Pricing and proposition testing in subscription economies

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Abstract As the subscription model continues to grow in popularity across diverse markets, this paper addresses three important issues in understanding the so-called subscription economy: (1) its prevalence; (2) the price sensitivity of different subscription types; and (3) whether promotional tactics can drive customer acquisition and retention. In addressing market prevalence, this paper reveals that 83 per cent of UK adults hold at least one type of subscription, with the most popular categories being service (71 per cent) and content (62 per cent), and the least popular being product subscriptions (30 per cent). Using the Behaviourlab platform, this paper finds all subscription industries are heavily price-driven; music and gym subscriptions are most price elastic of those tested, with price changes having double the impact on customer acquisition compared with other industries. The results from this study provide clear direction for future proposition design and the marketing of subscriptions.

KEYWORDS: behavioural science, subscriptions, randomised controlled trials, RCT, consumer behaviour, acquisition, retention

INTRODUCTION

The term 'subscription economy' describes the burgeoning trend among companies across a diverse range of markets to move towards subscription models, and it is currently worth £323m in the UK.[1] The move toward subscription models is being facilitated by the growth of digital technologies. For consumers, subscriptions offer the convenience of regular access to items without leaving the home. For the supplier, they provide a contract of repeat custom.

A well-known example of a company changing its strategy to a subscription model is Microsoft's shift to Office 365 in 2010. After 20 years with its previous business model, this marked a complete change in direction for Microsoft, and resulted in 27 per cent year-on-year growth for Office 365[2] — a sizable enough growth to motivate retailers who fit the criteria to consider a similar shift.

Beyond Microsoft, the subscription model is now visible across a broad range of companies, and the subscriptions landscape may be divided into three category types: product, content and service. While the better-known examples of Netflix and Spotify are content-based, subscriptions are also a growing trend among companies offering physical products, such as Hello Fresh and Birchbox. Service subscriptions, meanwhile, are those that facilitate an action for the subscriber, such as Amazon Prime and gym subscriptions. In these instances, the customer is not paying for a tangible product, or for passive entertainment; rather, they are paying to be able to do other activities.

The present study seeks to identify the most effective acquisition levers for each of these subscription categories, as well as offering a lens on the price sensitivity of each.

To achieve this, the researchers started by developing a picture of the current subscriptions market and the problems facing this relatively new area. Fieldwork was then conducted to identify the prevalence of the different categories, and thus obtain robust figures regarding their size. As a growing market, it is crucial to identify the levers affecting acquisition for subscription products. It is also important to understand if some types of subscriptions are more indispensable than others (and so less price elastic). To this end, a randomised controlled trial (RCT) was conducted to investigate the impact of acquisition levers on subscription uptake across the three subscription categories of product, content and services. To uncover the price elasticity, the study presented the propositions at a range of price points.

PROBLEMS FACED BY SUBSCRIPTIONS

As a relatively new business model, especially when linked to digital technologies, subscriptions are ripe for studies into why some fail to reach their desired user base size (acquisition) or may further fail to retain their customers (retention). On the one hand, subscription services face acquisition puzzles that are prevalent across other industries. These include loyalty, logistics and changing consumer preference. On the other hand, holding on to a pre-existing customer is as important, if not more so, as gaining a new customer. Therefore, identifying retention levers also has an important role in the success of subscription propositions.

More specifically, product subscriptions face a further challenge, in that the products are likely to suffer from high substitutability; that is, consumers could source equivalent products from other purchase destinations either in-store or online, without the disadvantage of being tied to a set provider. It is therefore anticipated that product subscriptions will experience particularly tough market conditions.

INVESTIGATING THE PROBLEM USING BEHAVIOURAL SCIENCE

By recognising the impact of various promotional tactics on subscription uptake, it is possible to construct a picture of the most effective marketing interventions to drive acquisition. Furthermore, by comparing across industries, one can identify those industries which are most price sensitive, and those where benefit-based features would be most effective. As the RCTs were carried out in an online simulation using the Behaviourlab platform,[3] it was possible to control for the effects of exogenous factors such as branding and user experience or journey experience.

Pinpointing the impact of the subscription features on acquisition across categories will provide tailored strategies for subscription categories to maximise acquisition. However, it is not just about the proposition itself — to get customers onboard, the offer needs to be communicated. Therefore, the results will also elucidate on subscription features to highlight in communications with customers, ie those that are most likely to maximise the benefits to the provider of the given offer.

This study will measure the impact of price and promotional offers on purchase likelihood (acquisition) and Net Promoter Score (NPS ; retention). To decide which promotional tactics to test, the authors conducted desk research on subscriptions, identifying the most popular offers.

RESEARCH DESIGN

The researchers investigated the research questions using our Behaviourlab platform to conduct a series of online randomised control trials (RCTs) with immersive simulations that mimic real-world consumer decision environments. Behaviourlab circumvents the issues traditionally associated with real-life live trials (eg cost, time, reputational risk, limitations on test variants), while retaining the accuracy of the results. The online survey was conducted in November 2019 and comprised three sections: (1) an online RCT; (2) a behavioural survey; and (3) a demographic questionnaire. The latter element was included as the study sought to isolate the impact of features, independent of the demographics of the customer viewing them. In total, 1,384 UK consumers over the age of 18 took part in this study.

In the implementation of the fieldwork, each participant responded to one overall survey. Within the online RCT, each participant was exposed to three scenarios, therefore providing three data points in the analysis. The various levers were not handcuffed together — any participant could see between zero and six subscription benefits in each scenario. As a result, it was possible to understand potential interactions between subscription benefits in the investigation.

As mentioned, the RCT involved taking participants through a realistic simulation of the subscription purchase journey. Each participant was required to make three purchases for three different subscription products selected at random from the following six industries explored: food recipe boxes, supermarket delivery, health & beauty, music, gym membership, TV & film (see Table 1).

The propositions were all unbranded so that the effectiveness of different acquisition levers could be measured cleanly without the influence of branding. The subscription price was randomly varied from –40 per cent to +40 per cent of the current average market price. Six different sign-up benefits were also tested, which were randomly selected to be shown; participants could see no benefits because of this (see Figure 1 and Table 2). Upon reviewing each randomly generated subscription proposition, participants were required to indicate their likelihood to purchase and intent to advocate (ie NPS).

Alongside the RCT part of the survey, a behavioural questionnaire element was also included, as discussed previously. The behavioural questionnaire asked participants what subscriptions they either currently had or had previously had; the benefits offered by those subscriptions; and the date when they first subscribed to these subscriptions. This was to provide information on their subscription usage

Table 1: Categorisation of unbranded subscriptions which were tested during the RCT phase

Subscription type	Definition	Example industry	Example providers
Product	Provides customers with a physical product(s), usually delivered to their door at regular intervals	Food	Hello Fresh
			Mindful Chef
		Health & beauty	BirchBox
			BeautyPie
Service	Provides customers with unlimited use of a specific service for the duration they pay for	Delivery	Amazon Prime
			Tesco Delivery
		Gym membership	PureGym
			Fitness First
Content	Provides customers with unlimited access to premium online content for the duration they pay for	TV & film	Netflix
			Amazon Prime Video
		Music	Spotify
			Apple Music

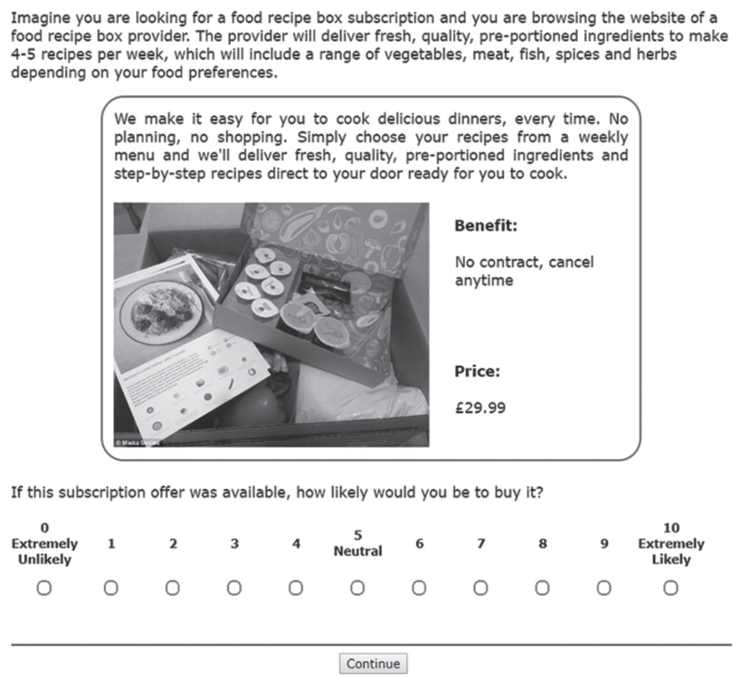


Figure 1: Example of task show to the participant during the RCT phase of the survey

habits, as a potential variable to be explored in the RCT analysis.

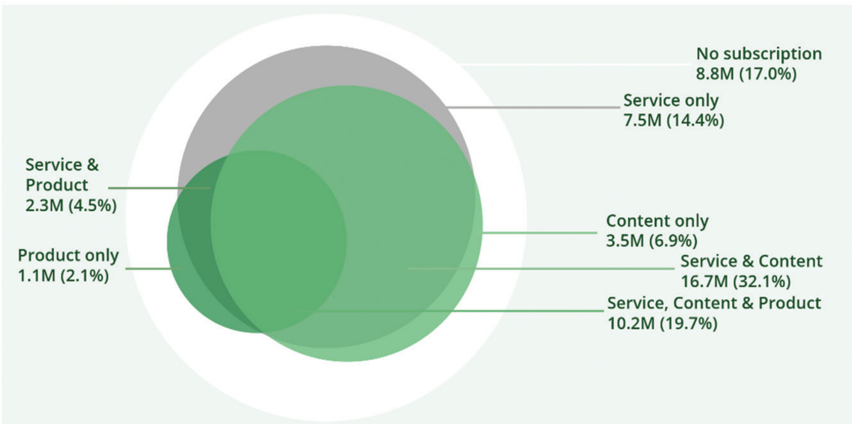
RESULTS

Market landscape

The research found high prevalence of subscriptions, with 83 per cent of the participants currently signed up to at least one subscription. Assuming a total UK adult population of 54 million,[4] this translates to about 45 million UK adults with at least one subscription. Figure 2 shows the results of the market landscaping, and estimated prevalence among UK adult subscribers. The most popular subscription

Table 2: Table of elements altered during the RCT trial

Attribute	Levels
Free trial for a month	On/Off
50 per cent off first two months	On/Off
No contract, cancel anytime	On/Off
Pause subscription or skip one order (You will not be charged when the subscription is paused or skipped)	On/Off
Referral scheme (Giving you one free month for recruiting a friend)	On/Off
Earn 5 loyalty points for subscribing each month that could be paid for subscription fees (50 loyalty points equal one month of subscription fee)	On/Off
Price	–40% to + 40% (increments of 10%)



Industry	Overall prevalence (%)	Annual growth rate (%)
TV & film	47	2
Music	33	2
Supermarket delivery	32	3
Gym	19	1
Health & beauty	10	1
Food recipe box	14	1

Figure 2: The market size and UK percentage of adult subscribers by subscription type

type was service, with 36.8m estimated UK adult subscribers (71 per cent). Content subscriptions were the next highest, with an estimated 32.2 million UK adult subscribers (62 per cent). Finally, product subscriptions struggle more with popularity, with only 15.4 million subscribers (30 per cent). The largest overlaps of ownership were in content and service — 32 per cent of UK adults have a subscription for both. The market landscaping suggests that product subscriptions are complementary subscription products rather than the gateway, as ownership of the category is most often combined with ownership of either a service or content subscription. In other words, product subscriptions are most likely to be taken up by those who have already bought into the concept of subscriptions.

Of the subscription industries explored, supermarket delivery services were found to have the largest net annual acquisition growth rate over the preceding 12 months (3 per cent — see Figure 2), while gym membership had the slowest growth rate (1 per cent). Identifying the acquisition growth rate is useful in understanding the changing shape of the subscription landscape. The low acquisition rate of product subscriptions is striking, with 1 per cent growth in customers taking health &

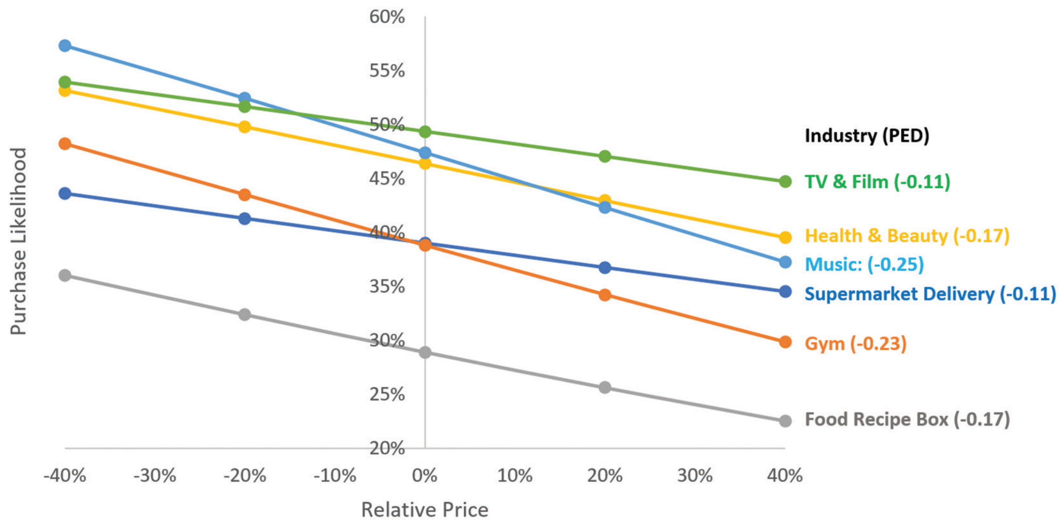


Figure 3: Price elasticity of demand in different subscription industries

beauty or food recipe box subscriptions, which is half the growth rate of content and service subscriptions.

This is not a case of health & beauty being penalised as a new entrant; indeed, younger industries typically grow at a faster rate as they have a larger chunk of the addressable market to gain, and so grow their share of the market. Perhaps one of the reasons that product subscriptions are flagging in growth is due to the lack of intrinsic demand. Many product subscriptions do not offer a unique product; rather, they are a readily available repackaged product. This is different from the offer of other subscription categories, particularly content subscriptions in which the offering is often exclusive to a given platform.

Beyond this, product subscriptions may struggle to offer the range and accessibility seen in content or service subscriptions. Once a product subscription has been delivered to the customer, the goods that the customer has are set. This contrasts with the often unlimited, on-demand nature of access to content services. This may well be a barrier to acquisition, with customers unwilling to be tied to a single provider without the freedom of choice and access.

Without a unique product, the value of product subscriptions relies on two elements: convenience and curation. The convenience of product subscriptions will be dampened by the fact that they are readily available products — the convenience is not in the sourcing, but rather in the passive nature of delivery to consumers' homes. If curation is done correctly, it could counteract the effect of a relatively limited product range, although this depends entirely on the provider's ability to understand and cater for its customers' preference/needs.

Price elasticity

The results from the experiment show that price is a dominant driver of choice, significantly affecting purchase likelihood across all tested industries. The researchers calculated the price elasticity of demand (percentage change in demand per 1 per cent increase in price) for each industry, finding music and gym to be the most price elastic (–0.25 and –0.23 respectively; Figure 3). Supermarket delivery, and TV & film were the least price elastic (both –0.11). While the absolute level of the

Table 3: Impact of subscription benefits on purchase likelihood (acquisition) across industries

	Delivery (%)	**Gym (%)**	**Food recipe box (%)**	**Health & beauty (%)**	**Music (%)**	**TV & film (%)**	**Across industry (%)**
40% price reduction	*4.6*	*9.4*	*7.1*	*6.8*	*9.9*	*4.6*	*7.1*
Free trial	7.7	–1.2	1.1	–6.5	–2.3	5.7	0.8
Initial discount	–1.9	–4.1	5.6	–6.9	–3.2	4.3	–1.0
Loyalty points	–3.2	–4.8	5.7	–0.2	3.1	–1.0	–0.1
No contract	–1.3	–3.0	6.5	–3.6	–2.6	*12.1*	1.3
Pause or skip	2.8	–0.7	*6.9*	–5.5	–2.5	–2.6	–0.3
Referral scheme	0.7	0.0	3.8	–3.0	–0.2	1.1	0.4

Numbers in italics represent statistical significance ($p < 0.1$)

elasticity would have obviously been influenced by the artificial context of the test environment, the value of these results lies in the relativistic comparison between the different industries. In general, the more a product/service is deemed a necessity, the lower the price elasticity; in contrast, luxury items would be more sensitive to price. This may explain why gym memberships and music subscriptions have higher price elasticity as they may be deemed as more luxury goods. For example, with free music readily available, purchasing a subscription in place of a freemium model could be seen as something of a luxury.

Acquisition and retention levers

The influence of the subscription features was analysed using an ordinal logit regression, with the dependant variable being purchase likelihood. The analysis reveals price to be the only lever to have a significant impact on purchase likelihood across categories (Table 3). However, there is variation within categories; in TV & film 'no contract' also has a significant effect on purchase likelihood, while 'pause or skip' significantly improves acquisition for food recipe boxes. This provides support for tailored subscription mechanics across industries.

As seen in the population figures, content and service subscription are more widespread than product subscriptions, with around half (47 per cent) of UK adults having a TV & film subscription. To really understand what this is saying, one must examine the nature of TV & film subscriptions. Most are fixed contract, which in turn results in better reported retention rates. However, the research showed fixed contract is not necessarily required for popularity; disruptor brands such as Netflix and Amazon Video actually contribute disproportionately to the success of content and service subscriptions, despite their no-contract format.

It is notable that in the market landscaping, the greatest acquisition growth was found for delivery service subscriptions (3 per cent). Amazon Prime (the leading delivery service subscription) itself also offers a rolling contract rather than fixed contract. Figures reported in October 2018 indicate that an estimated 26 per cent of UK adults are Amazon Prime members.[5] When reported, this represented a ten-percentage point growth in around a year.[6]

NPS is a widely accepted predictive metric of growth, loyalty and retention.[7] The RCT found the same benefits that drove purchase also push NPS, with the only lever affecting all industries being price (Table 4). Alongside price changes, 'no contract' was a significant driver of NPS for TV & film and for food recipe boxes. It is possible that one advantage of 'no contract' is that it removes scheduled prompts regarding the contract itself, such as renewal notices.

Table 4: Impact of subscription benefits on NPS (retention) across industries

	Delivery (%)	Gym (%)	Food recipe box (%)	Health & beauty (%)	Music (%)	TV & film (%)	Across industry (%)
40% price reduction	*8.1*	*13.0*	*10.8*	*12.0*	*19.1*	*7.2*	*11.7*
Free trial	12.0	–11.1	7.4	–6.8	0.6	7.8	1.6
Initial discount	0.3	*–16.3*	*9.2*	–4.6	–6.9	5.2	–2.2
Loyalty points	3.7	–13.0	*9.7*	3.8	10.6	–8.2	1.1
No contract	–0.7	–0.7	*9.5*	–5.4	0.0	*20.7*	3.9
Pause or skip	6.0	–8.9	*10.5*	–9.2	–1.5	–8.3	–1.9
Referral scheme	3.5	–9.6	*7.5*	–9.2	1.5	3.8	–0.4

Numbers in italics represent statistical significance ($p < 0.1$)

The research found food recipe boxes to be a challenging category, having lower uptake and slower growth. Food recipe boxes offer some of the advantages of content subscriptions; for example, there are usually a variety of options on offer, giving the customer greater control over the products consumed. Not only this, but the consumption of the product is also regular, perhaps reducing that visceral impact of a new delivery serving as a reminder that a payment will be taken. Food recipe boxes appear to offer one of the largest opportunities in terms of viable promotion tactics — the NPS of food recipe boxes is affected by a wider variety of levers than other subscription industries; specifically, 'initial discount', 'no contract', 'loyalty points' and 'pause or skip' all significantly increase NPS.

Not all levers were positively received; for example, 'initial discount' has a significant negative effect on NPS for gym memberships. It could be that given the price range in the industry, such discounts serve to highlight the profit margins during non-discounted membership. This chimes with the higher price elasticity of the industry.

CONCLUSION

This study shows that the subscription market is highly price-sensitive. As a result, few other promotional tactics have been shown to drive acquisition. The only additional significant levers were 'no contract' on TV & film subscriptions and 'pause or skip' on food recipe boxes. These levers also drive retention (NPS), alongside 'no contract', 'loyalty points' and 'initial discount' for food recipe boxes. For brands, the study offers a number of implications, as discussed below.

Acquisition drivers needs to demonstrate value

Given the prominence of price in the subscription market, it is no surprise to see those promotion features offering tangible monetary value prevail in driving acquisition. While 'free trial' is close to significance in boosting acquisition rate in supermarket delivery in the RCTs, anecdotal evidence from other industries such as content subscription has also implicated its impact. Alternatively, brands might consider offering an 'initial discount', as this showed leverage on retention for food recipe boxes in the study.

As ever, it is paramount for brands to carry out customer lifetime value (CLV) calculations,[8] robustly evaluating each of these tactics through the lens of acquisition costs (eg promotion, discount) and retention rate, and to make a decision on which tactic to adopt based on the expected value. Indeed, the approach would also inform any decision on the depth of discount to apply within a promotion tactic.

No contract should be central in any subscription business model

In the research, 'no contract' has shown to drive acquisition and retention in TV & film and is close to significance in acquisition for food delivery boxes. Beyond this 'no contract' also increases retention for food delivery boxes. In practice, disrupter brands such as Netflix and Spotify, which offer no-contract subscriptions, continue to perform strongly against incumbents.[9]

Overall, for marketers, it is obvious that highlighting the lack of commitment through no-contract offerings would provide an effective boost in acquisition. The hope is that this should tip the balance when it comes to the CLV evaluation against the supposedly higher churn. Perhaps counterintuitively, there is also rationale and evidence to suggest 'no contract' may not be detrimental in retention as it removes the regular prompting of the contract itself,[10] therefore enhancing its potential as a viable model for subscription businesses.

Differentiation is key for product subscriptions

This research was conducted before the COVID-19 pandemic, and since then there has been a surge in demand for product subscriptions. Subscription companies, however, remain cautious about how well these customers can be retained once the pandemic subsides. Looking at the acquisition growth of six different industries within the three subscription categories, the most striking finding is the low acquisition volume of product subscriptions. The 1 per cent annual growth in customers taking out either health & beauty or food recipe box subscriptions is half the growth rate of content and service subscriptions. One explanation for this observation may be the lack of intrinsic demand and underlying that, the redundancy of purchase destinations and the substitutability of the product itself. For instance, many of the products offered (eg food, grooming goods), or their close equivalents, could also be bought from other retail outlets. A unique selling point is as important as ever. The innovation could either come from the service/product itself or in the customer journey/experience. With the ever-increasing options available to consumers, the inertia of being in a subscription alone will not be enough to retain their business.

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