IMPLEMENTING EXTENDED CURRENCIES AND RETHINKING THE CURRENT PRINT PRICE MODELS

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1 INTRODUCTION

At the Valencia symposium we presented our plans for giving the market more detailed data for newspaper readership of the printed newspaper *"The new Norwegian NRS: From AIR to extended currencies"* (Futsæter, Sandvik & Østnes, 2009). Now, we have delivered extended currency data to the market twice, and would like to give an update on the final technical solution, the challenges, the results, reactions from the market and possible consequences for pricing of newspaper ads.

The main aim for the extension of the readership data in our NRS was to "raise newspaper currency from level two to level three of the Media Effect Pyramid" (Futsæter, Sandvik & Østnes, 2009). In research terms this meant producing readership figures beyond AIR for all newspapers covered by the Norwegian NRS. Our solution was to report readership figures for eight different newspaper content categories, and making them available in our analysis and planning software.

In Part 1 of this paper we will present the implementation of the new newspapers currencies. We start with a short introduction to the Norwegian media marked and how the newspaper industry met the demands from the marked. Then we describe the new currency, the principles of the modelling process, some results and the output in the software.

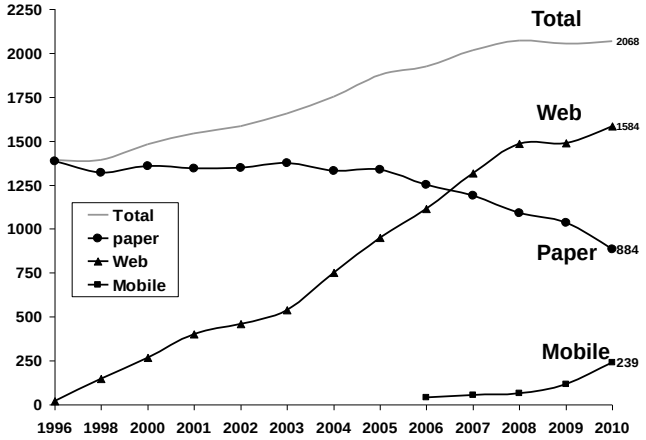
Part two will focus on how the newspapers might benefit, changing today's price models for newspaper advertising. Such new price models will rely heavily on inputs from research.

1.1 THE NORWEGIAN MEDIA MARKED

The Norwegians still have one of the world's highest consumptions of printed newspapers. However, declining readership figures and advertising income have put the print industry under pressure. Due to income from the oil industry Norway did not suffer from any financial crisis like most European countries. However, the digital revolution has hit the print industry and they struggle to meet the competition from TV, radio and internet.

One of the major challenges is the business model for digital content and getting the consumers to pay for digital content, especially in Norway where many newspapers have given most of the content away for free on their websites. As figure 1 illustrates for the newspaper VG, their total daily reach has increased over many years. Some websites, such as VG, now have larger online than print audiences. Most of the printed editions lose readers while their websites audiences increase.

Figure 1. Daily reach for the largest newspaper VG



With a daily use of the Internet of 78% and mobile content of 19%, Norway is a highly developed media marked. Furthermore, the Norwegian media owners have come far in the development of delivering content on multiple technological platforms. The Norwegian measurement system follows the users across all platforms, including media apps on media tablets such as iPad from 2011.

The new National Readership Survey (NRS) is a part of the multimedia survey Consumer & Media (C&M), which is a single-source study linked to the Target Group Index. We use CATI interviewing and Pure Recent Reading to establish readership figures, and measure both printed newspapers and all corresponding web sites in the NRS (Futsæter & Østnes, 2003). The use of major web sites has been measured since 1995, and the new NRS is extended to cover all electronic newspapers. In 2005 we included measurement of mobile content in the NRS.

In Norway we use different media measurements at different geographic levels. The electronic measurements for TV and radio, TV-meter and PPM, give the official figures for national broadcasters, while the CATI measurement in Consumer & Media provides the local currency. We have developed a hybrid methodology system for different purposes:

1. The browser measurement TNS Scores gives figures of all traffic.
2. The Norwegian InternetPanel (NIP) consists of a representative panel that measures use at work and at home for all websites that use Scores. There is also a link between the panel members and the mobile measurement system TNS Mobile. NIP is the currency for national sites and syndicates.
3. The NRS provides recall data for printed newspapers, all web titles and the largest mobile content sites. NRS is the official currency for local web titles and the figures are calibrated against the Scores figures.

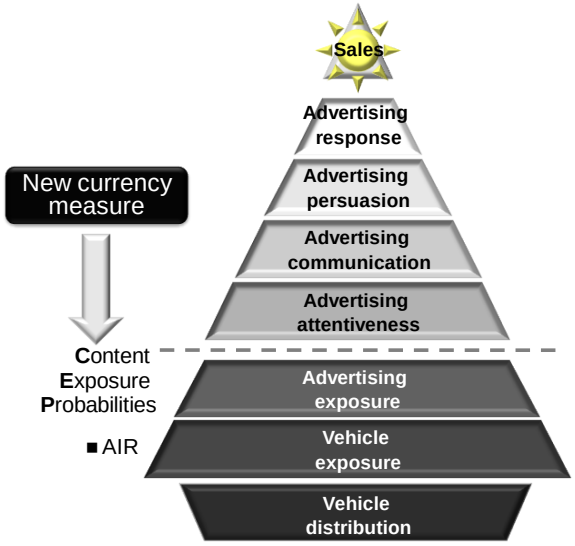
The Norwegian media measurement system gives opportunities for cross campaign analyses, especially for the media houses of the traditional newspapers, where we have audience figures across all platforms. We also have the opportunity to fuse the page views from the official internet measurement NIP into the NRS.

1.2 NEW DEMANDS FROM THE MARKED

Based on the Media Effect Pyramid the media agencies and advertisers have exercised pressure on the newspapers to develop a more precise measure of readership than AIR, and to deliver more frequent and detailed readership reports. The Media Effect Pyramid, inspired by ARF's "New Media Model" (2002), has been used as a backdrop for our discussion on responsibility, requirements and expectations concerning the media data that exist as official currencies. We have transformed ARF's model into a pyramid for illustrative purposes, and added the term Effect in order to underscore the idea that each level of the Pyramid carries its own set of effects (Futsæter, Sandvik & Østnes, 2009).

To meet the demands from the marked, TNS Gallup has developed extended currencies for newspapers and more frequent and detailed reporting of AIR figures, and has moved the newspaper currency to Level 3 of the pyramid. The new extended currency is called Content Exposure Probabilities (CEP). CEP brings the newspaper currency from Level 2 to Level 3 in the Media Effect Pyramid and hence being closer to TV's meter data and radio's PPM data.

Figure 2. The Media Effect Pyramid: Closing the gap with CEP



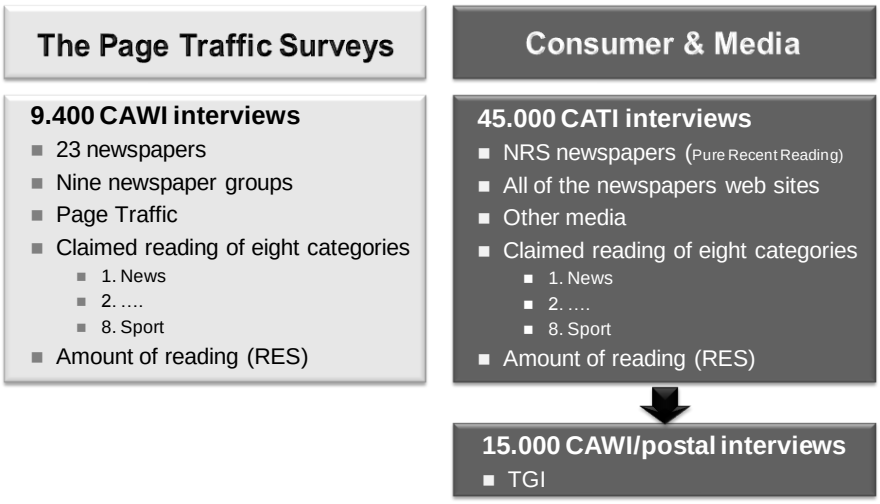
Part 1: Implementing The New Currency

2 THE SETUP

Our concept for extended currencies for newspapers was presented at the Valencia symposia (Futsæter, Sandvik & Østnes, 2009), and we can now present some results from this work – but first a short recap of the concept.

In the new part of the NRS we conduct a separate Page Traffic Survey. In total we will conduct at least 6700 interviews using CAWI techniques every second year, for 23 selected newspapers, representing nine newspaper groups.

Figure 3. The Page Traffic Surveys and Consumer & Media



2.1 THE PAGE TRAFFIC ESTABLISHMENT SURVEY (PTE)

Much effort was put into defining the different newspaper groups, and a number of criteria were considered – as number of issues pr. week, total number of readers (i.e. size), geographical distribution of readers, editorial content and reading patterns. The result was as mentioned above a total of nine groups, which comprise an operational classification of all Norwegian newspapers for our purposes.

1. Dagbladet (single newspaper group)
2. VG (single newspaper group)
3. Aftenposten (single newspaper group)
4. Regional newspapers
5. Financial newspapers
6. Niche newspapers
7. Local newspapers type 1 (Local – District)
8. Local newspapers type 2 (Local – Local)
9. Local newspapers type 3 (Local – few issues per week)

From each of these groups (excl. 1-3) we randomly selected 2-4 newspapers to represent the group in our PTE survey. The newspapers 1-3 were measured as separate titles, and not as part of a group due to their special characteristics. The scope of the PTE fieldwork resulted in measuring 23 newspapers covering a minimum of 6 issue days (600-700 interviews) for each group.

The first wave of the PTE survey was conducted February/March 2010, covering all 23 newspapers in the 9 defined newspaper groups. The results from this PTE wave were used for the first time in conjunction with reporting of the NRS fall 2010. The current decision is to conduct this PTE every second year, which will give us regular updates of critical values used in the modelling of CEP in the NRS.

In addition to registering actual reading of all pages in the paper, in this Page Traffic survey we have included a general question about amount read of eight different content categories in newspapers:

"When you read print editions of newspapers, approximately how much of what appear in the following content areas do you usually read or look at?"

1. TV & Radio
2. Consumer & Lifestyle
3. Sports
4. Culture & Entertainment
5. Debate & Commentary
6. News (local, national, global)
7. Personal (birthdays, weddings...)
8. Economy & Business

Furthermore we have included title specific questions about amount read of the newspaper as a whole:

"When you read the print edition of …, approximately how much of the newspaper do you usually read or look at?"

1. Everything/nearly everything
2. About 3/4
3. About half
4. About 1/4
5. Almost nothing
6. Nothing

The reason for including these questions is to be able to model the observed scores from the Page Traffic study onto the NRS as CEP values. The result of this modelling will yield values for relevant content areas at respondent level for all newspapers measured in the NRS.

2.2 THE EXTENDED NRS SURVEY (XNRS)

The ongoing NRS just had to undergo minor adjustments to act as a "receiver" of results from the PTE survey. The main structure of the readership questions was kept and we just added exactly the same questions, and response alternatives to the NRS as we did to the PTE:

- *"When you read the print edition of …, approximately how much of the newspaper do you usually read or look at?"*
- *"When you read print editions of newspapers, approximately how much of what appears in the following content areas do you usually read or look at?"*

3 THE MODELLING PROCESS

As described in the paper "The New NRS in Norway – from air to extended currencies for newspapers" (Futsæter, Sandvik & Østnes, 2009) the components used to model CEP values for all newspapers covered by the Norwegian NRS are:

1. A Page Traffic Establishment (PTE) survey – to collect necessary information about reading of different content areas in a sample of representative newspapers.
2. A somewhat extended NRS (xNRS) – to be able to model the information from PTE to the NRS respondents.

The aim for the modelling procedure is to produce respondent-specific Content Exposure Probabilities (CEP's) for the defined content categories for all newspapers measured in the NRS (in theory some 60 million (!) probabilities for the current sample).The basic information used in the modelling procedure is:

From xNRS:

- Respondent specific AIR probabilities for each measured newspaper based on PRR method
- Title specific Readership Engagement Score (RES) based on the question *"When you read the print edition of …, approximately how much of the newspaper do you usually read or look at?"*
- General (not title specific) question *"When you read print editions of newspapers, approximately how much of what appears in the following content areas do you usually read or look at?"*

From PTE:

- "Observed" Page Traffic results for newspapers/newspaper groups
- Parallel readership information to the NRS (Amount of newspaper read, amount usually read of different content in newspapers)

This table displays the model critical input/output for the two surveys:

EXTENDED NRS SURVEY (xNRS)	PAGE TRAFFIC ESTABLISHMENT SURVEY (PTE)
Amount of newspaper read (title specific question)	Amount of newspaper read (title specific question)
Amount usually read of… (general question): -News -Debate/comment -Sports -Consumer/Lifestyle -Business/Finance -Birthdays etc. -Culture/entertainment -Radio/TV	Amount usually read of… (general question): -News -Debate/comment -Sports -Consumer/Lifestyle -Business/Finance -Birthdays etc. -Culture/entertainment -Radio/TV
CEP for each newspaper (MODELLED): ***-Average (total)*** ***-News -Debate/comment*** ***-Sports -Consumer/Lifestyle*** ***-Business/Finance -Birthdays etc.*** ***-Culture/entertainment -Radio/TV***	Page Traffic for newspaper group (MEASURED): -Average (total) -News -Debate/comment -Sports -Consumer/Lifestyle -Business/Finance -Birthdays etc. -Culture/entertainment -Radio/TV

The main scope of the procedure is to model Page traffic (or CEP) for each newspaper trough generating respondent specific probabilities for the newspaper as a whole and for the eight content categories – newspaper by newspaper. This is done in a two-step process after the following principles:

3.1 MODELLING THE TOTAL CEP FOR EACH NEWSPAPER

For each newspaper group in the PT survey the average PT-figure (or total CEP) is calculated for each stated amount read group, and then summed to a newspaper group total:

Average PT for newspaper group = $f(PM,A) = ((PM_1*A_1)+(PM_2*A_2)+(PM_3*A_3)+(PM_4*A_4)+(PM_5*A_5)) / \sum(PM_{1-5})$

Where:
PM_1= Proportion stated read everything/nearly everything from PT
PM_2 = Proportion stated read about ¾ from PT
PM_3 = Proportion stated read about ½ from PT
PM_4 = Proportion stated read about ¼ from PT
PM_5 = Proportion stated read almost nothing/nothing from PT

A_1= Proportion "observed read"[1] amongst stated read everything/nearly everything from PT
A_2= Proportion "observed read" amongst stated read about ¾ from PT
A_3= Proportion "observed read" amongst stated read about ½ from PT
A_4= Proportion "observed read" amongst stated read about ¼ from PT
A_5= Proportion "observed read" amongst stated read almost nothing/nothing from PT

From the NRS we have the corresponding stated amount read variables for each newspaper:

NM_1 = Proportion stated read everything/nearly everything from NRS (sum of AIR-probabilities * respondent weight)
NM_2 = Proportion stated read about ¾ from NRS (sum of AIR-probabilities * respondent weight)
NM_3 = Proportion stated read about ½ from NRS (sum of AIR-probabilities * respondent weight)
NM_4 = Proportion stated read about ¼ from NRS (sum of AIR-probabilities * respondent weight)
NM_5 = Proportion stated read almost nothing/nothing from NRS (sum of AIR-probabilities * respondent weight)

As the distribution for the stated amount read variable is different between NRS and PT, and the PT-results are the ones we want to model against, we have to introduce a correction factor (C) for each newspaper group to level out these differences. These are newspaper group specific factors and have to be recalculated for each new wave of NRS data. That means that for each newspaper we will have the following calculation for the NRS data:

Modelled total CEP = $(((NM_1*A_1)+ (NM_2*A_2)+ (NM_3*A_3)+ (NM_4*A_4)+ (NM_5*A_5)) / \sum(PM_{1-5}))* C$

Here are some real examples from the first modelled NRS wave:

[1] Actual proportion of pages read from the PT

	Average Page Traffic from PT-survey	Total CEP from NRS	Factor (C) for group	Total CEP for newspaper from NRS	Corrected Total CEP for Newspaper in NRS	Newspaper
Newspaper group 1	83,2 %	80,4 %	1,034	80,3 %	83,0 %	Newspaper A
				79,3 %	82,0 %	Newspaper B
				81,5 %	84,3 %	Newspaper C
Newspaper group 2	89,4 %	86,2 %	1,037	86,8 %	90,0 %	Newspaper D
				87,4 %	90,6 %	Newspaper E
				86,1 %	89,3 %	Newspaper F
				85,9 %	89,1 %	Newspaper G
				85,0 %	88,1 %	Newspaper H

As we can see the corrected/modelled CEP for the newspapers differs also within the newspaper groups. These variations are caused by different distribution on the "amount stated read" for the newspapers in the NRS, and will represent the individual newspapers variation from the average of the group.

Even if the PT results are "static" (over two years), the modelled CEP values will differ from one report to the next, due both to changes in total CEP values for the different newspaper groups, and changes in distribution on the "stated amount read" question for the individual newspaper. This ensures the dynamics in the model even though the PT survey is carried out only every second year.

3.2 MODELLING THE EIGHT CONTENT CATEGORY CEP'S FOR EACH NEWSPAPER

An equal approach is used to model CEP for the eight content categories in the NRS. This is done according to the same principles as the total CEP, and is carried out step by step for each of the defined content categories. The only difference being that we use the general question about amount read for each content category to calculate the content specific PT and CEP levels for newspaper groups and individual newspapers, both in the NRS and Page Traffic survey.

A similar example as above will look like this for the content category NEWS:

	NEWS Page Traffic from PT-survey	**NEWS** CEP fom NRS	Factor (C) for group	**NEWS** CEP for newspaper from NRS	Corrected **NEWS** CEP for Newspaper in NRS	Newspaper
Newspaper group 1	93,8 %	93,4 %	1,004	93,9 %	94,3 %	Newspaper A
				94,0 %	94,4 %	Newspaper B
				92,7 %	93,1 %	Newspaper C
Newspaper group 2	96,8 %	96,5 %	1,003	96,3 %	96,6 %	Newspaper D
				96,6 %	96,9 %	Newspaper E
				96,5 %	96,8 %	Newspaper F
				96,4 %	96,7 %	Newspaper G
				96,3 %	96,6 %	Newspaper H

The practical application for the respondent data is to scale the respondents AIR probability according to the modelled CEP level for each respondent and each newspaper - in other words producing individual Content Exposure Probabilities (CEP's). This is done both on total content level and for each content category. Our planning and analysis software will subsequently use the correct probability according to the content category chosen by the user.

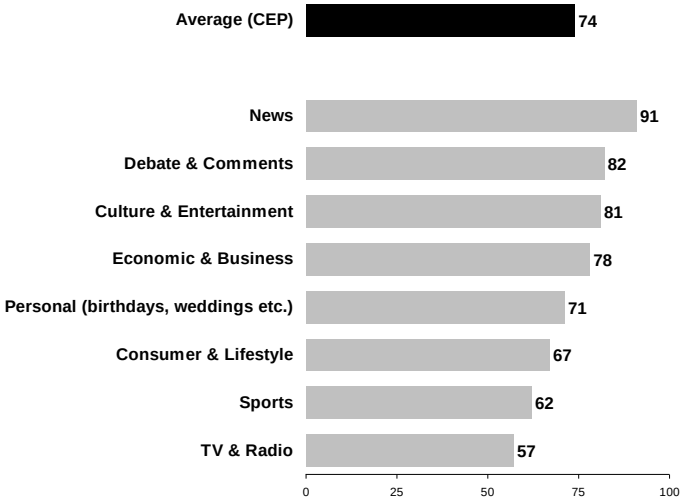
It's also worth pointing out that the Total CEP figures not are reported to the end-user, the reason being that this figure could be regarded only as a devaluation of the existing AIR. Hence the users of the NRS-database will only have access to the CEP-figures for the eight defined content categories.

4 SOME RESULTS

The average of the eight CEP-values in the percentage of the AIR varies between the nine newspaper groups from the smallest local papers with 91%, to 74% for the second largest paper Aftenposten. In general, local and national niche papers get the highest CEP-scores compared to AIR, and regional and large national papers get lower scores.

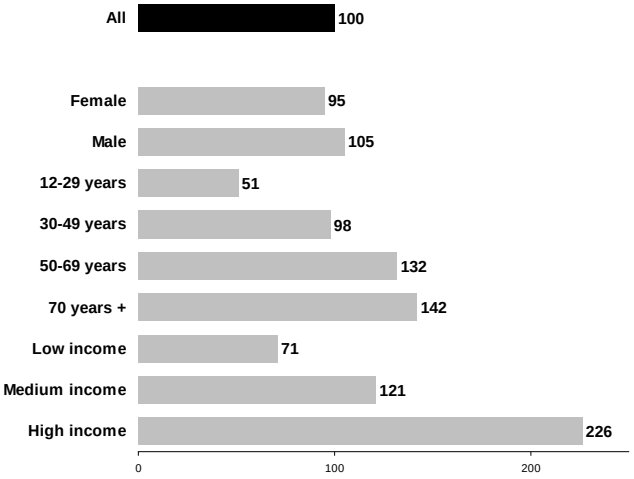
Furthermore, news got the highest score among the content categories (CEP) when we look at content categories across all the papers. Sports and TV/radio got the lowest scores. Figure 4 illustrate CEP-values for Aftenposten. News gets the highest score with 91%, and TV & Radio gets the lowest with 57%. Aftenposten is one of the papers with largest variation between the content categories. The average (or total) CEP in percentage of the AIR is 74%. This average/total is calculated as described in chapter 3.1, and is not an arithmetic average of the CEP for the 8 content categories, as these consist of different number of pages.

Figure 4. CEP-values for Aftenposten in percentage of AIR



There are very interesting fluctuations among different demographic groups and target groups regarding the content categories they read. Figure 5 illustrates this for the content category "Economy & Business" in Aftenposten. As expected, males have the highest indexes for Economy & Business. The youngest age group tends to read less Economy & Business, whereas the oldest read more. People with lower income read less than those with higher income. In general, high CEP-values are indicators of high engagement and interest in specific content. Also, if the advertising content fits the content categories, the advertising also gets high attention and interest.

Figure 5. Indexes of the CEP-values of Economy & Business for Aftenposten by sex, age and income



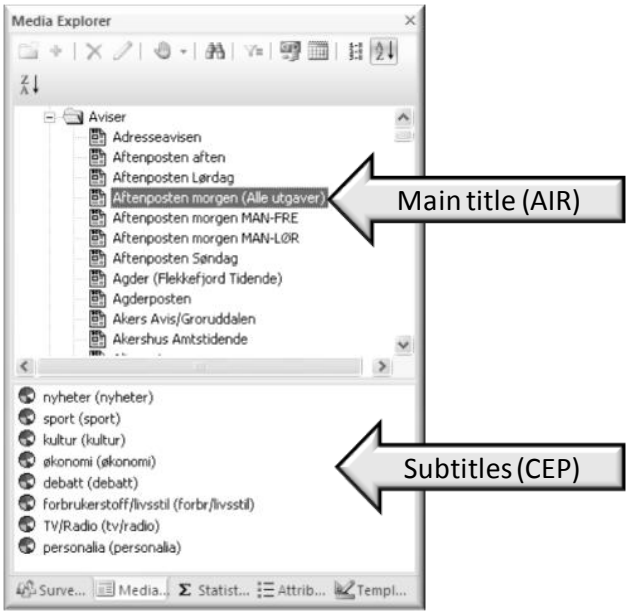
5 OUTPUT IN SOFTWARE AND DAILY USE

One very important point in this project was that the end user of the NRS data should have direct and easy access in the planning and analysis software to the new currency measures. Our current software at the start of the project was not able to handle the concept of multiple readership figures for each newspaper. Our distributed software (Galileo) had to be developed both at engine- and GUI-level, in order to give users easy access to the new information in the NRS database.

After fruitful discussions with our software developers in Confirmit, we designed a solution which in our view meets the challenge from the end users – accessibility and easiness of use. Our solution was to present the surveyed newspapers in two levels:

- Main title – AIR figure (calculated exactly as earlier)
- Subtitles – The eight defined content categories for each newspaper (and syndicate) based on CEP-modelling

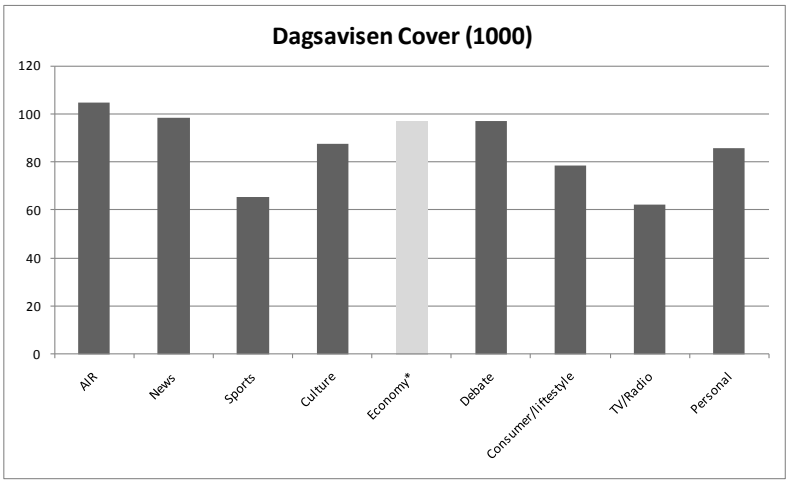
Figure 6. Choosing newspapers for further planning/analysis in the software



This way the user can choose between including only the main title, only one or more subtitles or a combination of these choices for further analysis. The solution is quite flexible, and the user can change his/her selection at any point later in the analysis.

There will of course be cases where newspapers don't carry one or more of the defined content categories, even if our modelling has produced figures (as each newspaper belongs to a group that might offer the content category in question). In these cases we have chosen to mark, and not delete, the relevant content categories, giving the user the opportunity to produce results indicating the CEP value if the content category were offered by the newspaper. The main reason for this is to produce valid CEP figures for all content categories in syndicates, even if some syndicate members lack one or more categories. An example of a "marked" (and non-existent) content category we find for the newspaper Dagsavisen:

Figure 7. Example: Number of readers for different content of Dagsavisen



This newspaper does not carry the content category "Economy". However the CEP for this category is modelled, and would be used as input in any syndicate Dagsavisen is a member of. This graph can also indicate the variation in cover between the different content categories – here varying between approx. 60' readers of "TV/Radio" to almost 100' readers of "Debate" and "News".

From a practical user point of view what's really happened is that the number of newspaper and syndicate titles to choose from has increased from 210 to approx. 1930 (!). An increase in available carriers this size will of course result in a more complex and demanding environment for planning newspapers. On the other hand this tool now gives the planners more detailed information about newspaper reading, giving them the opportunity to perform their planning more accurately and delivering more cost effective plans.

6 SAME DELIVERY BUT MORE PRECISE

The introduction of the new currency measures doesn't undermine the existence of the traditional AIR figure. This will still be a useful and valid indication of how many readers an average issue of the newspaper has. However, for newspaper planning purposes this is a weak measure – as what the planners really want to know is: "How many people will see my ad if placed in the sports section of the newspaper?"

It's common knowledge that not every reader of a newspaper read every page of the newspaper, and proprietary page traffic surveys have documented and quantified this fact for many years. We also know that the media planners have made their considerations regarding this question in their day-to-day work, mainly based on the AIR figures and their own knowledge and experience. The new measures we have introduced will simply give a more precise and more readily available answer to this question, by giving planners a fingertip tool to quantify what earlier have just been assumptions and "guesstimates".

As we can see from the screenshot in figure 8, a plan with one insertion in two newspapers will yield quite different results depending on where you plan your insertions in the newspaper. Anyhow, the figures based on the well known AIR will remain unchanged as showed in the bottom picture of figure 8:

Figure 8. Planning insertions in different content sections of different newspapers

It's important for us to stress that the introduction of the extended currency in no way implies that what the newspapers deliver as an advertising platform has changed overnight. Our attempt has solely been to give the users of the NRS data more precise information regarding reading of newspapers, rather than implying that the delivery has changed.

7 REACTIONS AND CHALLENGES IN THE MARKET

The background for MBL's (Norwegian Media Businesses' Association) wish to move the newspaper currency up one step in the Media Effect Pyramid was mainly criticism from the media agency side of the business. Their arguments were that the newspaper currency was "a dinosaur" and lagging far behind the "precise" currency measures from the electronically distributed media. MBL's answer to this criticism – CEP – has been well received by the very same media agencies, and the general criticism of the newspaper measurements in general, and the currency in particular, has softened after the first release of CEP figures in the fall of 2010.

Does this mean that the media agencies has fully embraced the new currency measures, and are using them actively in an effort to produce more cost effective newspaper plans? Unfortunately, we don't think that is the case. One reason could be the fact that the new measures have been available just one year, and we know that it takes time for the professional market to adopt changes of this type. Secondly - we think the "explosion" in the amount of available newspaper data from fall 2010 was somewhat unexpected for the "planning community". Going from a quite manageable situation where they had some 170 carriers to chose from when planning newspaper, to a situation with close to 2000 carriers, could understandably make the planning process more complex and time consuming. Again – we think it will take some time for the agencies to cope with these facts. Thirdly – the newspaper industry itself mainly still uses the old AIR-figures and the old pricing-models in their marketing and sales, unchanged by the fact that they now have access to more precise data about readers of own newspaper. There are of course some exceptions, but a clear majority of the newspapers still consider the new insight from this project as nice-to-know information.

Our view is that the new currency measures will have limited impact on the planning, buying and selling of advertising space in newspapers until the CEP levels will have direct implication for the pricing model and prices for ad-space in newspapers. This will be further discussed in Part 2 of this paper.

Part 2: Rethinking the print advertising price models with new research data

Compared to other media such as TV, Radio and even outdoor, the Newspaper currency is more loosely connected to the actual price of advertising. For TV and radio the price is a direct consequence of the actual audience delivered as documented by each currency measurement respectively. With the establishment of the new Norwegian Internet panel (NIP) we are most likely going to see a price model more in line with TV and radio for Internet as well. For newspapers and magazines the prices are grounded historically, and the price for an insertion is not necessary directly linked to the published readership figures.

8 WHY A NEW MODEL? - BACKGROUND AND SITUATION OVERVIEW

The traditional price model for print is based on:

1. Space (square cm.)
2. Placement based on supply and demand
3. Cost of production (in the old production system), for instance use of colour
4. Readership

This model was created at a time when print was the dominant advertising medium. In Norway the newspapers had an especially strong position and a market share in excess of 60%. Compared to newspapers, magazines were in a much weaker position and commercial TV was not on the market until the late 1980's. At that time, the National Readership Survey (NRS) was not very developed, and was of little interest to the market. CPT (Cost Per Thousand) was unknown. The focus was on the circulation figures, and they increased every year.

The old model is still working, even if the CPT-focus has been strengthened by the development of the National Readership Surveys. In Norway, the newspaper industry keeps the old model because it still works in some specific markets, especially some markets on the local level. However, on the national market the current model is really out of date. With an average discount of at least 40% (a conservative estimate), the price tariffs are of no value.

8.1 THE "NATURE" OF THE NEW CURRENCY COULD CALL FOR A CHANGE

The nature of the new newspaper currency could in itself call for a more diversified pricing structure. In its simplest form the prices for running an ad in a specified section of the newspaper could be higher or lower than the average price depending on the section's current CEP score. In some ways this is already reflected in the existing price model, where you have price amendments if an advertiser wants to buy specified pages in the newspaper, or wants to secure a placement in a specific section. However this would still be only a minor adjustment of the current price model, and would probably not be sufficient in order to be compared to the price models of for example TV and radio. The new currency does however add granularity to the readership data and could therefore be a measure with more flexibility in a given price model than the AIR figure.

Some sceptics feared that the new currency data in itself would result in substantial downwards pressure on the advertising prices, since the CEP values always are lower than the current AIR figure. Even though there surely are some such cases, this has not been a very big issue. The fact is that the new currencies only *"document what everybody have known forever: not everybody read everything"*. A far more important issue is the price pressure due to declining readership figures.

8.2 PRICE PRESSURE IN THE MARKET

Independent of the new currency measures, newspapers have been faced with a downwards pressure on advertising prices. The newspapers in Norway, as in the rest of the western world, have experienced declining readership figures (AIR) for some years now. Despite this situation, the procedure every year is to increase the rate cards with the "cost of living index" – thus leading to increased CPT! This situation increases the pressure on the price model due to the increase of the CPT-price. When the newspapers don't do anything with their price tariffs, they are forced to give higher discounts, particularly to important national advertisers.

With this in mind the newspapers established a project aimed to challenge the old thinking and practice of how newspaper ads are priced and sold. Again looking to TV and radio, a new price model would most likely depended on using readership data more directly into the price equation. Seeing readership research data become more important for business results is from a media researchers point of view of course very interesting.

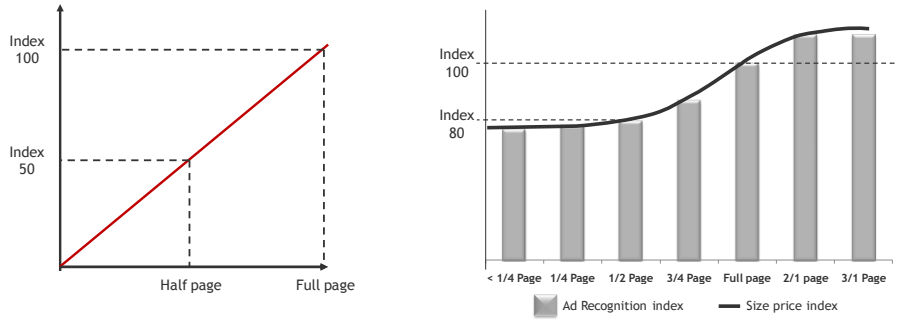
9 TODAY'S PRICE MODEL FOR NEWSPAPERS

As mentioned, the current price model for newspaper advertising is of quite old age. There are a couple of different systems in the market, but the basic model is net based, with a fixed price per ad. So the newspapers sell an opportunity to see an ad in a given section of the newspaper at a fixed rate, dependent mostly on the size of the ad.

The most common way to price an ad is what we could call the **linear system**. In this system a page is divided in to 25 equal squares called modules. With some restrictions it's possible to buy half squares and the price of all squares are qual. That means that a half page ad is half price of a full page ad and so on. The advertiser is simply paying for the space they are occupying in the paper. This is very easy and very logical, but there is one little flaw to this. Most people in the media- and communication industry knows that a half a page ad is not necessarily half the value of a full page ad in terms of effects.

Another system that has gained much attention in the last 5-10 years is what we could call the **S-curved system**. Still net based with a price per ad approach, this system does indeed take the *effect* into the determination of an ad's price. This system was born when the newspaper Aftenposten were shifting from broadsheet to compact format in 2005. To avoid focus on the reduction of the size of the ads, they looked into the substantial database of ad tests they had built up through the years. When looking into the database they found ad awareness levels for different ad sizes like quarter page, half page, and full page etc.

Figure 9. Illustration of the Linear and S-curve pricing systems



They then used this information in order set the prices according to the *effect* rather than a linear approach where *space* is the determinant of the price. So in this system a half page ad is not half price of the full page! Since then many newspapers has followed Aftenposten's example.

Our conclusion is that a new price model should in some way take the "S-curve theory" into account rather than the linear.

9.1 PLANNING AND BUYING TV AND RADIO CAMPAIGNS

As mentioned the newspaper price models differ from those of other media. Most important here are TV and radio, which are viewed as having fresher and more detailed data than newspapers. The audience data are also directly connected to the price of advertising in these media. Both TV and radio have a gross based price model, meaning that an advertiser has to pay for each exposure delivered, regardless of how many times an individual have seen the ad. The procedure for both TV and radio planning and buying is to plan a campaign based on existing audience data – selecting a timeframe of data that are similar to the weeks for the planned campaign. Then a specific target is set on how many GRPs (or TRPs) are to be bought. The TV stations then run the campaign until the ad has reached the bought number of GRPs, according to the audience measurement data.

Both TV and radio price their advertising as a cost per GRP for a 30 second ad. An ad that is longer than half a minute is multiplied by a specified length index to adjust the price. In practice all ads, regardless of length, in a given ad break are producing the same number of GRP's . The function of the length index is really to increase the price for a given spot that is longer than half a minute because it takes up more of the inventory for the channels than a half minute.

9.1.1 Key findings from radio's change from day after recall (DAR) to PPM data

A very interesting comparison for the newspapers is how radio transformed their price model from net to gross based on a shift in currency in 2006. Prior to 2006 radio had a day after recall measurement and the main measure was Average Quarter Hour (AQH) audience. Spots where sold with a fixed price regardless of what might be the actual rating. When shifting to PPM measurement radio got more detailed and precise data about actual listening. This called for a change in how radio advertising were to be priced and sold. Radio shifted from selling spots to selling GRPs. Campaigns are now planned and executed without focusing on number of aired spots but rather on the number of contacts generated – expressed in GRPs. Despite lower reach figures from the new currency (PPMs minute data) compared to the old AQH data, this has proved to be a very successful transition for the radio channels in Norway. The focus on variations of listening during a day was no more an issue in the market, and radios GRP inventory went up. With the new data in hand radio only had to figure out how to set the price for one GRP.

Figure 10. Setting the right price per GRP for radio

Figure 6 shows (Mølmen, 2008) how radio went forward in setting the right price for one GRP. This resulted in a GRP price that was viewed as reasonable and competitive with TV. A similar exercise is what newspapers could do in order to find out a) how many GRPs they are currently producing, and b) what would be the price per unit (ref. GRP price) needed in order to equal the revenues generated through the traditional price per ad pricing. Despite that the final solution nearly doubled the CPT, the change has been a economically success for radio.

10 A POSSIBLE NEW MODEL

When the Norwegian newspaper companies started their discussions about a new price model, they very much looked to TV, but mostly to radio. Radio was interesting because of the recent change from a net based to a gross based model; a result of the new PPM measurement system.

At the same time, the edited internet sites also started their discussion about introducing a gross based price model. In Norway many of the biggest internet sites are newspaper owned online editions. Many newspaper companies sell advertising packages with a combination of paper and online. For that reason it was also logical to consider a new price model, not only for the paper version, but for the combination of paper and online.

However, in the following part of our paper, we are mostly discussing a new price model for the paper edition, as this is where the changes would be most radical, and where we see the greatest challenges.

10.1 GROSS BASED VS. NET BASED

The dominant price model in the market is gross based. In fact, newspapers (and magazines) are the only media channel that has a net based price model. As explained above the net based model has big disadvantages when looking at CPT in the current situation. In a gross based model a media channel gets paid for every exposure they deliver, and the price per exposure point (GRP) is a fixed value.

Media	Survey & measure	Currency	Type	Note
Newspapers/ Magazines	Newspapers- CATI Magazines - F2F	Aaverage Issue Readership	**Net**	Sales based on readership. Cost Per Thousand (CPT) is the dominant cost efficiency measure
TV	TV meter panel	Gross/Target Rating Points (GRP / TRP)	Gross	Settlement of price according to gross delivery of exposures
Radio	PPM panel	Gross/Target Rating Points (GRP / TRP)	Gross	Settlement of price according to gross delivery of exposures
Internet	Norwegian Internet Panel (NIP)	Number of Displays/ CPM	Gross	Implementation in progress. Cost Per Million (CPM) displays is the dominant cost efficiency measure
Outdoor	Outdoor Impact	Visibility Adjusted Contacts	Gross	VAC= Visibility Adjusted Contacts
Cinema	Tickets Admissions + Reach and Frequency in Consumer & Media - CATI	Admissions	Gross	Settlement of price according to gross admissions

A point worth noting concerns the Internet and the establishment of the panel measurement. Even though not fully implemented, the price model will be based on the gross approach. Keeping in mind that the newspapers' online editions are a major player in the market, the media houses should consider a price model which support cross platform sales. As of today they are relying on a net based and a gross based model when selling print + internet ads in a package. If both where gross based, it would be much easier to calculate the total exposure delivery - as you simply could add them together. When selling combined packages (paper

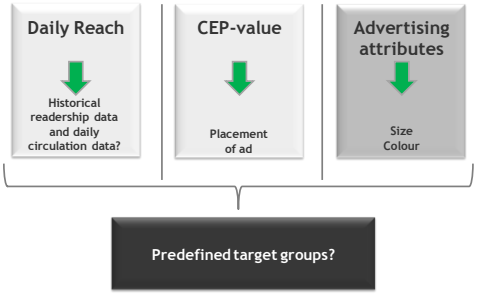
+ online) the online edition could also provide more flexibility to fulfill the agreed delivery of exposures than that of print alone (see discussion in section 11.1).

10.2 A GROSS BASED PRICE MODEL FOR THE NEWSPAPER INDUSTRY

In a gross based model the cost efficiency focus will shift from CPT (cost per thousand readers) to CPC (cost per contact). This will generate an entirely new situation for newspapers, selling ads based on a gross based model rather than the current price per ad approach. We believe the biggest challenge in the market will be the shift of focus and thinking when going *from net coverage to gross contacts*. The number of contacts could either be calculated for the total population, or within predefined target groups. This is the equivalent of how TV and radio sell either GRPs (Gross Rating Points) or TRPs (Target Rating Points). Obviously the TRPs are more expensive than the GRPs, since the advertiser then pays for a better targeted audience. This is where we envisage that the newspapers' new currencies (CEP) could come into play.

A new model would require various input data in order to be comparable to the price models for TV and radio. Figure 7 illustrates a framework for a possible new model and the types of input data we deem it necessary to include:

Figure 11. Framework of input data for a new price model



In more detail: the following variables would be needed to calculate the actual number of contacts and the price for a specific ad or a campaign:

1. **Reach and Frequency**
   In one way or another reach and frequency figures will need to be part of a new price model.
2. **Daily Reach (on any given date)**
   Creating a relevant and solid measure of daily reach on any given day is a big challenge. Despite the increase of the NRS sample size to 45.000, reliable daily reach figures on this level cannot be obtained from the NRS. Not even for the big national titles will we adequate data. There could be several ways to create such a measure, and a combination of sources could be a solution. One option could be to simply adjust the average readership figures according to an indicator created from one or more external sources. The basic idea is to create a figure that is on par with TV and radio, and is viewed as a reliable measure of readership on a specific day, ex. Tuesday 11th of October 2011. Input sources could be:
   a. **Analysis and modeling of historical readership data**
      Modelling in itself would probably not produce an adequate measurement of daily reach but it could take account for any underling trends, seasonality etc. Input from modelling would probably be more important in a planning situation rather than the evaluation of a campaign.
   b. Use of circulation data
      In Norway reliable circulation data are available within few days for each title by date. Variation of daily circulation compared to average could be used to estimate a daily readership figure. A joint analysis of readership and circulation data could even help us establish a relationship between readership and circulation which could be helpful or even necessary. The challenge is to get these data quickly into a reporting system – but we reckon this as a solvable issue.
   c. Use of simple readership indexes by weekday and season
      Indexes of readership on different weekdays and seasons are provided in the NRS today. An easier way than to use circulation data could be to use these indexes in the price model. It would not produce exact readership for a given day, but could be viewed sufficient, and far better than using average readership.
3. **OTS for an ad**
   The introduced CEP-values would serve as the OTS for an ad measure.

4. **Advertising Attributes**
   A price model also needs to take into account for different kinds of ad attributes; most importantly ad size. The data used in the S-curve system could be used to create size indexes. In theory this could also be used in the calculation of number of contacts, but as a starting point the size index would only be used for calculating the prize.

A new price model can then be defined as like this:

$$\frac{\text{Daily reach \%} * \text{Avg. Frequency} * \text{CEP-value}}{\text{Size of defined universe (\% of total population)}}$$

This formula could be seen as GRP for newspapers. But since it's not derived from a traditional TV/radio GRP, we prefer the idea of coming up with a unique term for newspapers. ***TEP (Total Exposure Points)*** is the term we came up with, that sums up what the formula calculates. One TEP is equal to 1% of the defined universe, and the formula calculates the gross percentage of the population reached in terms of exposures. Using number of readers and size of population instead of percentages will give the gross number of exposures/contacts delivered.

In addition we would need an extra component to determine the price of a given ad or campaign. The best idea is probably to introduce a "size index" for all ad sizes. In our view it would be appropriate to learn from the S-shaped price model, as this is rooted in empirical studies of ad recognition effects. The "size index" will not affect the TEP-value, even if we of course know that bigger ads in general produce a higher likelihood to be seen, or a higher OTS if you like. The size index will be an important part of the price model in order to calculate the price of a campaign. It will also be important to choose the "correct" ad size to be set as index 100, as this will be viewed as the "signal price" to the market. With the addition of a predefined price per TEP the price will be calculated as follows:

Delivered TEPs * price per TEP * size-index

We are aware that it will be a challenge for each and every newspaper to establish a "correct" TEP-price. Even if we manage to establish the "TEP model" in the market as a unique newspaper (or print) value not to be confused with GRP, the market will most probably compare the TEP-price for newspapers with the GRP-price for TV and radio. However, this only underlines the importance of doing a thorough job when setting the price per TEP. During our project we did some initial calculations based on some actual advertising campaigns, but in this area there is still much work to be done.

10.3 WITH OR WITHOUT FINAL SETTLEMENT

There could be two ways of implementing a new price model:

1. **A gross based price model *without* a final settlement deal**
   - *Will involve a different kind of sales approach than the current model, and would implement the new currency better than the current. Such a model would in fact not require the daily reach figure, as it would still use the average figures for readership.*
2. **A gross based price model *with* a final settlement deal**
   - *Both TV and radio follow this route and this would require a daily reach figure for newspapers as well. The final settlement works as a receipt for what has been delivered, and the advertiser is invoiced accordingly. A final settlement also helps the advertiser to be confident that they actually are receiving what they are paying for.*

A price model with a settlement deal involves more complexity than a model without settlement for sure. The big question would be which would get the higher market acceptance.

Both TV and radio are also following the practice of calculating a final price settlement for a campaign after the campaign is finished airing. The advertiser will only pay for the number of GRPs that a campaign has generated. If a campaign has gained less GRP's than planned within the planned timeframe, the channels might run the campaign a little longer in order to meet the agreed GRP level. For TV and radio this could be done rather accurately, since the ads can be run next to programs that produce a range of GRP's; from very small to very large number of GRP's. For newspapers this is a bigger challenge, since insertion of ads would produce GRPs (or in our case TEPs) in larger intervals. For example: if a newspaper runs 5 ads that each produces 45 TEPs, the results for the total campaign would be 225 TEPs. If an advertiser has bought 250 TEP's from the newspaper – how should the newspaper respond to produce 250, when one more insertion (45 TEPs) would result in a campaign total of 270 TEPs? Reduce the ad size to half or run the ad in only half of the copies? We think there are ways around this dilemma, which will be discussed in the following chapter.

11 FOUNDATION AND CHALLENGES FOR A NEW PRICE MODEL

The main target for a new price model would be the national market, with media agencies and brand owners as the important players. This means that a new model would be relevant primary for the big newspapers and the syndicates. In our opinion the local markets works differently, and are not mature enough to understand and hence accept a gross based model. This is the case for radio as well, where there are two different approaches; one for the national market (gross) and one for the local (net – price per spot).

Figure 12. For whom a new price model would have primary relevance

	National advertisers	Locale advertisers
Big newspaper	Yes	?
Syndicates	Yes	?
Small newspaper	No	No

Even though you could implement a new gross based model for the sale of any individual ad in the national market, we think such a model would be more appropriate when ad volumes are a bit bigger. We have outlined three situations where the gross model would seem to work particularly well:

1. **Campaigns**
   - *As discussed in chapter 10.3 there could be situations where it is difficult for newspapers to deliver an exact number of TEPs as planned due to the nature of the medium. The different readership of newspaper sections (CEP) will however provide flexibility for the newspapers to deliver as close as possible the number of required TEPs. In such a case it is up to the newspaper to place insertions wherever they like in order to meet the TEP requirement.*
   - *A common practice by other media is to transfer the value insufficient delivery to the next campaign(s).*
2. **A settlement of account of within a given agreed timeframe**
   - *A final settlement of account according to delivered contacts within an agreed time period:*
     - Examples: monthly, quarterly, half yearly etc.
   - *A common practise in the market is to have yearly agreements between advertisers and media that regulate volume, prices and discounts within a given year. For these kinds of agreements a gross based model would work very well as they require a continuous follow up on what has been delivered and what are to be paid.*
3. **For a combination of paper and online advertising.**
   - *"All" newspapers are aiming to sell advertising on all platforms where they provide editorial content. To sell packages of digital and paper advertising are therefore very attractive for the newspaper houses. The common practise now is that all newspaper campaigns include online as well.*
   - *With a new gross and exposure based price model for online, it would be easier to calculate the total delivery of the combined packages.*
   - *Online ads could quickly be removed as soon as the planned exposure points are met, whereas to run one more insertion in the paper edition most probably would result in a delivery above planned. Online would therefore provide needed flexibility for the newspaper houses in order to deliver exposures as close to the agreement as possible.*

Our conclusion is that a new price model would be more successful if implemented with a settlement arrangement. This is more comparable to newspapers' biggest competitors, and it would be viewed as a more real "pay for what you get" approach than without a settlement deal.

11.1 POSSIBLE CHALLENGES

Even though a new gross based price model seems a reasonable way to go forward, there are some challenges connected to it as well. However, we think they are possible to overcome - but it will require some time to solve the technical issues. Feedback from the market indicates that such a new way of thinking would be welcomed and accepted by the market - and after all, that is the most important issue anyway. We identified the following to be the most pressing challenges for the successful implementation of a new model:

1. **Structural challenges**
   a. *Definition of the universe for niche papers, big regional newspapers and syndicates. For the regional newspapers and syndicates it should be rather easy to define a universe that is representative of their geographical area. For niche papers, such as business papers, it is a bit more complicated.*
   b. *The size index. We believe that the S-curve is a better, unique and more future proof approach than the linear. However, this would require that all newspapers need to agree on a standard of what will be the optimum s-curve and what should be determined as the index 100 for the size index.*

2. **Practical challenges**
    a. *We would need to find the right formula for estimating daily readership figures, based on a combination of circulation and readership.*
    b. *Even though the newspapers have a good system for calculating daily circulation, we would need to implement this to work on a day to day basis together with other systems such as accounting and production systems/software.*
    c. *Training of the market and internal sales peoples.*
3. **"Psychological" challenges**
    a. *A radically new and different way of thinking compared to the old model.*
    b. *Acceptance in the market.*

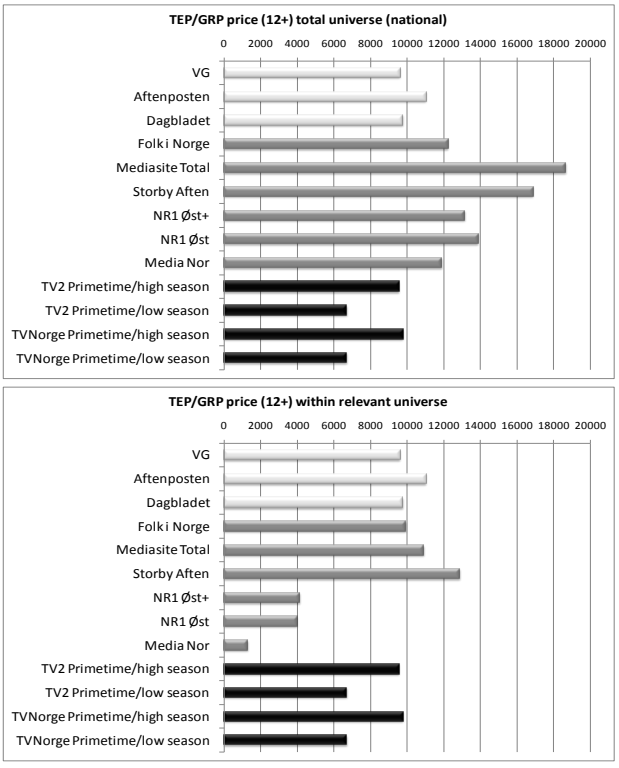
12 THEORY & PRACTISE

A very important exercise to get a final judgment about the realism of implementing a new price model is to look at its potential and economical consequences. This point has only played a minor part of our project which aim primarily was to get some initial thoughts on how a new model could be constructed. Our project outlined a way forward where these exercises are of crucial importance. We did however make some initial investigation and calculation in order to do a first reality check on the model.

The first check was to briefly see what TEP potential there was in today's advertising volumes in the newspapers. What we found when counting all advertising within some newspapers during a week was that there was indeed a great deal of TEP production. Looking at revenues generated from all ads within the same week gave us an early indication that there should in theory be possible to establish a competitive TEP price. The results of these calculations are vague since there are too many factors that could make a difference that our little exercise did not account for. Our suggestion to the newspapers was to appoint a dedicated committee to make more reliable calculations and simulations on how the model could work out. But with our little exercise we have pointed out how this could be done based on existing information. This is pretty much the same route as the radio channels followed when they changed their price model in 2006, discussed in chapter 9.1.1.

We believe that the market will compare the GRP price for TV and radio with the new TEP price for newspapers (and eventually magazines as well). Just looking at today's rate cards gave us valuable information about the realism of the proposed new model. As we can see from figure 10 the TEP prices are not so far away from some of the GRP prices for TV. Figure 10 also shows the importance of defining a relevant universe for newspapers with limited geographical reach.

Figure 13. Comparing TEP / GRP prices from today's rate cards (full page ads)



In figure 10 the first 3 newspapers are national and the next 6 are newspaper syndicates with different geographical reach. The last 4 media are 2 TV channels in two different seasons. The graph on the left shows that the national newspapers TEP price is not that far away from the GRP prices of the TV channels. The regional syndicates do however have a TEP price far above. This exemplifies the need to define a relevant universe for each regional publication or syndicate. The graph on the right shows that when the universe is set to reflect their reach area, they produce more TEPs and become much more competitive.

Even with today's rate cards we think that these calculations show promising results in favour of continuing to develop the new price model. We should also bear in mind that the TV GRP does not take into account any special placement towards programs etc. The TV channels operate with a range of price amendments for any special requirements, and this will increase the GRP price. We would recommend for the newspapers to operate with similar extra "toppings" as well.

13 CONCLUSION

Our conclusion is that it certainly would be possible to implement a new model, but that there are certain challenges. However, these challenges are not impossible to overcome – the worst enemy is probably the "old way of thinking". A report on this issue has been presented to the biggest newspaper owners (Sandvik, Holbæk-Hanssen & Ruud 2011), and are received with much interest. The current status of this project is that the various newspaper groups are evaluating the suggested model and how it could be implemented. Obviously there has to be done a significant number of calculations based on historical adspend data in order to determine the implications of a new model.

The main benefits of changing the price model from net to a gross (exposure) based model are several. A new exposure based model would help avoiding pressure on CPT prices due to decreasing readership figures. It would also make use of the new currency data, and help to promote them, in a more "fulfilled" way. A new model would most likely work better on bigger national campaigns and towards brand owners, which is a market where newspapers need to be more competitive. From our point of view a new model would work best if it is implemented with a settlement deal at the end of a campaign or within a defined time period. We strongly believe that such a model would better promote the newspapers towards the brand owners/national market, as it would be more comparable to the price models of other media.

For nearly all newspapers it is a high priority goal to sell packages of both print and online advertising to the market. A new gross based model would make such offerings easier to sell and document. The combination of print and online advertising would also add flexibility in the delivery of exposures.

Despite the obvious challenges that all new ideas naturally face, we hope to have planted a seed within the newspaper organizations. At the very least it ought to lead to a thorough evaluation of the current price model. We do hope however, that this paper could create a debate for a new way of thinking about these issues while here in San Francisco – it's much needed we think. We also hope that a closer integration of readership data in the price model – thus making readership research more important - will be welcomed by fellow media research colleagues.

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