INTRODUCTION

Price bundling, the practice of combining multiple products or components at a set price, has become a popular marketing strategy (Eppen et al., 1991; Dolan and Simon, 1996). Retailers use promotions in a very intensive manner to attract customers and increase their revenues. Among the promotional techniques, bundle is one of the most used. A bundle is an offer for price reduction in exchange for buying a set number of product units (Guiltinan, 1987; Stremersch and Tellis, 2002). A bundle is said “real” when the products are physically over-packaged in a single unit to be sold. It is said “virtual” when the products are presented separately but in conjunction with communication presenting a possible discount in case of the simultaneous purchase of a set number of product units. Specifically, the bundle does not exist in itself (it is “virtual”): it is the customer who, by picking several products, creates the bundle. Food and beverage suppliers bundle ready-to-serve meals while computer vendors bundle a central processing unit, a monitor, a printer and software at a single price. Manufacturers of industrial goods, such as machine tools, electronic components and chemical substances, frequently offer their products at a system price in conjunction with an assortment of services. In the service sector, travel companies bundle flights, rent-a-cars, accommodations, and events into a one-price vacation package. Strategically this bundling activity is designed to benefit the consumer, as through a reduction in transaction costs or combining of complementary products and services to differentiate an offering, and/or reduce a company’s own transaction costs (Demsetz, 1968; Danshy and Conrad, 1984). The bundles are advertised by retailers on features and displays, but unlike the real bundle, the virtual bundle is not advertised on the packaging of the product. However it can sometimes be “materialized” by bags in which the client must insert the products. A virtual bundle could then be perceived less easily in store. Moreover the communication of the virtual bundle is more complex than that of the real bundle. The former presents the basic offer (product and price) and the details referring to the virtual offer (granting conditions and price) whereas the latter only presents the package with its price. Meanwhile the virtual bundle also highlights the discount or the free part of the product, which increases the perceived value of the offer (Chandrashekaran, 2004).

The literature on virtual bundling is still scarce (Desmet, 1999) and the first step in this research consisted in interviewing experts from three major actors in pushing everyday products to the market (Colgate/Palmolive, Unilever, and Yoplait), a retailer (Monoprix) and a firm specialized in the analysis of consumers’ behavior (Catalina). All experts justify the development of virtual bundling from its many advantages over real bundling. The promotions implementation costs are mainly financed by the manufacturers and are particularly important for classical bundles as they include specific packing or the creation of a new gencode (Drèze and Bell, 2003). However, retailers are currently getting equipped with “intelligent” registers that make possible the creation of virtual bundles that avoid those costs. As it does not require a specific manufacturing process, virtual bundling limits the drawbacks of a failing sales forecast (i.e. out of stock conditions, reconditioning of excessive stocks). For the retailer, virtual bundling strongly highlights the advantage proposed to customers and allows for an
increase of sales volume without modifying the processes at the point of purchase. Finally, virtual bundling affects the manufacturer-retailer relationship. On one hand, it supports a good relationship with the retailer within a trade marketing framework (i.e. insertion in features) because this type of promotional offer is in line with retailers expectations. On the other hand, it enables the manufacturer to move from a contractual promotion to an efficient promotion as only the units bought are invoiced when real bundling was based on fixed allowances (Desmet, 2002).

II. REVIEW OF LITERATURE

In the literature, the perception of the benefits and costs of promotional offers is analyzed along three different modes – economic, affective and informational – that in turn impact the customer offer evaluation and purchase intention (Chandon, Wansink and Laurent, 2000; Raghubir, Inman and Grande, 2004). However, as virtual and real bundles differ on the physical presentation of the bundle and price information, all the costs and benefits have to be reexamined. The results of this study show that: virtual and real bundles are perceived as similar, the virtual bundle is considered as less visible and less clear than the real bundle, the consumer doubts the promotion will be applied for the virtual bundle, when he feels it is assured for a real bundle, the virtual bundle implies a more intensive decision making process for the customer whereas the real bundle immediately translates into a “promotional signal”.

Following the conceptual framework proposed by Raghubir, Inman and Grande (2004) and taking into account this study, virtual and real bundling are compared along the economic, affective and informational routes.

The economic route

The economic route deals with the monetary and non-monetary – time and effort – benefits and losses associated to the promotion by the consumer (Raghubir, Inman and Grande, 2004). The presentation and the communication of a promotional offer directly influence its perception and evaluation by the consumer, even for an equal economic value (Janiszewski and Cunha, 2004; Harlam et al., 1995). In particular, advertising a reference price results in a better evaluation (Della Bitta, Monroe and McGinnis, 1981; Das, 1992; Chandrashekarar, 2004). For the real bundle, the communication on pricing only reflects the bundle price but for the virtual bundle, the bundle price comes with a reference price. In consequence:

H1: The perceived monetary benefit is higher for the virtual bundle than for the real bundle.

The communication around the deal can create an uncertainty on the value (Raghubir, Inman and Grande, 2004) and increase the perceived risk from a mistake in choosing. Whereas real bundling corresponds to a certainty on obtaining the benefit, virtual bundling requires increased vigilance at the register as the promotional benefit from virtual bundling is effective only after the register check. Thus:

H2: The perceived cost of effort from control is higher for the virtual bundle than for the real bundle.

The affective route

The affective route refers to the feelings and emotions that can emerge during all steps of the buying process (Raghubir, Inman and Grande, 2004). To the general affective benefit derived from the satisfaction of getting a good deal, a benefit of self-expression, more specific, is linked to a claim of smart shopper know-how (Schindler, 1989). This benefit is directly connected to the self-attribute of the responsibility for promotional benefit (Schindler, 1998). As virtual bundling requires a particular effort from the buyer, he may feel responsible for the promotional benefit obtained. Thus:

H3: The perceived self-expression value associated to the deal is higher for the virtual bundle than for the real bundle.

The informational route

The informational route refers to the cognitive activity generated by the exposition to the promotional stimulus: inferences about the brand, expectancies about quality, price or promotions to come, awareness of the brand, etc. (Raghubir, Inman and Grande, 2004). A price promotion enables the consumer to reduce his decision making process by giving him a justification for his purchase and for the quantity to buy: the promotion acts like a “signal” for the consumer (Raghubir, Inman and Grande, 2004). This signal effect, which goes through a first evaluation of the physical dimension of the product (Raghubir and Krishna, 1999), is more important for the real bundle. Moreover the qualitative phase revealed a « peripheral » treatment of the real bundle: it is appreciated on its value as « signal » and is not subject to an in-depth analysis of the associated economic interest. On the contrary, the virtual bundle seems to be the object of an in-depth decoding and thus of a more « central » treatment of the offer (Petty and Cacioppo, 1981). Thus, we postulate that:

H4: The perceived interest associated to the deal is identical for both virtual and real bundling.

RESEARCH METHODOLOGY

The objective is to compare the perceived benefits, costs and interest towards a bundle depending on its implementation (virtual or real) for a constant economic value with an inter-subjects experimentation framework.

As this study focus on the consumer’s evaluations towards bundle offer with special reference to FMCG products. The target respondents of this study were individuals who consume the bath soap in an around of Chidambaram town. The questionnaire was divided into different parts, each examining the consumer’s evaluation process towards bundle offer. The 2x2 design crosses the presentation of the bundle (real vs. virtual) and the product category (Hamam bath soap vs. Cinthol bath soap). The economic value of the offer is a 36% discount in the form of free product: (three units bought = the fourth free). The selection of the two brands is set to enable replication of results but no particular difference is expected between the two brands.

The degree of perceived benefit and cons was also asked in the questionnaire. Finally, demographic information was asked, including average monthly income. Convenient sampling
method is used to identify the samples. A total of 146 usable questionnaires were returned. The respondents were asked to complete the questionnaire based on their evaluation towards bundle offer. The survey used a multi-item approach with each construct being measured by a few items for construct validity and reliability. Measurement of perceived monetary benefit, perceived cognitive cost, Perceived self-expression value and perceived interest towards bundle offer were carried out by a five-point likert scale, ranging from strongly agree to strongly disagree.

The constructs were measured with multi-item scales. The reliability is satisfactory for the perceived interest (three items adapted from Bréchet, Desmet and De Pecheyrou, 2005; Cronbach’s α=0.71), the economic and hedonic benefits (three items each from Chandon, Wansink and Laurent, 2000; α=0.85 and α=0.80 respectively), the cognitive cost linked to the promotional signal (three items derived from the exploratory qualitative phase; α=0.72) and the promotional sensitivity (three items from Froloff, 1992; α=0.87). However, the reliability is modest for the perceived cost of effort from control scale (three items from the exploratory qualitative phase; α=0.50) that had not been the object of any preliminary validation.

Data Analysis And Interpretation

Table 1: Frequency distribution of respondent’s profile

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>93</td>
<td>63.7</td>
</tr>
<tr>
<td>Female</td>
<td>53</td>
<td>36.3</td>
</tr>
</tbody>
</table>

Table shows the profiles of the respondents. It is observed that among 146 respondents, majority of the respondents are male (63.5%), and 36.3 percent are female. It is observed that among 146 respondents, majority of the respondents belong to the age group of above 35 years (65.8%) followed by the respondents in the age group of 26-35 years (29.5%), 3.4 percent of the respondents are observed in the age group of 16 to 25 years and 1.4 percent are noted below 16 years. Among the respondents, 50.0 percent have acquired graduate level of education, whereas 25.3 percent of the respondents educated up to post graduation, 20.5 percent of the respondents are educated up to under graduation or professionals and 4.1 percent of the respondents are noted to be professional holders.

Table 2: Influence of gender on perceived benefit and costs

<table>
<thead>
<tr>
<th>Gender</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>2.9432</td>
<td>.3789</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>3.0283</td>
<td>.3683</td>
<td>1.739</td>
<td>.189</td>
</tr>
</tbody>
</table>

Among the respondents, 50.0 percent are housewife, whereas 30.8 percent of the respondents are employee, 8.2 percent are professional, 6.2 percent of the respondents are businessman.

The above table shows the mean and standard deviation of perceived benefits and costs towards bundle offer with respect to gender. ANOVA was performed and the result shows that the respondents do not differ with respect to their gender towards perceived monetary benefits on bundle offer (F=1.739; P=.189). However male (mean=2.9432; SD=.378) have less mean value compared to female (mean=3.0283; SD=.3683) respondents.

Table 3: Influence of age on perceived benefit and costs

<table>
<thead>
<tr>
<th>Age</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 16</td>
<td>2.8214</td>
<td>.0505</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16 – 25</td>
<td>2.8143</td>
<td>.4989</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26 – 35</td>
<td>2.9601</td>
<td>.3259</td>
<td>.496</td>
<td>.685</td>
</tr>
<tr>
<td>Above 35</td>
<td>2.9918</td>
<td>.3951</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The age is important factor in evaluation of bundle offer, because majority of the respondents are middle age. The above table shows the mean and standard deviation with respect to the age of the respondents. ANOVA was performed and result shows that the respondents do not differ with respect to their age towards perceived benefit and costs (F=.046; P=.685). However, respondents belong to above 35 years of age group have higher mean value (mean=2.9918;SD=.395), followed by 26-35 years of age group(mean=2.9601;SD=.325) respondents belong to 16-25 years of age (mean=2.8143;SD=.498) groups have less mean value, which mean that their attitude is less compared to other age groups.

Table 4: Influence of education on perceived benefit and costs

<table>
<thead>
<tr>
<th>Education</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under Graduate</td>
<td>3.0143</td>
<td>.3465</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate</td>
<td>2.9599</td>
<td>.3939</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post Graduate</td>
<td>2.9865</td>
<td>.3701</td>
<td>.867</td>
<td>.048</td>
</tr>
<tr>
<td>Professional</td>
<td>2.8690</td>
<td>.39232</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2.9741</td>
<td>.3760</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The above table shows mean and standard deviation of perceived benefit and costs with respect to education. ANOVA was performed and result shows that the respondents significantly differ with respect to their education towards perceived benefits and costs (F=.867; P=.048). However, graduate have higher mean value (Mean=2.9599; SD=.393) compare to post graduate (Mean=2.986; SD=.370) and under graduate (Mean=3.014; SD=.346).

Table 5: Influence of occupation on perceived benefit and costs

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student</td>
<td>2.9589</td>
<td>.33612</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Businessman</td>
<td>2.9127</td>
<td>.40371</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employee</td>
<td>3.0063</td>
<td>.54987</td>
<td>.853</td>
<td>.022</td>
</tr>
<tr>
<td>Professional</td>
<td>2.9286</td>
<td>.35909</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Housewife</td>
<td>3.0816</td>
<td>.39999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2.9741</td>
<td>.3760</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Above table explains the respondent opinion towards perceived benefits and costs based on the occupation of respondents. Mean and standard deviation are calculated for each group. ANOVA was performed and result shows that the respondents significantly differ with respect to their occupation towards perceived benefits and costs (F=.853; P=.022). However the mean value of the respondents who are housewife category (Mean=3.0816;
A multivariate variance analysis (MANOVA) is conducted with bundle type and product category as variables and with monthly purchased volume and deal proneness as individual covariables. The interaction between bundle and product category is not significant. Therefore, the data of both categories are pooled together (see descriptive results in Table 6).

The multivariate analysis shows a global positive effect for the variable bundle type (Wilks Lambda=0.87; F=4.71; p=0.003). The contrasts for bundle gives significant results for the perception of economic benefits differences (H1a supported) and cognitive efforts linked to the added verification for the virtual bundle (H1b supported). Contrary to the proposed assumptions, bundle type influences neither the value of self-expression (H2 not supported) nor the perceived cognitive costs linked to promotional signal (H3 not supported). Globally the difference of interest between the two bundles is not significant: the virtual bundle does not benefit from a stronger interest than the real bundle (H4 supported).

**DISCUSSION**

The academic literature underlines the need for the members of a distribution channel to coordinate their actions to improve their effectiveness (des Garets, 2000). Virtual bundling reduces expenses for each partner while encouraging them to implement joint savings. In particular, virtual bundling can avoid the manufacturing costs of creating and storing the bundles. Manager interviews reflect quite well the idea stressed by the literature of an increased efficiency associated with collaborative practices. Nevertheless, a qualitative study on consumers reveals different benefits and costs associated to the virtual bundle. The virtual bundle is less visible in shelves and more complex to decode than the real bundle. Moreover, the use of virtual bundle is often linked to the uncertainty of obtaining the discount. The quantitative study demonstrates that the positive effect from a higher perceived economic value is balanced by the negative effect of perceiving the additional cognitive costs associated to the decision making process, in particular those linked to the uncertainty of obtaining the discount for virtual bundles. So, these results prove that there is no significant reduction of the interest for the virtual bundle compared to the real one.

**Managerial Implication**

Two managerial implications can then be stressed. First, virtual bundling offers all the characteristics that should lead to a more and more intensive use for promotional campaigns regarding everyday use product categories. Second, the quantitative studies show the importance of in-store communication that ensures the visibility and success of virtual bundling. For instance, it seems very useful to organize weekly in-store events based on virtual bundling. Features constraining format to explain how virtual bundling works. Two limits should be considered. First, the lack of previous researches led to an exploratory process based on interviews. The new scales developed for the purpose of the study are not totally satisfactory and their reliability has to be improved. Second, the experimentation ignores the influences of point of purchase characteristics. These elements could possibly moderate the general conclusion stating virtual bundles appear to be a more interesting solution than real bundles.

**CONCLUSION**

Consistent with our hypotheses, the influence of bundle price discount on evaluations of bundle components varied across virtual and real bundles. In a virtual bundle, bundle price discounts made consumers perceive the regular prices of bundle components as more expensive; however, it had no effect on quality perceptions of individual bundle components. The influence of bundle price discounts on evaluations of virtual bundle components was significantly different in a real bundle than that in a mixed-joint bundle. First, the bundle price discount had no influence on perceived price of the undiscounted product in the bundle, but enhanced its perceived quality. Second, the bundle price discount hurt the discounted product in the bundle, leading to more expensive perceived regular price and lower perceived quality. However, the effects of bundle price discount on evaluations of bundle components were moderated by complementarity of bundle components. Under high levels of bundle component complementarity, the negative impacts of the bundle price discount on the discounted product and positive impacts on the undiscounted product were attenuated. In future research, the direction for future research is to examine the influence of a variety of potentially moderating effects on price bundling. Two potential moderating factors described earlier are a consumer’s need for cognition vs. their preference for summary information.

**References**


Froloff, L., 1992. La sensibilité du consommateur à la promotion des ventes: De la naissance à la maturité.

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