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Bundling Digital Journalism: Exploring the Potential of Subscription-Based Product Bundles

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Abstract

This study explores the potential of cross-publisher bundled offers as a strategy for increasing subscription sales in digital journalism. While innovative forms of bundling are an integral part of media distribution in music (e.g., Spotify) and film (e.g., Netflix), their adoption in digital journalism has been limited, despite research showing that bundled access to products can increase consumers' willingness to pay, especially in younger target groups. Against this background, we conduct a choice-based conjoint analysis using data from a representative survey of the German online population ($n = 1,542$). Results show that bundling digital journalism has the potential to raise publisher revenues and subscription sales in digital markets. In particular, they highlight that a comprehensive, cross-publisher bundled offer, available at a fixed monthly rate, has the potential to stimulate digital journalism sales among different consumer groups in a relatively balanced way, including those who are typically more reluctant towards journalism. These findings align with the principles of information goods economics, which posit that maximising the size of digital content bundles often tends to be the most profitable distribution strategy. However, it is crucial to examine these findings in the context of the potential negative effects associated with this emerging business model in digital journalism, such as the cannibalisation of print subscriptions, diminished brand identification, and a possible imbalanced distribution of revenues.

Keywords

bundling; choice-based conjoint analysis; collaborative platforms; digital journalism; innovation; market expansion

1. Introduction

In the last couple of years, many news organisations worldwide have adopted reader revenue strategies and novel subscription-based models (Myllylahti, 2018; Olsen et al., 2021). Nevertheless, the digital journalism market remains challenging. Recent studies highlight that large national media brands dominate subscription penetration, while digital subscription strategies tend to remain less effective for smaller publishers (Newman et al., 2023). Digital subscriptions only account for a small proportion of total reader revenue in the US and Germany (Bundesverband Digitalpublisher und Zeitungsverleger [BDZV], 2022; Chyi & Ng, 2020).

According to the *Reuters Digital News Report 2023*, most people have not paid for digital journalism in the last year. Short-term and non-subscribers tend to find paying full subscription prices unattractive and are concerned about being restricted to a single news brand (Newman & Robertson, 2023). The trend among subscribers to pay for online news is levelling off, mainly due to high inflation rates, resulting in rising customer churn (Newman & Robertson, 2023). Notably, the number of current subscribers for digital news in Germany has actually declined (Deloitte, 2023). Increasing prices, combined with a decrease in readership, are leading to concerns about a growing knowledge gap in the population between subscribers and non-subscribers (Olsen et al., 2021). Revenue strategies that depend primarily on reader payments may limit access to quality journalism for individuals who do not have the means or prefer not to subscribe, ultimately leading to a small group of affluent and highly educated individuals benefiting from it (Benson, 2019; Usher, 2021).

At the same time, news publishers rely heavily on third-party digital platforms to distribute content, expand audiences, and attract paying customers. This dependence results in an imbalanced power dynamic, where algorithms wield significant influence over content presentation and publisher decisions (Ekström & Westlund, 2019). Notably, the removal of news content in Australia by platforms such as Google and Facebook due to the News Media Bargaining Code highlights these power dynamics (Bossio et al., 2022). The emergence of artificial intelligence systems exacerbates platform control, affecting both news distribution and production (Simon, 2022) and aligns with the notion of "infrastructure capture" (Nechushtai, 2018, p. 1045).

With other revenue models struggling, cross-publisher bundles appear to offer a novel avenue for funding digital journalism (Buschow & Wellbrock, 2023). In related media markets, services such as Spotify and Netflix have become prime access points for consuming audio and video content (Hennig-Thurau & Houston, 2019; Prey et al., 2022). They rely on a business model which bundles media content from different providers into one comprehensive package for a fixed monthly subscription. The price of this subscription is typically lower than buying each product separately. A crucial factor in the success of these offers is how bundling mitigates the dispersion in consumer willingness to pay (Bakos & Brynjolfsson, 1999). Prior research on the shift to music streaming services indicates that their effect on industry revenue is positive or, at least, net-neutral, rather than resulting in the displacement of individual products (Aguiar & Waldfogel, 2018; Wlömert & Papies, 2016).

Instead of each publisher trying to compete individually in the market, digital journalism can potentially increase subscription sales and gain more independence from digital platforms by adopting collaborative platforms with cross-publisher content bundling strategies. When those models are introduced in the journalistic media industry, publishers gain control over crucial aspects currently dominated by big tech platforms, including access, revenue distribution, and user data (Wellbrock, 2020b). Notably, such models

are more responsive to consumer preferences, as demonstrated in several studies (e.g., Behre et al., 2023; Kammer et al., 2015; Newman et al., 2023).

Examples of current journalism platforms that fulfil the basic characteristics of comprehensive bundles include Readly and Apple News+. However, these platforms still retain a significant share of subscription revenue, with publishers earning stakes based on reading frequency and volume (Fleischer, 2021; Rashidian et al., 2020). Previous research suggests that this revenue-sharing model is why many German publishers remain cautious about the economic potential of journalistic platforms (Weber et al., 2021).

Initial empirical results point towards the market appeal of these models (Wellbrock, 2020a). However, small sample sizes and methodological constraints have hindered the analysis of different consumer groups and broader market effects, such as the potential cannibalisation of print products. Against this background, we propose the following research question:

> RQ: How does the bundling of digital journalistic content from several publishers affect revenues and subscriptions?

To explore our RQ, we analyse consumer preferences for a range of journalistic bundles, from individual subscription offers (as the current dominant distribution strategy) to different hypothetical cross-publisher bundles. We conduct a choice-based conjoint (CBC) analysis to estimate the potential revenues and subscription sales of several text-based news products based on consumer preferences, including different bundled products. Our study involves a representative survey of 1,542 online users in Germany.

This article is structured as follows: In our literature review, we initially direct our attention to the preferences of current and potential subscribers of digital journalism with regard to cross-publisher bundles. We next introduce the theory of predictive value of bundling as proposed by Bakos and Brynjolfsson (1999), revealing the potential benefits of bundling strategies. Their findings serve as a crucial basis for the development of our hypotheses concerning the digital journalism market. Then, we describe the methodology of our study and the sample of the CBC. In the findings section, we explore the effectiveness of bundling strategies in enhancing the overall potential of digital journalism and address the challenges that journalistic platforms may face when implementing bundling strategies. This discussion is embedded in our conclusion.

2. Literature Review and Theory

2.1. Preferences for Cross-Publisher Bundles

Recent market data from the *Reuters Institute Digital News Report 2023* shows that digital news consumers are increasingly opting for multiple subscriptions (Newman et al., 2023). This shift can be attributed to the introduction of cross-publisher bundles in digital journalism, exemplified by offerings such as Apple News+ in the US, Canada, UK, and Australia. This is linked to the findings of Newman et al. (2019), which show that half of all news consumers access content from more than four sources on a weekly basis. Existing and potential subscribers have reservations about being tied to a single news outlet (Newman & Robertson, 2023). They express dissatisfaction with the perceived lack of diversity and want access to multiple news sources at a price significantly lower than the combined cost of multiple individual subscriptions. The findings of Behre

et al. (2023) confirm these results for Germany and suggest that access to multiple news websites could increase willingness to pay among German users who do not currently pay for digital journalism.

It is imperative to consider the preferences of young people, as news outlets struggle to persuade them to pay because they perceive the prices of digital journalism as too high (Borchgrevink-Brækhus & Moe, 2023; Groot Kormelink, 2023). Younger audiences predominantly consume news via social media platforms (Newman et al., 2023) and, given their familiarity with platform logics, some of them show a strong inclination towards cross-publisher offerings (Borchgrevink-Brækhus & Moe, 2023; Kammer et al., 2015; Schwaiger et al., 2022). They prefer access to multiple perspectives rather than limiting themselves to a single source, opting instead for a mix of individual media brands tailored to their individual tastes (Borchgrevink-Brækhus & Moe, 2023). Studies highlight generational differences: Older audiences tend to gravitate towards broad journalistic content, while younger audiences tend to gravitate towards personalised offerings (Kammer et al., 2015). Wadbring and Bergström (2021) provide further evidence that, in the context of journalism, younger audiences have lower levels of brand loyalty than older audiences.

Despite these findings, current research falls short when analysing the market potential of cross-publisher bundles in journalism. This research gap can be attributed to the relatively limited attention such platforms have received within media and journalism studies (Buschow & Wellbrock, 2023). A study by Buschow and Wellbrock (2019) suggests that German online users show a strong tendency to subscribe to cross-publisher journalistic platforms, often referred to as "Spotify for News," rather than subscribing to individual news outlets. However, this study is limited by a small sample size, which does not allow for the analysis of certain consumer groups in detail. A follow-up study by Buschow and Wellbrock (2023) provides empirical insights from focus group discussions that identify key attributes of journalism platforms. These findings indicate that respondents expect them to have similar characteristics to those of popular platforms in related media markets (e.g., Spotify), such as the desire for access to multiple subscriptions at a single price.

In the journalism industry, some companies are already experimenting with such cross-publisher bundles. Apple News+ offers a selection of magazines and newspapers in a personalised app for Apple hardware such as the iPhone and iPad, making it particularly attractive to younger demographics in the US. Newman and Robertson (2023) suggest that nearly 30% of all subscribers under the age of 35 are paying for Apple News+ in the US compared to only 13% of older age groups, indicating its appeal to younger users. In Germany, Apple News+ is currently unavailable. However, the model raises concerns about the concentration of bargaining and publishing power in the hands of one market-dominating digital player, which potentially hinders non-discriminatory platform access for publishers.

The Swedish company Readly claims to be the leading platform for digital magazine consumption in Europe, offering a selection of national and regional dailies. However, it only provides access to a handful of premium-quality newspapers. In Germany, adoption thus remains relatively low, with only 2% of respondents claiming to use it (Behre et al., 2023). The platform mainly replicates print magazines and falls short of offering personalised features (Fleischer, 2021). Both Readly and Apple News+ claim a significant share of revenue (30 and 50%) from publishers (Fleischer, 2021; Rashidian et al., 2020).

Norwegian media company Schibsted provides Full Tilgang, a bundle that aggregates a range of local and national newspapers, podcasts, and videos at a lower price than if they were purchased individually (Newman

et al., 2023). However, Full Tilgang only includes journalistic content owned by Schibsted, while current studies point towards the increased market potential of bundling content from different publishers.

Unlike northern European countries and the US, where bundled offers have proven more successful (Newman et al., 2023; Newman & Robertson, 2023), Germany appears to be trailing behind in adopting this model (Behre et al., 2023). The reason for this is that current bundled offers only provide a few German dailies, because many publishers tend to recognise insufficient (economic) potential (Weber et al., 2021), including concerns regarding revenue distribution, a possible lack of brand identification and a loss of direct access to user data (Wellbrock, 2020b). Given that German consumers share a preference for cross-publisher offerings, our research seeks to empirically analyse the potential for market expansion among German publishers.

While northern European countries such as Norway have public policies that subsidise journalism as a public good (Andersson, 2023), the US has a highly commercialised media system with minimal public broadcasting and almost no subsidies for journalism (Humprecht et al., 2022). In Germany, the media system is characterised by a private press sector with indirect subsidies and strong public service media (Horz-Ishak & Thomass, 2021) that could potentially position it as a supporting entity for German publishers to build collaborative platforms (Wellbrock, 2020b).

2.2. Theory of Predictive Value of Bundling

Bundling is defined as selling multiple goods in one package (Adams & Yellen, 1976). Since the willingness to pay for a good differs for each individual consumer, a valuable strategy is price differentiation (also often referred to as price discrimination). An effective approach is second-degree price differentiation (Pigou, 2017), where goods are offered in various forms—such as different versions or bundles—to encourage self-selection by customers.

Stigler (1963), as well as Adams and Yellen (1976), have suggested the advantages of bundling if products' valuations are negatively correlated. Schmalensee (1984) has shown that the bundling of two goods can be more profitable than selling the products individually, even if the product valuations are positively correlated. These authors enabled the groundbreaking research by Bakos and Brynjolfsson (1998, 1999): If bundling can reduce differences in consumer willingness to pay, it enables the seller to capture larger parts of consumer welfare with one price (Bakos & Brynjolfsson, 1998; Shapiro & Varian, 1998).

In general, this principle is based on the law of large numbers and is known as the "Predictive Value of Bundling" (Bakos & Brynjolfsson, 1999). Assuming that there are many different goods in a specific market and consumer preferences are sufficiently independent across these goods, it may be beneficial to bundle as many goods as possible, because by increasing the bundle size, consumer willingness to pay will become more similar across consumers.

When Netflix, for example, offers romantic comedies and science fiction content, we can assume that some consumers prefer one genre over the other (Wellbrock, 2020a). The demand for each individual product would therefore look like that seen in Figure 1(a). When bundling the two goods, demand becomes less dispersed— there are now fewer consumers who dislike both types of content and fewer who like both types of content

(as in Figure 1(b)). This means that demand becomes more inelastic at the extremes and more elastic around the middle of the demand curve, as seen in Figure 1.

If all the available types of content were bundled together, the aggregated preferences or willingness to pay would align even further across consumers. The broader the range of content in the bundle and the greater the number of consumers with sufficiently heterogeneous preferences, the more the demand curve would resemble that seen in Figure 1(c). There would only be a few consumers with a strong or weak preference for all the components of the bundle. Most consumers fall around the average range.

Netflix, Spotify, and others can thus essentially charge a unified price for the entire bundle across all consumers and capture significant portions of willingness to pay or consumer surplus, avoiding the costly identification of consumer segments (third-degree price discrimination).

However, in the case of information goods, adding a good to the bundle has zero marginal costs, unlike many services and physical goods (Bakos & Brynjolfsson, 1999). Whether a digital newspaper subscription includes comprehensive content or only a portion is, in terms of cost, irrelevant to the provider. This is a strong argument for creating bundles that are as large as possible in the realm of digital journalism, especially across publishers. Since willingness to pay would align across consumers, the revenue-maximising price could also be below the optimal price of individual offers.

Bundling is also a common strategy for selling journalism. For example, *The Economist* bundles articles related to the US and Europe to reduce variability in customer willingness to pay (Shapiro & Varian, 1998). In contrast, selling articles individually tends to result in lower revenue than offering them as bundled packages. This result is reinforced by Stahl et al. (2004), who found that combining digital journalistic content into bundles generates more revenue than selling articles separately.

The New York Times (*NYT*) was one of the first newspapers that experimented with bundles wherein print subscribers get free access to their online newspaper (Pattabhiramaiah et al., 2019). By now, the *NYT* has expanded its strategy by bundling digital content, as print subscriptions are less important to the company's success (*NYT*, 2020b): Currently, it offers a subscription of digital journalistic and service content in an
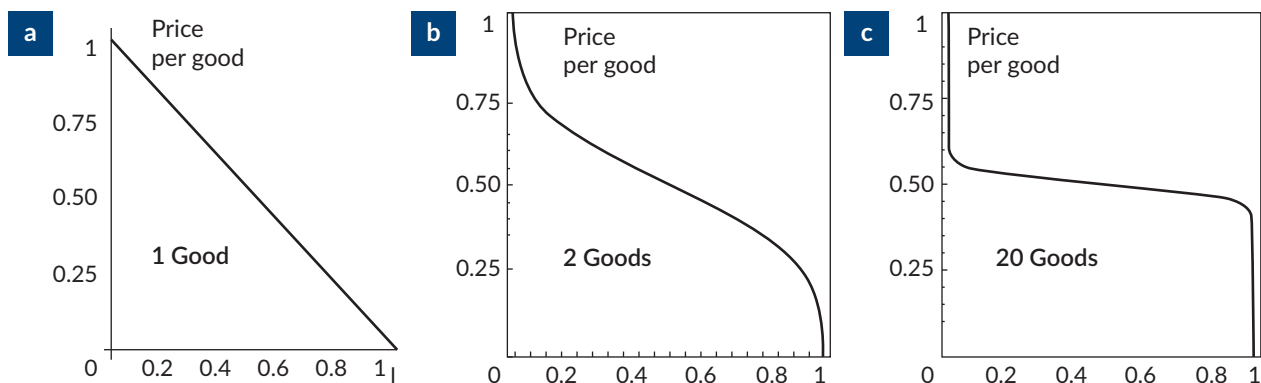
Figure 1. Demand for bundles of 1 (a), 2 (b), and 20 (c) information goods, with independent and identically distributed valuations uniformly distributed in (0,1; linear demand case). Source: Bakos and Brynjolfsson (1999, p. 1617).

"all-inclusive" bundle for one price, including news articles, games, cooking tips, product evaluations through Wirecutter, and sports coverage under The Athletic (Newman et al., 2023; *NYT*, 2023b).

Current market data and the financial figures for 2023 reported by the *NYT* show the appeal of offering subscriptions for multi-products. The news outlet has extended its lead position and now has 36% of total US digital subscribers, ahead of both *The Washington Post* and *The Wall Street Journal* (Newman et al., 2023). In the second quarter of 2023, more than half of the newly acquired digital subscribers embraced the all-access bundle (*NYT*, 2023a). Additionally, 38% of digital-only subscribers opted for at least two different products including the all-access bundle in the third quarter (Q3) of the fiscal year (*NYT*, 2023b). The *NYT* reports that the increase in digital-only subscription revenue in Q3 is driven by higher bundled and multi-product revenues, as well as an increase in other individual-product subscription revenue. Given its "winner-takes-most" status (Newman et al., 2023, p. 18), the success of the *NYT* may serve as an indicator of the broader market dynamics associated with bundling.

What sets this strategy apart from the previously discussed ones is its approach of bundling a wide range of genres and interests that also go beyond journalism. It is important to note that its appeal is also likely connected to the "welcome offer," which allows users to subscribe to the bundle for a lower price for a limited time. This strategy of bundling is an internal offering specific to the *NYT*. We would suggest that other news organisations consider adopting similar strategies, but by establishing collaborative cross-publisher offerings that provide access to an even more diverse range of newspapers, magazines, and other potentially valuable services.

Our research builds on these foundations and underpins our central hypothesis: Multi-publisher bundled offerings could generate higher revenue for news outlets, unlike the prevailing individual subscription products in the contemporary market. This leads to the following hypotheses:

> **H1**: Cross-publisher bundles lead to an overall increase in revenue across the German overall (including print products) and digital market (only digital products, including e-paper).

> **H2**: Cross-publisher bundles lead to an overall increase in subscription sales across the German overall (including print products) and digital market (only digital products, including e-paper).

To test these hypotheses, we need to measure consumer preferences for a set of existing and hypothetical journalistic content bundles. We examine the hypotheses based on Wellbrock (2020a) through market simulations, a common technique within CBC that allows for the estimation of demand curves for different products in relation to competing products.

3. Method

Conjoint analysis is a commonly used method in market research to estimate the share of respondent preferences (Dobney et al., 2017). In communication studies, it is established for simulating multidimensional processes of decision-making (Pelzer, 2019). The method presents respondents with a variety of product versions, each characterised by distinctive attributes and systematically different attribute levels. It therefore allows for the simulation of real-life market decisions (Miller et al., 2011). Attribute ratings

within conjoint analysis exhibit higher predictive validity than choices in which attributes are assessed independently (Sattler & Hensel-Börner, 2007). For our research, we have applied CBC analysis (Louviere & Woodworth, 1983). Unlike conventional methodologies, CBC quantifies actual choices made by respondents rather than simply classifying alternatives.

Our empirical study involves 1,542 participants, who were selected to represent the German online population based on their activity over the previous three months. In June 2022, the market research company Bilendi recruited participants from its actively managed online access panel. To obtain a representative sample, we used a quota sampling approach, which is a non-probability strategy. We considered demographics such as age, gender, formal education, net household income, and geographical region to ensure a diverse and representative sample. Participants in our survey were aged from 16 to 69. Our resulting sample should be similar to data obtained using probability sampling methods (Fowler, 2002).

We used Sawtooth software to conduct the CBC analysis. Our survey process began with the collection of demographic information from the participants. Following this, the respondents were surveyed about their intention to pay for digital journalism. Nineteen per cent indicated a high or very high likelihood of paying, whereas 56% said it was unlikely or very unlikely that they would pay. We then proceeded to the CBC.

CBC perceives a product as possessing multiple attributes, each distinguished by different attribute levels (Hair et al., 2010). Their perception is understood to have a significant impact on purchasing decisions. Each characteristic holds different partial utility values for a respondent. These values represent the preference weight for each attribute, while their combination allows us to describe a respondent's preference structure. CBC also allows for the classification of attribute importance by computing hierarchical Bayesian estimation. In our study, we have selected four different attributes: price per month, format, bundle size, and access (see Table 1). These affect willingness to pay for journalism, as current research shows.

Price is considered the most important attribute that affects willingness to pay for journalism (Borchgrevink-Brækhus & Moe, 2023; Groot Kormelink, 2023). For digital products, we have chosen a price scale that ranges from €4.95 to €29.95 per month, divided into five tiers. For print products, the scale ranges from €29.95 to €59.95 per month, divided into ten tiers. These price scales are based on 2021 market data for Germany (BDZV, 2022).

The attribute "format" describes the medium through which content is delivered to users. In a conjoint analysis by Berger et al. (2015) it is the second most important attribute when deciding to subscribe to a news outlet. We distinguish between printed paper, website, app, and e-paper as potential formats (attribute levels).

"Bundle size" discerns between individual products and bundles. One of the variants considered includes a comprehensive bundle, providing users with access to text-based content from various national and regional publishers (a "Spotify for News"; Wellbrock, 2020a). Other product versions include bundles that present content from all regional or national publishers, or a combination of a single regional and national title, enabling us to determine whether smaller bundles also positively affect user perceptions. Current research shows that large bundles which allow access to several publishers can enhance willingness to pay for digital journalism, especially for younger audiences (e.g., Behre et al., 2023; Borchgrevink-Brækhus & Moe, 2023; Kammer et al., 2015).

Table 1. Attributes and their levels, surveyed in CBC.

Attributes	Levels
Format	Print Website App e-paper Website + App + e-paper
Bundle size	Regional single product National single product Regional + national product Regional bundle National bundle Comprehensive bundle
Price per month	€4.95–€29.95 €29.95–€59.95
Access	Centralised Decentralised

The term "access" refers to the two ways—centralised and decentralised—in which content can be reached by users. Centralised access involves the delivery of content through a single platform. A decentralised approach allows users to bypass publisher paywalls with a single sign-on solution. They could be a key feature for publishers, as they come at a much lower cost than centralised platforms and the content remains in the publishers' brand environments (Wellbrock, 2020a).

In our survey, we presented respondents with a text describing various attributes and their corresponding levels. We then asked them to rank four attributes (as shown in Table 1) according to their perceived importance. They were then presented with a choice of five different journalistic products and given the opportunity to abstain, all randomly selected. The specific question they were asked was: "Given this choice of journalistic products, which one would you choose to subscribe to?" Figure 2 shows a sample set of choices, including different bundle options and individual products. Respondents made their choices by clicking on their preferred options, with the option of hovering the mouse over them for additional information about the attributes. Respondents were presented with 26 sets of choices.

The utilities derived from respondents' choices were used to evaluate how attribute levels impact market share in simulated market scenarios. These simulations allow us to predict respondent behaviour in various market

Figure 2. Exemplary presentation of the possibilities of choice in CBC.

conditions where predefined products, based on current market data (BDZV, 2022), are in play. For each respondent's product profile, a total utility was computed by summing the utilities of the attribute levels associated with that product. We opted for the randomised first-choice method in these simulations, as it has been shown to be effective when compared to other methods using Sawtooth software (Sawtooth, 2023a). The choices of the respondents were combined to estimate the market share for each product profile.

By adjusting the attribute levels of product profiles, different market scenarios were simulated to understand how changes in products or the introduction of new ones might impact market share. Market share was calculated by determining the ratio of respondents who chose a specific product to the total number of respondents (Hal Dean, 2004).

Conducting market simulations allows us to explore the impact on revenue and subscription sales if a comprehensive product bundle (encompassing regional and national content, website, app, e-paper, and centralised format) was introduced to the entire German journalistic market (including print products) and the digital market (excluding print products). Additionally, the potential effect of cannibalisation on print products was approximated by examining the results of these market simulations (Green & Krieger, 1989).

4. Results

Price per month emerged as the most influential factor, followed by format, bundle size, and access (Table 2). These results are consistent with the research already presented, and further indicate the importance of bundle size and the relative unimportance of access, whether centralised or decentralised.

Table 2. Attribute's importance when purchasing journalistic products.

Attribute	Value	Standard error	Lower 95% CI	Upper 95% CI
Price per month	47.12	0.33	46.48	47.76
Format	28.15	0.3	27.56	28.73
Bundle size	20.78	0.23	20.33	21.23
Access	3.95	0.08	3.79	4.12

Note: $n = 1,542$.

Table 3 illustrates respondents' relative preferences for different bundle sizes. In general, bundles tend to offer more value to consumers than individual products, as individual products receive the lowest ratings, both for regional and national titles.

Based on the data analysis, it appears that respondents have a stronger preference for the comprehensive bundle than other levels of the attribute. This conclusion is supported by the non-overlapping confidence intervals of the comprehensive bundle when compared to other bundle sizes, as this suggests a statistically significant difference in preferences for the comprehensive bundle ($\alpha = 0.05$; Sawtooth, 2023b).

Additionally, the data indicates a significant difference between the combination of a single bundle of national and regional content and other bundles or single products. These findings provide evidence that respondents prefer the combination of national and regional content, even though they receive less overall content than in the alternatives.

Table 3. Partial utility values of the attribute "bundle size."

Bundle size	Partial Utility value	standard error	Lower 95% CI	Upper 95% CI
Comprehensive bundle	30.51	0.8	28.94	32.08
One national + one regional newspaper	11.45	0.55	10.37	12.53
Bundle of national newspapers	2.73	0.63	1.49	3.96
Bundle of regional newspaper	0.54	0.5	−0.45	1.53
One regional newspaper	−21.92	0.75	−23.39	−20.45
One national newspaper	−23.31	0.6	−24.48	−22.13

It remains, however, inconclusive as to whether respondents exhibit a stronger preference for the national bundle over the regional bundle, as their respective confidence intervals overlap.

Market simulations were applied in order to test the hypotheses. The market simulations were conducted using the prices for existing products (BZDV, 2022) and an optimal price point of €9.95 for the comprehensive bundle, as recommended by the CBC. We projected the preferences exhibited by our sample onto the entire 2021 German online population of 66.6 million (ARD/ZDF-Forschungskommission, 2021).

In contrast to actual market data (BDZV, 2022), the CBC method exhibits a proclivity towards overestimating the total revenues and the demand for digital journalism in Germany. Even though such overestimations are acknowledged limitations of conjoint analysis (Sichtmann et al., 2011), these overestimations are expected to be consistently proportional across all the surveyed groups and products. Credible conclusions can therefore only be drawn from relative differences.

Table 4 shows the impact of introducing a comprehensive bundle in the German digital and the overall market. Despite the comprehensive bundle having a lower price than existing digital products, the market simulation reveals an overall increase in digital revenue. The revenue in the overall market remains stable, with only approximately 10% of current print subscribers switching to the comprehensive bundle, meaning that publisher concerns about a substantial decline in print subscribers seem unfounded. The market expansion induced by the cross-publisher bundle would offset losses in the print market.

In both estimations, cross-publisher bundles account for around 40% of total revenues. The combination of lower prices and access to content from multiple publishers is appealing to consumers, driving market

Table 4. Adding a comprehensive bundle in market simulations.

Market simulations	Digital market	Overall market
Monthly revenue (current market situation)	€432.5 million	€566 million
Monthly revenue + platform	€467.4 million	€566.7 million
Revenue share of platform	43%	35%
Subscription share of platform	62%	58%
Increase in revenue	+10%	+0.12%
Increase in subscriptions	+41%	+37%

Note: $n = 1,542$.

expansion and offering revenue growth potential. These findings remain consistent even when access is provided through a decentralised system, such as a single sign-on model.

These findings partly support H1, as the introduction of a comprehensive bundle would increase the revenue by 10% in the digital market and yield stable revenue in the overall market. H2 is fully supported, as subscription sales substantially increase in both markets.

Remarkably, this market expansion is almost evenly distributed across different population groups. Table 5 shows the effects on different population groups who usually prefer to consume news on platforms and have a low willingness to pay for digital journalism.

Our market simulations show a remarkable increase in subscription sales among groups of young people, people living in rural areas, and people with lower levels of education, political interest, and trust in the media. In the simulation, subscription sales for these groups increase by 33% to 40% in both the digital and total markets when compared to today's mainly single-publisher offerings (see Table 5).

Table 5. Impact on subscriptions for selected population groups as a result of including a comprehensive bundle.

Population group	Change in subscriptions due to platform (current market)	Change in subscriptions due to platform (digital market)
Total sample	+41%	+37%
16 to 29 years old	+34%	+36%
Rural population	+36%	+42%
Low formal school education	+33%	+38%
Low political interest	+35%	+36%
Low trust in media	+37%	+38%

Note: $n = 1,542$.

5. Discussion and Conclusion

All in all, the results of the CBC analysis confirm that bundling different publishers and formats likely has a positive impact on the digital market revenue and stabilises the overall revenue. The concept of a comprehensive bundle that includes both national and regional content seems to appeal most to consumers. This bundle shares similarities with the presented models, especially in its ability to provide access to multiple publishers with varying content, access types, and bundling options through a single subscription. However, it is crucial to highlight that our comprehensive approach differs from these existing models in two significant ways. First, we propose a collaborative product within the journalistic media industry itself, without relying on a dominant platform company like Apple. Second, the bundle aims to function as a cross-publisher solution, enabling users to access a wide array of offerings from different news companies. Such models, built by the publishers themselves, could be one further promising way to diversify revenue streams (Olsen et al., 2021).

The current focus of news outlets on a financially privileged, and highly educated elite that can pay for digital journalism as well as increasing prices and shrinking audiences, raises concerns about a growing

knowledge gap (Benson, 2019; Olsen et al., 2021; Usher, 2021). This scenario could erode a society's ability to stay informed, participate in democratic processes, and nurture institutional and political trust. Our research suggests that offering a comprehensive bundle can help counter this scenario by catering to diverse groups with different interests, such as those with a limited income, lack of political interest, or distrust of the media. Therefore, such models could also serve to fill knowledge gaps and incentivise publishers to broaden their reach beyond a narrow, affluent audience.

In summary, our research is consistent with the empirical studies conducted by Newman et al. (2023), Newman and Robertson (2023), and Behre et al. (2023), all of which highlight the importance of offering access to a variety of news publishers for a single price as an incentive for users to pay for digital journalism subscriptions. In addition, our study reinforces the positive impact of bundling as proposed by Bakos and Brynjolfsson (1998, 1999) and further related to digital journalism by Wellbrock (2020a), showing that a subscription model that facilitates access to multiple news outlets contributes to an overall increase in journalism subscription sales. Our research extends the scope of current research by allowing us to estimate potential market effects. These effects include considerations such as the impact on the overall revenue, subscription sales across different demographic groups, and the extent of cannibalisation of print products—the results of which suggest that cannibalisation is relatively low in this context.

Most publisher concerns regarding cross-publisher models stem from the centralised "Spotify for News" concept (Wellbrock, 2020b). Many of these concerns, including market identification and content prioritisation, can be addressed through decentralised access models. Our research indicates that consumers are open to such approaches. However, the equitable distribution of revenues remains a challenge, regardless of the access model. To prevent revenue concentration among large publishers, the distribution model could consider factors beyond usage duration and intensity, such as a publisher's geographic location or the number of permanently employed journalists.

The chosen method has limitations tied to its assumptions and selected attributes (Kulshreshtha et al., 2023). Specifically, our CBC does not explore respondent preferences for different publishers (e.g., private or public media organisations) and omits attributes such as personalisation, recommendation algorithms, or search functionality to avoid overwhelming respondents. Furthermore, the underlying assumption of full respondent rationality does not capture consumer behaviour's complexity (Curry, 1997). As the products are only partially available in the current market, this approach may be susceptible to response biases, including strategic, random, or satisficing responses, partly due to the repetitive nature of the questions (Bijmolt & Wedel, 1995). Despite these limitations, the method remains widely used because of its ability to facilitate realistic decision-making while allowing for the consideration of market conditions.

Overall, our study shows the potential of embracing collaborative platforms for journalism. Such an approach would expand the societal influence of digital journalism, making it a more accessible resource for a broader audience.

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