple groups	CG1	CG2	CG3	CG8	Expectancy	Instrumentality	Valence
CT1	Didn't notice the absence of a 'throbber' or transfer screen until prompted and only after seeing a TJ	N/A	Feelings of insecurity, anxiousness (after compared to TJ)	(generally) concerned about what TPPs could do with their information	N/A	Participants expect reasonable level of wait or 'effort' as a natural part of the Consent process - leading to successfully performing sign up, grant access, or add an account.	Completing the sign-up signifies that a robust background process has taken place, and leads to attaining the service (outcome), in a safe and secure way. The 'throbber' signified performing a secure process between TPP and bank (to privacy conscious people)	Value placed on attaining the service depends on perception of benefits vs potential risks – exposed financial accounts, identity theft, information being used to make decisions about them, etc.
TJ 1.1 & 1.2	Expected a 'throbber' as a customary step in this type of sign up journey Most didn't spot differences between CT1 and TJs, unless they were pointed out 5 second delay (TJ1.1) felt too long, when compared to 3 second (TJ1.2)	Could become frustrating after prolonged use and increased familiarity Said if they saw a delay they would think it's a connection delay; didn't necessarily associate with a robust background process	2 organizations are communicating A process in the background Doing what you've asked it to so Being transferred from Third Party Provider to Bank	'Throbber' wouldn't deter, but encourage them May 'switch off' while waiting and think about something else	Level of security A robust process they would expect Don't expect things to be instantaneous Too long delay may be frustrating or interpreted as a 'crashed site'			
CT2	Preferred CT2 as it added sense of security and control Represented a good way to model in their minds that there is a Third Party, a Bank and a connection between them (before seeing TJs)	When compared to alternative TJs, felt long-winded/ clunky (upon experiencing TJs) the inconvenience of extra step is actually negligible	Clearer compared to TJ2.2, with distinct Authorisation step Affirming what you are consenting to; Good for people that glance over small print More confident that data will be secure	CG6 – Poor Credit History Taking the time now even with extra step means ensure security is right Process asks for familiar information, so doesn't seem lengthy	User friendly Familiar, in the things you are required to provide Wasn't asking for 'that much' information	Steps were perceived as part of the 'effort' needed– give certain information, bank confirms it – to attain the performance of 'successfully signing up'.	Performing the sign-up process, leads to the attaining the service. Privacy- and security-conscious groups saw the performance of extra steps as, instrumental to ensuring their information is secure and risk is as low as possible. Early adopters saw them as unnecessary for the desired out come	Depending on value placed on attaining the service, people perceived the extra steps as either acceptable or unnecessary. Similarly, extra steps/prompts were welcome more by privacy-aware people.
TJ2.1	Compared to 3-step model, people didn't feel comfortable with this; more positive attitudes to 3-step consent model	When comparing to 3-step model, acknowledged that they are sharing data, so should be extra cautious, so didn't mind extra step	Felt this is a weaker consent model than CT2	Felt they wouldn't notice the lack of Authorization if they hadn't experienced CT2	Compared to CT2, didn't like the absence of Authorization step			
TJ2.2.	Said they wouldn't be on the app unless they wanted to/had all the information – so extra step may be unnecessary	Less steps than CT2 so seems easier to go through No distinct Authorisatoin step wasn't detrimental – no need for yet another prompt	Helped them notice that authorization & authentication can look similar in CT2 No distinct Authorisatoin step wasn't detrimental – would've been completely informed and sure at this point	N/A	N/A			

Table 1. Summary of Findings - Attitudes, Feelings, and Observations across the Different Consumer Groups

it, they didn't want to be challenged one more time. The more privacy-conscious and technology-resistant groups, felt the same, but the justification cited was that they would have already done extensive research, decided to either trust it or not, and then try it.

In summary, friction is perceived as a more positive encounter where participants were more privacy and security conscious (typically technophobes, and financially excluded); early adopters, tech-savvy and younger people, expressed preference for and put exceeding value on convenience and speed, and thus were inclined to perceive friction as negative. It is important to clarify that this inclination was in the context of imagining what long-term use might feel like.

Implications

This research has shown that if the aim is to increase engagement and uptake within the Open Banking ecosystem, the barriers to overcome are the preference for convenience or speed, and the simultaneous security and privacy consideration. Friction could, then operate as a control mechanism for these perceptions, helping to strike the right balance for a successful uptake with the target audience. Extant literature tells us that people have different preferences for security and privacy versus convenience - from disregarding privacy concerns if the offer is compelling enough (Ipsos Mori, 2015; McDonald & Cranor, 2008) to paying premium to shop on websites where they feel their privacy is safeguarded (Tsai, Egelman, Cranor, & Acquisti, 2011). However, results are dependent on people's perceptions and values, and can be examined as continuum impacted by variables, including how tech-savvy and/or risk-averse people are. Previous studies recommend that because of the various considerations taken into account, e-banking and e-commerce technologies could not be aggregated into one category, with a one-size-fits-all approach to marketing, communication and adoption strategies (Kolodinsky, Hogarth, & Hilgert, 2004). Furthermore, adhering to the GDPR's requirements for informed consent is fundamental for all companies dealing with gathering, storing and sharing data. A pertinent observation is people's perception that commencing the digital journey is enough of a signal of their intent to be there, certain of their decision, and even being informed enough. This contradicts research, so far, showing that people aren't fully aware of what they are agreeing to because they don't read through privacy policies. Perhaps, another dimension of the privacy paradox.

Finally, despite my main findings aligning with previous literature, it is my conclusion the Open Banking ecosystem is unique, and once it has matured, further research may show different results about perceptions. I would recommend that quantitative research is conducted to validate these findings and determine the extent to which privacy and security concerns affect the tolerance to friction or its perception as positive vs negative friction. Suggested studies should be segmented across age groups, and with a large sample across similar consumer groups, and measure drop-off rates at different points in a UX funnel and A/B testing different degrees and approaches to friction.

Limitations

Data gathering was conducted by external market researchers, meaning less control over guiding designing and guiding the focus group discussions. In addition, participants in this case did not have first-hand interaction with the stimuli, but were instead shown and talked through them. Perceived ease of use from hand-on trial of e-service software, has been found to reduce perceived risk of using the software (Featherman & Pavlou, 2003). Finally, this study entailed participants imagining their preferences and opinions about a future ecosystem and theoretical products, with all the contextual complexities.

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