Consumer Welfare Effects of Cable-TV Bundling in Nigeria

Oluwadare, Adekemi Jessica and Soetan, Rosemary Olufunmilayo
Department of Economics, Obafemi Awolowo University, Ile-Ife, Nigeria.
adekemijessica@gmail.com, funmiasoetan@gmail.com
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Abstract
The practice of selling two or more products together as a bundle, often at a discounted price, can be used by firms to extract consumer surplus by reducing consumer heterogeneity. This article examines the ongoing debate in extant literature on whether consumer welfare would be enhanced, reduced, or remain unchanged, when Cable-TV channels are offered as a bundle or under à la carte pricing where consumers pay only for the channels they wish to receive. Our study employs both descriptive and inferential analyses to interrogate this discourse with empirical evidence from Nigeria. Our results indicate that under the existing bundling regime, subscribers' welfare is not maximized, as surplus is extracted by firms for up to 96% of subscribers. Surplus extraction is further made possible in the context of the diversity of subscribers' channel preferences. Our findings also show that subscribers are dissatisfied with the bundling of channels as they would prefer the à la carte pricing system which is more welfare-enhancing. The study contributes to the current empirical and policy debates on regulation of the pricing practices of Cable-TV firms in Nigeria, by recommending an informed price-regulatory policy for the industry.

Keywords: *Cable-TV; Bundling; À la carte; Consumer welfare; Nigeria*
JEL Codes: *D600, D690, D190, D120, L500, L820*

1. Introduction

The Federal Communications Commission (FCC) of the United States, in 2006, issued a report: consumers would save as much as 13% on their cable bills if they could buy only the channels they wanted. This report came two years after the FCC published a report in 2004 stating that *à la carte* programming (that is, purchasing specific channels off a menu list) would lead to higher costs for consumers. Both reports, which are clearly conflicting, reflect an ongoing debate on the benefits (or the lack thereof) that bundling of Cable-TV channels offers to consumers.

In Nigeria, the story is similar; court cases against price increases, the 'unjust' system of channel bundling, and the dominance of a single firm seem to be the order of the day for the Cable-TV industry. The prevailing news headlines show government actions directed at halting price increases[1], investigating firms' decisions to increase their rates[23], and regulating monopoly powers[4]. In 2021, Nigeria's House of Representatives ad-hoc Committee on pay-per-view tariff sponsored a bill in 2021 to compel Cable-TV providers to implement pay-per-view or *à la carte* system. Policy moves like this to curb price hikes and introduce flexible subscription plans in the

[1] https://www.naijanews.com/2024/04/25/fccpc-takes-action-as-dstv-gotv-increase-subscription-price/
[2] https://nairametrics.com/2024/05/07/multichoice-nigerian-tribunal-hears-case-against-dstv-gotv-rate-hikes-today/
[3] https://dailypost.ng/2023/10/11/nbc-to-investigate-dstv-gotv-others-over-subscription/
[4] https://www.vanguardngr.com/2022/11/pay-tv-monopoly-nbc-charges-multichoice-to-sublet-channels-to-metro-tv/

industry are all in a bid to improve the benefits that accrue to consumers who subscribe to the services of Pay-TV firms.

Research efforts to address welfare issues stemming from the pricing practices of Cable-TV firms have focused on assessing the superiority of *à la carte* pricing over bundling; that is, whether consumers would be better or worse off buying individual channels rather than buying bundled channels. The Nigerian Cable-TV industry is an oligopoly comprising of a few firms, about 7 of them, and a large consumer base estimated at 3.4million in 2017 (Owoeye, 2017). The prevalent practice in the Nigerian Cable-TV industry is to offer TV channels for sale in a bundle; these bundles are popularly known as bouquets. The argument against the bundling of Cable-TV channels is that it is wasteful as it compels consumers to purchase bundles containing channels of high, low, and zero interest, to gain access to their preferred channels. The general dissatisfaction with the constant price increases of Cable-TV bouquets actually stems from dissatisfaction with the practice of bundling in the industry.

Theoretically, and in practice, Cable-TV bundle prices are designed to take full advantage of the combination of customers' price sensitivity and heterogeneity of tastes (Varian, 1987; Sorensen, 2013). By this, firms avoid charging a single price across all consumers, to attract the maximum price that different classes of consumers are willing to pay for a channel. In essence, Cable-TV bundling facilitates the extraction of consumer surplus by firms (Lambert, 2011).

A rational consumer has a primary goal – to maximise his/her satisfaction from every consumption activity, and consumer welfare is achieved when consumers, in their assessment, achieve a desired level of satisfaction from the consumption of a good or service. Generally, consumer welfare may be analysed from different perspectives – reduced price, variety of choices or improved quality (Crawford, Shcherbakov, & Shum, 2019; Lin, 2017; Adam & Konstatinos 2020). From a price perspective, pricing strategies that allow for a measure of savings by consumers are regarded as welfare-enhancing because they increase consumers' purchasing power. The logic of improving welfare for Cable-TV subscribers suggests that if consumers can purchase only the TV channels they watch, it would cost them less than the bundle of channels they currently subscribe to. This difference is considered a consumer surplus, which if enjoyed by consumers would improve their welfare.

Although channel bundling is the predominant practice in the Cable-TV industry, its microeconomic implications are vague (Crawford, 2008, Crawford & Yurukoglu, 2016). While firms have a justification for bundling as the least cost method of providing any cable service, consumers also have a justification for not subscribing to channels which they never watch. The primary question which this study seeks to answer is: What happens when a consumer is faced with the sole offer of buying TV channels in a bundle which they have no part in curating? This study surveys Cable-TV subscribers in Africa's largest country to empirically document the welfare effects of bundling for consumers. The use of consumer data has the benefits of providing direct information on consumers' preferences, willingness to pay for the product and ultimately for assessing their welfare (Byzalov, 2010).

2. Related Literature

Bundling is an important topic in industrial organization, being a typical feature of contemporary product markets (Chen and Riordan, 2013; Crawford & Yurukoglu, 2016; 2012; Crawford, 2008; Renhoff & Serfes, 2008). Firms create product bundles to maximise profits by offering goods such that the bundle price is less than the sum of the individual prices of the goods in the bundle. A monopolist selling different goods can offer them for sale individually or as a bundle. Examples of bundled products include fast food (value meals at KFC); school fees (usually bundled to include tuition, exam fees, health fees, and other charges); and subscription-based TV services (bundle of channels), among others.

This study is carried out within the theoretical context that “when consumers have heterogeneous tastes for several products, a monopolist may bundle to reduce that heterogeneity, earning greater profit than would be possible with component (unbundled) prices” (Crawford, 2008, p.42). Bundling by profit-driven firms operating in an imperfectly competitive market could be welfare-reducing for rational consumers who are price-sensitive because firms leverage on bundling to earn the highest possible profits. The hypothesis put forward is thus: when consumers are faced with buying a bundled commodity within an imperfectly competitive market, their WTP for the bundle is lower than its market price. Cable-TV is a non-essential commodity which has alternatives. Hence, the perceived value by the consumer is expected to be lower than the prevailing market price. Household income and the heterogeneity of preferences could also potentially influence subscribers’ perception of Cable-TV bundling. For a consumer who seeks to maximise his satisfaction from goods purchased, Cable-TV prices could be welfare-reducing because he/she is forced to pay for TV contents which may never be consumed.

The microeconomic implications of bundling could either be beneficial (such as the simplification of consumers’ choices) or harmful (making consumers to pay more than they are willing to) (Crawford, 2008). Bundling in the subscription-based TV industry involves packaging several TV networks as a single TV service for consumers, and given the volume of channels included in a typical bundle, firms can extract relatively all of the consumer surplus (Crawford & Yurukoglu, 2012; Armstrong, 2006). This pricing strategy compels consumers to purchase TV channels which they will ordinarily not ‘consume’, thereby hampering consumer welfare (Crawford & Cullen, 2007). Bundling has been described as a strategy by firms in this industry, to take advantage of heterogeneity in consumer tastes and preferences for different TV channels (Sorensen, 2013).

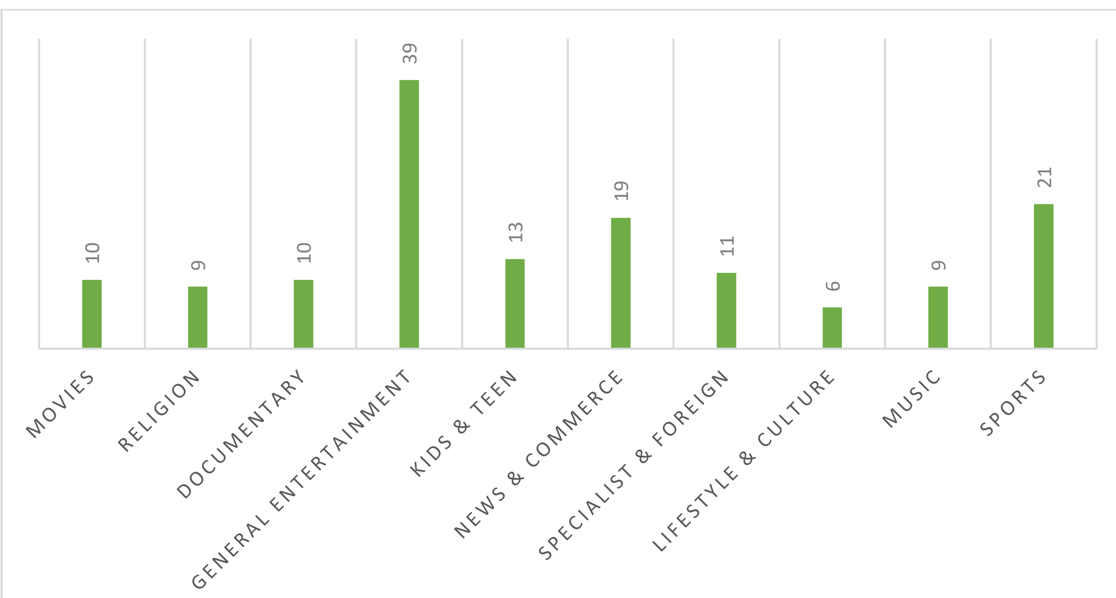

Figure 1: Contents of a typical Cable-TV Bouquet in Nigeria

Figure 1 illustrates what a typical Cable-TV bundle looks like, as provided by one of the firms in Nigeria. The bouquet comprises multiple channels with different themes or contents and is sold as a single product at a monthly subscription fee. The numbers attached to each bar in Figure 1 indicate the number of channels which are available for each theme. This means that the bouquet contains 10 movie channels, 39 general entertainment channels, 19 news and commerce channels, 21 sports channels, and so on. This shows how Cable-TV channels are bundled together, regardless of the subscriber's personal preferences.

The underlying motivation to product bundling by firms is the different tastes of consumers, and the need for channel providers to make the most of sales from all the channels available for viewers (Pindyck & Rubinfeld, 2013, p. 419). Consumers value each TV channel differently but are still made to purchase their least preferred channel together with their most preferred channel. Several studies have been carried out on bundling in the Cable-TV industry and its impact on the welfare of Cable-TV subscribers; some of these studies will be examined in the paragraphs that follow.

Beard, Ekelund, Ford and Saba (2001) sought to analyse consumer welfare in the Cable-TV industry by comparing the effects of price increases vis-à-vis the increased quality provision associated with the price increase. The authors use data from a sample of 717 monopoly cable markets in the United States to assess the welfare implications of price-quality trade-offs. Their findings reveal that the benefit derived by consumers from improved quality is almost exactly counterbalanced by the associated price increase. The empirical analysis carried out by Boik (2016) on the U.S. cable television industry analysed the role of television stations as intermediaries between viewers and advertisers. This intermediary role informs pricing and ultimately consumer welfare in the industry. The ability of content distributors to negotiate channel retransmission fees and advertisement rates has a direct effect on final prices to consumers.

Driven by the need to clarify contrasting evidences of consumer benefits of *à la carte* in the United States, Crawford & Cullen (2007) carried out a numerical analysis of bundling's impact on a monopolist's pricing and product choices and assessed the implications for consumer welfare in cable television markets. Their simulation made use of industry data on number of subscribers and input costs and modeled a re-negotiation (bargaining) of input costs in the face of full *à la carte*. The results suggest that consumers would benefit from *à la carte* sales if all channels under the bundling policy continue to be offered under the *à la carte* policy. The average consumer surplus is predicted to increase by 65.6%, although with an implication of reduced profits for firms. Crawford (2008)'s research reflects the role of individual preferences for different TV channels in determining welfare gains or losses for consumers. The microeconomic analysis of market-level dataset on a cross-section of United States cable systems reveals that discriminatory bundling, on the average, reduces consumer welfare.

The dynamics of providing Cable-TV services is one of the salient factors in the controversy on the efficacy of either *à la carte* pricing or bundling. Content distributors in Nigeria, such as Multichoice, Startimes, MyTV do not own the programmes they host on their decoders. This implies that they have to pay content providers such as Disney (owners of Disney channel, ESPN, NatGeo Wild) or Viacom (owners of Nickelodeon, BET) for the license to host these programmes. Horton (undated) provided evidence that 69% of cable bills go to cable content providers, and these costs are determined irrespective of the actual number of viewers of the channels. Content providers negotiate contract pricing with cable companies (content distributors) based on all their contents, irrespective of the company's choice or preference. Input-market bargaining between Cable-TV operators and content providers is thus an important factor that determines pricing of channel bundles.

Crawford & Yurukoglu (2012; 2016) provide an empirical analysis of this dynamic. Theoretically, consumers are better off when they are allowed to choose channels individually, but what implications does unbundling have for the firm's production costs, which in the end, the firm would pass onto the consumer? Their study showed that consumers would be worse off if given *à la carte* pricing because of higher unit costs of the TV channels. In their illustration, *à la carte* offerings will reduce the number of households subscribing to a particular channel, since consumers can decide whether to subscribe to that channel. However, given that channel providers will continue charging the Cable-TV operators the same amount for their channel(s), spreading the total cost over fewer households will increase the unit cost per household. Input-market renegotiations in an *à la carte* system will thus make consumer welfare fall.

Sørensen (2013) analysed the effects of unbundling (*à la carte* pricing) on firms' profitability in the Norwegian television industry, adopting the US models by Crawford & Cullen (2007) and Crawford & Yurukoglu (2012). The author's findings present interesting results from different scenarios of unbundling with and without channel exits and unbundling with and without re-negotiations of affiliate fees. Channel exits imply that with *à la carte* offerings in the industry, consumers will respond by not purchasing channels which do not suit their preferences, that is, channels for which they have zero willingness-to-pay (WTP). This move by consumers means that distributors have fewer subscribers from which to recoup their input (channel) costs and these costs can be resolved by either transferring to other consumers or renegotiating with the content providers. *À la carte* pricing without channel exits and without increases in input costs increases total welfare, that is, both consumer and distributor welfare. This effect is however described as somewhat unrealistic in the television market because the input costs for a channel will have to be renegotiated given a significant drop in number of subscribers.

Bundling, in addition to other factors, could influence consumer behaviour towards TV and streaming services. The other factors identified by Juhlin and Pedersen (2021) include range of content, convenience, trigger, habit, leeching, special content, free trials, technology, cost, and social components. Some respondents surveyed in their study argue in favour of bundling because bundled subscriptions are considered cheaper than the costs of purchasing separate streaming or TV services.

The findings from existing studies suggest that empirical studies on the impact of Cable-TV bundling on consumer welfare are inconclusive. Also, to the best of our knowledge, none of such analyses is publicly available for the African context. Hence, carrying out this study in Africa's most populated country will make a unique contribution to this research field.

3. Data and Methodology

This study makes use of primary data obtained from Cable-TV subscribers in Nigeria. This approach is novel to the extent there is only one other known study carried out by Tseng (2019) in Taiwan which made use of primary data obtained via a consumer survey to capture consumers' position on the bundling of Cable-TV. The questionnaire used in this study was structured to obtain background information from respondents and was tailored to assess consumers' pricing preferences and welfare vis-à-vis the current prices of TV bouquets. There is an estimated 6.7million Cable-TV subscribers in Nigeria. Using the Yamane formula (Glenn, 1992) with a 5% margin of error, data was obtained from a total of 508 Cable-TV subscribers across Nigeria, via an online survey. The data collection method was designed to ensure nationwide representation.

3.1 Estimation of Consumer Welfare

Consumer welfare represents the personal benefits derived by consumers from the purchase and use of a commodity (OECD, 1993). It is thus a personal assessment of the consumer's satisfaction with the consumption of a commodity. In economic literature, consumer welfare is largely examined through a price lens (Lin, 2017). Thus, a consumer is deemed to derive personal benefits from the consumption of a commodity when the actual price paid for a product is lower than their monetary valuation of the same product. This difference is referred to as a surplus, and is measured as the positive difference between the prevailing market price of a commodity and the price the consumer is willing to pay (Camm, 1983; Harrison, 2016). Consumer surplus is a commonly used measure of consumer welfare (Schlee, 2002). The current study adopts consumer surplus as a proxy for consumer welfare, following the research on the welfare effects of Cable-TV bundling by Crawford and Yurukoglu (2012). To determine the presence or otherwise of consumer surplus in the industry, two key variables are used: the current market prices of the respective Cable-TV bundles, and the price that subscribers are willing to pay for their TV bundles.

The concept of Willingness-to-pay (WTP) has been used in the literature, to analyse consumer welfare as it captures the surplus enjoyed by consumers (Schlee, 2002; Byzalov, 2010; Inderst and Thomas, 2021). WTP refers to the maximum amount that a consumer is willing to pay for a given commodity, and this serves as an indication of the consumer's valuation or perception of worth of the commodity (Stobierski, 2020). Thus, the consumer enjoys a surplus when this amount is greater than current market prices (Camm, 1983). Analysing consumer surplus, and ultimately consumer welfare, thus requires estimating consumers' WTP for a commodity.

A variety of approaches and corresponding analytical techniques for measuring WTP can be classified based on the methods for collecting the required data for analyses, which includes survey techniques or price response data (Breidert *et al*., 2006). Price response data can be either obtained from market observations (actual sales data) or by experimentation (simulated data). Survey techniques for WTP determination include the use of data obtained from direct or indirect surveys. Direct survey data, also known as stated preference data, which involves asking consumers to directly state the amount they would be willing to pay for a product, was engaged in this study. Estimating consumers' WTP through stated preferences is identified to be more relevant and accurate, compared to other WTP measures, given that a consumer's welfare is defined by his own assessment of his satisfaction (OECD, 1993).

To obtain information on the relevant variables, the following direct questions were asked in the research instrument.

(1) Current market price: ***How much do you pay each time you subscribe to your Cable-TV bouquet?***
(2) Willingness to Pay: ***How much would you be willing to pay for your current subscription?***

With respect to willingness-to-pay (WTP), the key underlying assumption is that the different benefits derivable from Cable-TV subscriptions have been taken into consideration by the subscribers, in arriving at this value. WTP is the maximum amount of money a consumer is prepared to part with, to purchase their Cable-TV packages. This is a representation of the monetary value that the consumer places on the product. Thus, when WTP is less than actual market price, the difference is transferred to the producer, implying consumer surplus extraction. On the other hand, a market price which is less than WTP increases welfare by allowing the consumer to retain his surplus. The value of a subscriber's WTP is useful for analyzing demand in the Cable-TV industry given that demand analyses for broadcasting services includes measurement of their economic value, both exact and perceived values (Shishikura, Kasuga, & Torii, 2005).

This study adopts a basic model from Sørensen (2013) to capture consumer surplus as a relationship between WTP and actual market price. The model has the underlying assumption that the WTP for a TV bundle is a sum of the consumer's WTP for each channel in the bundle. Given the direct stated preference method was used to determine WTP in this study, the survey instrument directly captures WTP for a TV bundle as the sum of respondents' WTP for each channel in their bundles. To model consumer surplus (CS), the key variables of interest are WTP and the current market price of Cable-TV services. Surplus is enjoyed by households when they have a willingness to pay (WTP) that is above the market price set for a product (Sørensen, 2013).

$CS = W - P$.. (1)

CS is consumer surplus, *W* is willingness-to-pay and *P* is the current market price. A positive *CS* value implies that consumer welfare is being maximised in the industry. Descriptive and inferential analyses were carried out on the data. The results are presented in the next section.

4. Results

4.1 Consumer Surplus Extraction

The results reveal that the current pricing and bundling of Cable-TV services allows firms to extract surplus from consumers. There is a lower WTP than market price for 85% of subscribers. Only 4% of subscribers have a WTP that is higher than the current price of their bouquet, while 11% have a WTP for their Cable-TV bouquet that is the same amount as the market price. This suggests that consumer surplus is being extracted by firms for more than 80% of Cable-TV subscribers, and this is regardless of their socio-economic background. These results are consistent with the study by Chen *et al*. (2016) which found that under a pure bundling strategy by Cable-TV firms in the United States, the WTP of the average consumer is lower than the price.

4.2 Reduction of Consumer Heterogeneity

According to Crawford (2008) "…bundling reduces heterogeneity in consumer tastes, permitting greater consumer surplus extraction than would be possible with component (unbundled) prices." Another evidence of consumer surplus extraction found in this study is supported by the heterogeneity in preferences of consumers on the same bundle plan. Table 1 presents an analysis of the channel preferences of consumers on similar bundle plans. For ease of analysis, we select the most expensive plans across three Cable-TV services, and we report on the level of consumer preferences for the different channels on these plans.

We observe a wide disparity in the preferences of consumers when it comes to the channels most consumed. The results show that 47% of subscribers on the DSTV premium plan have the highest preference for sports channels, and 18% consider religious channels as their most preferred. On the GoTVMax bundle, there is a spread of consumers' preferences across all channels; the same can be seen of the StarTV Classic bundle. This implies that consumers attach varying levels of priority and preferences to the different channels on their TV bouquets; yet they are compelled to buy a bundle that contains channels they would never view. Bundling in the face of such diversity gives Cable-TV firms the leverage to extract the maximum possible amount which consumers would pay for a product they would not consume, because it has been bundled with one which they cannot do without.

Table 1: Analyses of Consumer heterogeneity

Channel preferences	DSTV Premium - N=36	GOTV Max - N=86	StarTV Classic N=13
Sports	47%	32%	38%
News & Commerce	36%	32%	17%
Movies & Entertainment	42%	36%	62%
Music	23%	26%	31%
Kids & Teens	29%	26%	23%
Documentaries & Lifestyle	22%	25%	31%
Religion	18%	20%	8%

**The percentages reported here overlap as some households have multiple channels which have the highest likelihood of being viewed, possibly due to diverse interests of consumers within the same household.*

4.3 Factors influencing consumers' WTP for Cable-TV

We present the results of a linear regression of family status (*family*), family income (*income*) and Cable-TV demand (*cabledemand*) on the WTP values (*wtp*). Family status and family income levels are binary variables. Family status is either an individual living alone (0) or a family household (1). Income levels are categorised into high income (1) or low (0) income. The variable on Cable-TV demand is proxied by the frequency of subscriptions in the past six months. The results show that at 5% significance level, family status is negatively and insignificantly related to willingness to pay for Cable-TV. Demand is positively related, albeit insignificant at 5% level, while income is positively and significantly related to subscribers' willingness to pay for their bouquets. WTP is positively and significantly related to income, and this is expected as both variables are a measure of the individual's purchasing power.

This relationship between income and WTP may be responsible for the decision of Cable-TV operators to focus more on providing services to high-income areas. This is because high-income earners can attract higher demand and are "more likely to pay for higher-quality programming" (Anstine, 2001).

Table 2: Regression Results

wtp	Coef.	Std. Err.	T	P>|t|	[95% Conf. Interval]	
family	-679.86	470.24	-1.45	0.15	-1603.99	244.27
income	969.52	420.99	2.30	0.02*	142.17	1796.88
cabledemand	149.86	117.61	1.27	0.20	-81.26	380.98
constant	2967.23	526.02	5.64	0.00	1933.49	4000.97
Number of observations = 455						
F (3, 451) = 2.66						
Prob > F = 0.05						
R-squared = 0.02						
Adj R-squared = 0.01						
Root MSE = 4278.4						

Source: Author's computation, 2021.

Further, there is a revealed preference for *à la carte* above bundling (Table 3) and this explains why subscribers have a lower WTP for their TV bundles than the market price. Consumers perceive *à la carte* to be more beneficial as they can select the channels to purchase off a menu list. The preference for *à la carte* is also independent of subscribers' socio-economic background.

Table 3: Subscribers' preference statements for *À la carte* pricing

Preference statements	**(%)**
I prefer *à la carte* channels, only if it means I will pay less	81.1
I prefer *à la carte* channels if the price remains the same as my current bouquet	7.3
I prefer *à la carte* channels, even if it implies higher subscription costs than my current bouquet	2.8
I am indifferent between *à la carte* and bundled channels	5.5
I prefer bundled channels	3.3
Total	**100**

Source: Author's computation, 2021.

Traditionally, if consumers pay for only their preferred channels, the total number of channels they would have access to would be less than the number currently available in the bundles. Existing studies already provide evidence that fewer channels would be offered under an *à la carte* system. Our data presents the facts that either under bundling or *à la carte*, consumers would consume the same quantity of channels. An average TV bundle in Nigeria contains about 100 channels. Eighty percent (80%) of households surveyed in this study watch no more than 20% of the channels in their bundle. By implication, consumers would prefer to purchase only 20% of channels in their bundle, mostly under the condition that they would pay less than the current rate of their bundles. This further explains why WTP is lower than market price because consumers are paying for channels in which they have little or even zero interest.

In addition to subscribing to channels *à la carte*, consumers also prefer to pay per time per viewing time. These flexible plans are appealing to consumers because the plans afford them greater control over their cable bill and they expect to pay less than they are currently billed by the firms, given that they can limit themselves only to their preferred viewing duration and channels (Rennhoff and Serfes, 2009; Tseng, 2019). Generally, this study provides evidence that subscribers, despite their income level or household combination, have a rational desire to maximise the benefits derivable from their cable-TV subscription plans.

5. Conclusion

The primary argument in literature and policy in favour of *à la carte* pricing is that it will save consumers the costs of purchasing channels which they never watch. Generally, Cable-TV subscribers are not willing to pay for up to 80% of contents in their TV bundles. Thus, the financial resources committed towards redundant TV channels can be used for more productive purposes. Any pricing system such as Cable-TV bundling which does not allow consumers to retain their surplus reduces welfare. While many studies have justified firms' decision to bundle based on input costs, the perception of consumers need to be given priority, a primary reason being the availability of multiple alternatives to Cable-TV such as Video-on-Demand streaming platforms. Consumers' preferences should not be given a lower priority than firms' revenue.

Although a minor fraction (3%), some consumers consider it more valuable to subscribe only to channels of interest, even if it means higher costs. This justifies the current push for *à la carte* pricing in the Cable TV industry as it indicates that there is some value being lost by consumers when they subscribe to a TV bundle which they have no part in deciding what channels make up the bundle. We recommend that firms redesign existing channel bundles using their respective viewership data, increase the array of bouquets available to consumers, and provide some *à la carte* pricing options. *À la carte* offerings can be designed to benefit both subscribers and firms. While bundling is done to capture consumer heterogeneity in tastes, a better system of taking care of this heterogeneity needs to be introduced by firms to help consumers pay only for the content they actively consume. A hybrid system of 'unbundling and re-bundling' has the potential to improve service offerings to consumers. The introduction of more flexible payment plans would give consumers better control over what they subscribe to and could further enhance consumer welfare.

From a policy perspective, it is important for the government to provide an enabling policy environment that will allow for healthy firm competition and will drive innovative alternatives to bundling in the Cable-TV industry. The availability of alternatives to bundling will help consumers make better choices towards maximizing their welfare. This research provides fresh insight into the ongoing debate on the pricing practices of Cable-TV firms. Generally, there is little or no evidence on welfare analysis of Cable-TV subscribers in Nigeria. This study helps to fill this knowledge gap in Nigeria and by extension, in Africa.

REFERENCES

Anstine, D. B. (2001). How Much Will Consumers Pay ? A Hedonic Analysis of the Cable Television Industry. *Review of Industrial Organization, 19*(2), 129–147. Retrieved from https://www.jstor.org/stable/41799034

Armstrong, M. (2006). Price Discrimination. In Munich Personal RePEc Archive. Retrieved from https://mpra.ub.uni-muenchen.de/4693/

Beard, T.R., Ekelund, R.B., Ford, G.S. and Saba, R.S. (2001). Price-Quality Tradeoffs and Welfare Effects in Cable Television Markets, *Journal of Regulatory Economics, 20*(2).

Boik, A. (2016). Intermediaries in Two-Sided Markets : An Empirical Analysis of the US Cable Television Industry. *American Economic Journal: Microeconomics, 8*(1), 256–282. Retrieved from https://www.jstor.org/stable/43948908

Breidert, C., Hahsler, M., & Reutterer, T. (2006). A Review of Methods for Measuring Willingness-To-Pay. *Innovative Marketing, 2*(4). Retrieved from https://businessperspectives.org/journals/innovative-marketing/issue-111/a-review-of-methods-for-measuring-willingness-to-pay

Byzalov, D. (2010). Unbundling Cable Television : An Empirical Investigation. Accessed 10th February, 2020 https://dbyzalov.com/cable.pdf

Camm, F. (1983). Consumer Surplus, Demand Functions and Policy Analysis. Retrieved from https://www.rand.org/pubs/reports/R3048.html

Chen, Y., and Riordan, M. H. (2013). Profitability of Product Bundling. *International Economic Review, 54*(1), 35–57. Retrieved from https://www.jstor.org/stable/pdf/23352318.pdf?refreqid=excelsior%3Ab0a19e3dfdc27822382a4f8a2c7eec6d

Chen, M., Rennhoff, A. D., & Serfes, K. (2016). Bundling, à la carte pricing and vertical bargaining in a two-sided model. *Information Economics and Policy, 35*, pp. 30–44. https://doi.org/10.1016/j.infoecopol.2016.03.001

Crawford, G. S. (2008). The discriminatory incentives to bundle in the cable television industry. Quantitative Marketing and Economics, 6(1), 41–78. https://doi.org/10.1007/s11129-007-9031-7

Crawford, G. S., & Cullen, J. (2007). Bundling, product choice, and efficiency: Should cable television networks be offered à la carte? *Information Economics and Policy, 19*(3–4), 379–404. https://doi.org/10.1016/j.infoecopol.2007.06.005

Crawford, G. S., & Yurukoglu, A. (2012). The welfare effects of bundling in multichannel television markets. *American Economic Review, 102*(2), 643–685. https://doi.org/10.1257/aer.102.2.643

Crawford, G. S., Shcherbakov, O., & Shum, M. (2019). Quality overprovision in cable television markets. *American Economic Review, 109*(3), 956–995. https://doi.org/10.1257/aer.20151182

Glenn, I. (1992). *Determining sample size*, University of Florida, Agricultural Education and Communication Department series number PEOD6 https://www.tarleton.edu/academicassessment/documents/samplesize.pdf

Hanning Fang & Peter Norman (2006). To bundle or not to bundle, *The Rand Journal of Economics, 37(4), 946-963.* http://www.jstor.org/stable/25046282

Harrison, J. L. (2016). A Socioeconomic Approach to Antitrust: Unpacking Competition, Consumer Surplus, and Allocative Efficiency. 49 *Akron L. Rev. 409.* https://doi.org/10.2139/ssrn.2645944

Horton, J. (undated). The Rising Cost of Cable-TV – The Story Behind the Story. https://bluevalley.net/blog/2019/03/21/the-rising-cost-of-cable-tv-%E2%80%93-the-story-behind-the-story

Inderst, R. and Thomas, S. (2021). Prospective Welfare Analysis: Extending Willingness-to-Pay Assessment to Embrace Sustainability, LawFin Working Paper No. 29, *Goethe Universitat, Frankfurt*

Juhlin, J. and Pedersen, S.W. (2021). Factors That Affect Consumer Behavior Towards Streaming and TV Services. School of Business, Society and Engineering, Mälardalen University. https://www.diva-portal.org/smash/get/diva2:1560396/FULLTEXT01.pdf [accessed 4th May, 2024].

Lambert, T. (2011). The efficiency of cable bundling. Retrieved November 12, 2019, from Truth on the Market website: https://truthonthemarket.com/2011/07/10/the-efficiency-of-cable-bundling/

Lin, P. (2017). Essays on Consumer Behavior. Tilburg: CentER, Center for Economic Research.

OECD. (1993). Glossary of Industrial Organisation Economics and Competition Law. Oecd, 90. Retrieved from http://www.oecd.org/regreform/sectors/2376087.pdf

Owoeye, F. (2017). These are the 2 major market forces that drives the Nigeria Pay TV industry. Retrieved August 6, 2019, from https://nairametrics.com/2017/11/03/112389-2/

Pindyck, R. S., & Rubinfeld, D. L. (2013). Microeconomics (8th ed.). New Jersey: Pearson Education Inc.

Rennhoff, A. & Serfes, K. (2009). The role of upstream-downstream competition on bundling decisions: Should regulators force firms to unbundle? J*ournal of Economics & Management Strategy, 18*(2), 547-588.

Schlee, E.E. (2002). Expected Consumer's Surplus as an Approximate Welfare Measure. [Accessed 3rd December, 2021] https://economics.yale.edu/sites/default/files/files/Workshops-Seminars/MicroTheory/schlee-021002.pdf

Shishikura, M., Kasuga, N., & Torii, A. (2005). Analysis of Subscription Demand for Pay-TV. Retrieved from https://econwpa.ub.uni-muenchen.de/econ-wp/io/papers/0509/0509005.pdf

Sørensen, D. A. (2013). Bundling in the television market - who will benefit the most from à la carte channel choice in the Norwegian television market ? (No. 19/13).

Stobierski, T. (2020). Willingness to Pay: What it is and how to calculate. *Business Insights,* Harvard Business School

Tseng, Kuo-Feng (2019) : The Digital Cable-TV Pricing Mechanism and the Consumer Preferences: the Survey in Taiwan, 30th European Conference of the International Telecommunications Society (ITS): "Towards a Connected and Automated Society", Helsinki, Finland, 16th-19th June, 2019, International Telecommunications Society (ITS), Calgary

Varian, H. R. (1987). Price Discrimination (No. 87--26). Retrieved from https://deepblue.lib.umich.edu/bitstream/handle/2027.42/101032/ECON469.pdf?sequenc