

## Consumer Expectations and Fair Contracting for Digital Products

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**Abstract:** The formation of consumer expectations for digital products affects competition between digital platforms that offer competing products. Unfair competition may occur if the competitive outcome is influenced by misled expectations, notably if the company that wins the competition either misled consumers or did not affirmatively correct consumer expectations that were incorrect. The ability to exploit customers whose expectations have been misled is particularly strong for networks that have tipped, as outside alternatives for dissatisfied consumers may no longer be realistic or viable alternatives for consumers. Unilateral deviations by a company's product away from the future product expectations that have been created around their products may be unfair and create anti-competitive outcomes in growing digital markets.

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## I. INTRODUCTION

This paper focuses on the role of customer expectations in digital markets. For some products, expectations may be crucial in determining consumer adoption of a given supplier of a product. Inaccurate expectations lead them to choose based on an incorrect view of the future features of the product. Decisions made with substantially inaccurate expectations may result in inferior outcomes for consumers, and, to the extent that expectational formation impacts decisions between competing products, could distort competition in ways that are deemed transactionally unfair.<sup>1</sup>

Consumers may select between products today based on their own expectations about both the current and future state of the product. In the active competition for the current set of available customers, enterprises with products whose customers are repeat customers seek to create expectations about the price-quality features of their future product. When products are network products, the creation of these expectations is important on both sides of the market. Examples of products for which future expectations matter include user selection of which digital platform they use, selection of mobile phone platforms, selection of apps and other software that either requires updates or whose operational capacities are based on past use (such as search engines or recommender systems).

This paper makes three points. First, expectations can affect the current and future demand for product. In this sense, expectations may affect the competition between multiple firms offering competing products. Second, firms may find it profitable to create false expectations when there is a lock-in effect for customers. The firm may find it profitable to reduce the quality or raise the price compared to expectations once customers have invested in

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<sup>1</sup> For a further discussion of transactional unfairness, see Lyons, B. & Sugden, R. (2021) “Transactional fairness and pricing practices in consumer markets,” CCP Working Paper 21-03. <https://ueaeco.github.io/working-papers/papers/ccp/CCP-21-03.pdf>.

one product. This profit possibility, if it exists, creates an incentive for firms to encourage “over-optimistic” expectations early on that are not ultimately met. Third, for many products, there are natural adjustment mechanisms (lost demand, loss of firm reputation) that make companies abide by their customers’ initial expectations. But these constraints bind most strongly when customers have effective choices to leave in the face of disappointed expectations. For products with network effects, like many digital products, customers may not have such choices, though customers could potentially reduce their consumption and thus discipline providers through reduced consumption.

## **II. THE ROLE OF EXPECTATIONS IN DEMAND**

The role of expectation in influencing consumer choices is well known. In one relevant example, when customers make an investment in a capital good like a car or a photocopier, they recognize that it will have a limited lifespan, reliability differences and will require maintenance during its operational life. A crucial feature of their evaluation of the long-run cost of a good is then its duration of operation and the maintenance costs during that time. That is, the cost evaluated by the customer at the time of purchase is not just the cost of the machine itself but also the cost of maintenance and of renting any alternative machines when the purchased one needs repair.

Examining the market for maintenance services, customers may reasonably look at the prices from alternative suppliers. Suppose they find current options both of obtaining services from the original manufacturer as well as third-party maintenance companies. They may expect they will be able to purchase these third-party maintenance service (and OEM parts would be available to the party) as well as believing that the existence of this third-party option will discipline maintenance service costs from the OEM. The cost of the maintenance services they

plan to use will reasonably contribute to customer their expectations about future cost and affect the customer's initial decision over which photocopier to purchase.

Just as in the case of other long-lived capital products, digital products may also find their adoption being influenced by expectations over future characteristics of the product. Even when consumers do not have to pay for a service, they may still be viewed as investing in the service. The characteristics of importance for consumer choice can include quality and price. One major quality characteristic is privacy, but there are many other quality characteristics related to the ability of the product to meet customer needs and desires.

### **III. MISLED EXPECTATIONS**

Suppose that customers are interested both in the current and future characteristics of the product when they choose it. For a firm offering the product, offering a low price or high quality may be either more costly in actual or opportunity costs. As a result, the highest one-period profits, absent competition, might come from providing a high-price or low-quality product, as in a monopoly pricing situation. Nonetheless, firms may be incentivized to offer low-price high-quality combinations, due to the presence of competition or, even with a monopoly, due to the presence of substantial customer variation in their demand or usage of the product in the presence of the high-price low-quality offer.

Looking forwards over multi-periods, the firm may itself recognize that its profits could augment from making customers commit to its product today, with the low-price high-quality offer, and then switch them over to a high-price low-quality offer once the customers have committed. Not all digital products would necessarily have this feature of higher profits from misleading consumers. For those that do, firms will have the incentive to create misleading expectations about the future. These misleading expectations could affect the competitive

process and lead customers to commit to the product today, whether a one-sided or multi-sided product.

The existence of expectational distortion strategies is not novel in the digital area. Judge Sporkin in the 1994 in the *U.S. v. Microsoft* consent decree opinion, noted the existence of “vaporware” allegations against Microsoft. Judge Sporkin defined vaporware as “the public announcement of a computer product before it is ready for market for the sole purpose of causing consumers not to purchase a competitor's product that has been developed and is either currently available for sale or momentarily about to enter the market.” Sporkin’s memorandum states ““Vaporware” is a practice that is deceitful on its face and everybody in the business community knows it.”<sup>2</sup> The announcement of vaporware would affect expectations of users today and could change their purchasing intentions. These announcements could then derail the rollout of alternative products, as users waited for the release they might prefer. In the case of vaporware, that release might never emerge, but competitive damage to competitors would be done.

More generally, distortion of customer expectations has played a key role in judicial interpretation of behaviors related to long-life products. For example, in the Kodak decision, the court recognized that a reversal of a prior policy that had allowed OEM sales to third-party repair companies was effectively a change in expectation, even if not excluded by contract, and could represent a competitive harm and potentially illegal behavior.<sup>3</sup>

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<sup>2</sup> Judge Stanley Sporkin’s Memorandum Opinion in Civil Action No. 94-1564 further states, in emphasizing the point of unfairness of creating undue expectations, “Microsoft has a dominant position in the operating systems market, from which the Government’s expert concedes it would be very hard to dislodge it. Given this fact, Microsoft could unfairly hold onto this position with aggressive preannouncements of new products in the face of the introduction of possibly superior competitive products.” Note that Judge Sporkin was subsequently removed from the case after refusing to allow what he considered as too lenient a consent decree.

<sup>3</sup> *Eastman Kodak v Image Technical Services* was decided by the US Supreme Court in 1992 (504 U.S. 451), preventing Kodak from tying its aftermarket services. The court found that if customers were aware of the aftermarket sales restrictions when buying the initial product, they could take into account the life-cycle product cost. To the extent that policies change after purchase, that it is difficult to assess costs or that changing machines after purchase is difficult, concerns could exist. EU cases that have found aftermarket abuse include *Novo Nordisk* (1996), *Digital* (1997), and the *IBM Mainframes Maintenance* (2011).

The determination of whether an expectation comes from active misleading or simple unplanned adjustment of business behavior after the fact, and without pre-meditation or planning, does not alter the competitive effect from misled expectations, which could be the same in both cases, from the consumer perspective.

One might argue that, given the risks of such “exploitation” from misled expectations, consumers should insist upon contractual protections. But in a situation in which consumers have no ability to deviate from a standard contracts and no effective choice of such a contract with long-run protections from the options present, they may reasonably, in many conditions, base their expectations upon the best current indicator. In such circumstances, the best current indicator is current behavior and announcements of the suppliers.

Consumer cannot be expected to be aware of all the financial calculations and plans or possible plans of companies they deal with, particularly for transactions that have relatively low value. But examples are legion of introductory offers being supported by investors without being properly labelled as introductory offers. Many fintech companies, while competing with traditional banks, have offered their services at zero cost while losing money on an average customer over an extended period. While the rationale of building up a network may result in higher enterprise value, in the long run such a scheme is not sustainable and would require a way to harvest value. In such situations, a proper creation of expectations would warn customers, in large and clear print, that the offer from the company will need to evolve into one with higher payment for services, and provide some estimate of the costs to come. While such clear introductory offer announcements might create more balanced expectations about consumers about their future stream of costs from signing up with and investing in a given service provider, such announcement have been rare or inexistant in most products potentially affected by the type of behavior here, where the product supplier has an incentive to change the deal once customers have locked themselves into it.

If products are repeatedly shown to exhibit “introductory offer” effects, and this is common knowledge among consumers, the introductory offer effects would not be so clearly misleading. Thus, introductory offer effects in a product that is established, and where the effect regularly occurs, such as insurance, may not be on the same level of seriousness as those as products for which customers would have no obvious expectation the effects will exist. For insurance, informed consumers could expect the initial offer received is an introductory offer. Even so, there is an argument that this pattern should be more clearly communicated to consumers, where it occurs, to ensure a balanced competition between products. For some products, such as internet access and telecom services, introductory offers are often clearly labelled and explicitly time limited. But for many products, the potential that offers are introductory is inherently unclear to consumers.

#### **IV. ROLE OF NETWORK EFFECTS**

Suppose that we imagine the decision-making and profits of companies as they deal with consumers over two-periods.

In the first period, two competing companies set price-quality levels and recruit consumers. The firm that recruits the most customers in the first period will then experience a tipping effect and have all the customers in the second period. Companies in the first period make statements with implications about their future behavior. These statements can include, for example, direct statements about the future, statements about interoperability, statements about the values of the company and ways that the company’s product protects consumers. Companies themselves differ in the extent to which they discount future profits, which can lead them to set different price-quality offers. At the end of the period, all customers move to the winning firm and make their investment. They make an investment to build up knowledge of how to use the product. This investment is not recoverable when moving to the other product.

In the second period, the winning firm from the first period sets a price-quality level. Customers begin by dealing with the company that won the first period tipping battle. This company announces its price-quality level. The customers then find out whether they were led astray by the behavior of the company that was making the best offer in the first period. The difference for the company in this second period is that consumers have now invested into their product, and if the consumers moved away, would have to make, at the minimum, a comparable investment into the product they did not select. We can imagine this would give the tipping winner the power to extract, in the second period, this switching cost. Customers decide whether to continue consuming the same product as won the tipping battle. If so, how much to consume. Customers who leave can return to the product that lost the tipping war.

In this scenario, the key point for determining the first-period decision of consumers is not only the first period price-quality offer but also the consumer's expectation of the second period price-quality offer. The challenge is that predicting the future price-quality offer is difficult. In the absence of clear information, such as a long-term contract, the customer may reasonably determine that the best available mechanism for predicting the subsequent period is each company's behavior in the first period. For example, if one company has a higher quality-adjusted price than the other, the consumer may reasonably conclude that this would also be the company with the higher quality-adjusted price in the second period. There could be good reasons for this assumption, including that the company with the lower price may have lower costs, may have lower discount rates, may have less inclination to take advantage of market power or may have a corporate belief system that would yield better measures of quality (e.g. privacy) than the other company.

Now suppose that the firms are operating a product with network effects in which the value of the selected product is contingent upon the number of consumers. In this case, the



analysis changes, in the sense that the cost of switching is no longer limited to that of learning a new product. The cost is multiplied. The functionality of the alternative product, in terms of direct network connections, will be much reduced, so that customers might not any longer have a viable alternative network to use, due to the tipping that happened at the end of the first period. Especially if customers will generally prefer to be on the dominant network, adopting a coordination mechanism that ensures many disappointed customers could move jointly is typically unrealistic. Thus, platforms may have a capacity and incentive to limit the quality or raise price, compared to initial expectations, in ways that would harm consumers. Their capacity to change the offer may be greater than for non-network products.

We here assume that long-term contracting over the price-quality level is not possible. There may be many reasons that such long-term contracting would not be possible. In addition to the classical ones emphasized by Williamson related to uncontractable or costly contracting for all states of the world<sup>4</sup> is the additional reason that if a platform provides future guarantees to both sides, the platform loses its ability to dynamically adjust the contract considering technological changes that are unknown to all and that may affect the bargain needed between the two sides of the platform.

The disciplining effect of lost customers can easily operate in such a way that the company that won the tipping battle is willing to lose a small number of customers who end up with disappointed expectations. Thus, even if some customers are so upset by the quality declines in a product that they leave, the size of this leaving group may be insufficient to discipline a quality reduction from the expected level. This would require that the firm profits from the quality reduction on the remaining customers are greater than the lost profits from customers who leave.

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<sup>4</sup> Williamson, O. E. (1985). *The economic institutions of capitalism: Firms, markets, relational contracting*. New York: Free Press.

A welfare analysis could usefully compare the scenario in which tipped companies do not meet original customer expectations and one in which there is a standard that implicit expectations must be maintained. Welfare would likely be greater in the presence of a standard that would not allow companies to divert away from expectations initially created. In a world where companies could not mislead initially and then divert from their initial status without a strong reason, consumers would make better informed decisions and would likely be better off. Companies would still be able to have introductory offers, which might be necessary to create initial network effects around their products, but when made, such offers would be labelled as introductory. The choice between competing offers early on would be informed. Some ability for platforms to raise price and lower quality from the initial level may be commercially necessary to recover the costs of initial investment and ensure an adequate return. But allowing companies to indiscriminately change the contract from the implicit and initially expected contract will likely lower long-run consumer welfare.

At the same time, a standard expectation of maintaining initial expectations must consider that, to the extent technological evolution makes the initial scenario unrealistic or worse for consumers, then an optimal scenario would allow evolution of the implicit contracts. Moreover, if business plans evolve over time, e.g., due to risk of bankruptcy, a change from initial expectations may also be natural. In absence of these exceptional factors, creating or maintaining false expectations is not a form of corporate behavior that is fair to consumers, can distort competition and would not be encouraged for consumer welfare.

Companies that do not plan to honor their initial contracts, or to treat them as a kind of introductory offer, would provide more truthful and fair indicators to customers if they label their offers as introductory in clear and noticeable ways. For example, if “virtual” banks operating with loss-making business models make it clear that they will have to introduce additional charges in the future, such clarity would be more transparent than a strategy of

recruiting customers with zero cost plans and then gradually raising costs in ways that are predictably necessary from the business perspective, but were not expected by consumers. There are many examples of companies in the digital sphere that have created misleading impressions. These actions can include companies that, after establishing a platform product, raise the price to one side of the platform by a factor of as much as four times, or platforms that make announcements that are instrumental in their solidification of tipping but are not later honored, or platforms that begin drip pricing after customers become addicted to a product, or platforms that lower privacy protections to consumers over time.

## **V. CONCLUSION**

The formation of consumer expectations for digital products is crucial for determining early outcomes in competition between platforms. Unfair competition may occur if the competitive outcome is influenced by misled expectations and if the company that won the competition either misled or did not affirmatively correct consumer expectations that were not going to be met. The ability to exploit customers whose expectations have been misled is particularly strong for networks that have tipped, as outside alternatives for dissatisfied consumers may no longer be realistic or viable alternatives for consumers. Greater corporate care to fulfilling consumer expectations would enhance welfare and ensure transactionally fair competitive outcomes for digital products.