“Converting Browser to Buyers: An approach to measure and increase conversion rates in retailing”

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Converting browser to buyers: an approach to measure and increase conversion rates in retailing

Abstract

The conversion rate is the percentage of customers who enter a store and make a purchase. In this paper, we argue that a conversion rate defined by two stages (visit and purchase) is too rough to measure in many retail settings. Drawing on the idea of hierarchy-of-effect-models we propose a multi-stage framework, which decomposes conversion rates into four specific components with higher diagnostic value. Based on a qualitative and quantitative study in a retail context characterized by comparative shopping we demonstrate the usefulness of this approach. It is argued that our framework can be applied in a wide variety of settings in retail contexts of comparative shopping.

Keywords: conversion rate, hierarchy-of-effect models, store browsing, store traffic.

Introduction

Retailers' marketing activities serve three major purposes: 1) draw customers into their stores, 2) encourage browsers to buy, and 3) influence the type and quantity of items customers buy. Accordingly, retailers' objectives are classified into three broad categories: attraction effects (store entry or store-choice decisions), conversion effects (proportion of customers that buy something at the store) and spending effects (size and composition of transactions) (Lam et al., 2001).

Video-imaging and infrared-technology allows retailers to measure front traffic, store traffic, and aisle traffic accurately and at low cost and many retailers have installed electronic store traffic counters and together with the use of scanners with their large transaction-specific databases, retailers can assess the conversion rate and the effects of marketing activities, such as promotions, the number and composition of transactions completed, product sales, and profitability (Lam et al., 2001). These measures are valuable in cases where the shopping ratio is close to one, e.g., in most supermarkets. However, in settings with a high amount of comparison shopping (e.g., jewelry, giftware, apparel), the conversion rate is way below one and is typically between 10 and 20% in mall stores, between 20 and 30% in strip center stores, and between 30 and 40% in main street stores (www.storetraffic.com). In these cases the conversion rate is a key performance indicator. For example, when the current conversion rate is 20%, a 1% increase results in a 5% increase of sales.

In this paper, we argue that the conversion rate (i.e. the percentage of consumers who enter the store and make a purchase) is too rough to measure. Borrowing from hierarchy of effects models we propose a framework to decompose the conversion rate into four components along the shopping process (entrance, browsing, staff contact and purchase act). In each of these four phases customers can be lost, or converted. We present a case study that illustrates how these four conversion rates can be measured and how the reasons for the gaps can be identified. The primary objective of the paper is to introduce a new more detailed and specific view on conversion rates with a higher diagnostic value and to present a practical approach to conversion rate management. The main contribution of this paper therefore lies in the practical approach and in its strong and important managerial implications.

1. Conceptual background

Hierarchy of effects or 'stair-step' models, in which consumers move through some set of stages from unaware through awareness and interest toward purchase and postpurchase behavior, has a long and robust history in consumer theory and application (e.g., Strong, 1925; Vakratas and Ambler, 1999). Originally adapted from sales force management (e.g., Dalrymple et al., 2004; Roff-Marsh, 2004), such models have also been used to explain consumer decision making in general (e.g., Arndt, 1976; Nicosia, 1966), and have been applied most prominently to advertising effects (e.g., Barry and Howard, 1990; Lavidge and Steiner, 1961).

The advertising literature has extensively considered hierarchies of effects, the 'best' taxonomy of psychological stages, and whether or not consumers proceed linearly through the steps (for a review see Vakratas and Ambler, 1999). Hierarchy of effects models have not been as often considered or applied in retailing, although 'conversion rate' (or 'conversion ratio'; the rate at which traffic is converted into sales) has been considered, almost exclusively in online retailing (Hoque and Lohse, 1999; Johnson et al., 2004; Kim et al., 2007; Moe and

Fader, 2004; Mummalaneni, 2005). Conversion rate, defined as "proportion of Web site visitors that actually place a purchase order" (Mummalaneni, 2005) is essentially a two-step behavioral hierarchy assessing the rate at which consumers who visit a website make a purchase (behavioral in that, instead of modelling sequences of psychological processes [awareness, interest, and so on], conversion rate models overt behaviors). Conversion rate in the context of bricks-and-mortar retailing has not been as often considered in theory and research but is an important consideration in the managerial literature. It has been the focus of technological development (e.g., Steenburgh et al., 2007) and many retail effectiveness metrics tap related ideas. In this paper, we propose a hierarchical model of conversion rates for bricks-and-mortar retailing, we describe a method for assessing and ameliorating conversion at multiple stages, and we also present a case study of the model and method's application. This model is multi-stage: whereas conversion rate is defined by two stages (visit and purchase) our model includes multiple stages of shopper "conversion" and is adaptable to additional or fewer stage analyses.

Figure 1 presents the framework of our analysis. Instead of using one single conversion rate (percentage of entrants who are converted), we decompose it into four components along the shopping process and use four ratios:

- Browser ratio: percentage of entrants who decide to browse;
- Querier ratio: percentage of browsers who ask sales staff for information or advice;
- Serious Interest ratio: percentage of queriers who are seriously interested and proceed to cashier;
- Closing ratio: percentage of seriously interested who buy.

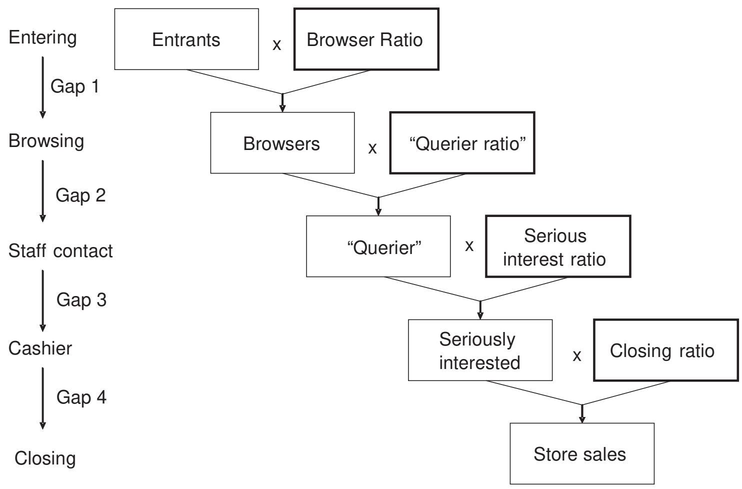

Fig. 1. Framework for the analysis of conversion rates

The first stage in the shopping process is the entering phase. Already in this phase some customers may decide not to browse through the store and not to buy. Here the first customers can be lost (first gap). The second gap emerges between customers who decide to browse and those who approach sales staff. In this stage of the shopping process, another gap emerges when a share of the browsers decide in this phase not to contact sales staff and not to proceed with the shopping process. Of the "querier" (those customers who ask sales staff for information, advice, or help), not all are seriously interested in buying a product (gap 3). The last gap emerges when those customers with a strong buying intention for some reason abandon the purchase (gap 4).

While many customers may proceed linearly through these phases, some may immediately approach sales staff without browsing, or go directly to the cashier. Nevertheless, as our case study will show it is useful to consider this multi-stage framework.

2. The measurement and management of conversion rates: a case study

A worldwide retailer in the area of jewelry and fashion accessories with more than 1,200 standardized stores has been chosen to collect data. The empirical study was conducted in two phases. In the first phase, a qualitative study was conducted to get a better understanding of the shopping process, the conversion rate, and reasons for not-buying. Second, a quantitative study was conducted to measure conversion rates, and not-buying reasons.

2.1. Qualitative study. 123 in-depth interviews with customers were carried out to gain a better understanding of the conversion rate, the single phases of the shopping experience, and not-buying reasons (42 in the USA, 40 in Spain, and 41 in Japan; in two major cities of each country, respectively). Customers that had just left the stores were invited to a coffee shop nearby the store, where they were offered a free drink and one product of the store's product range worth between 30 and 70 USD as an incentive.

Customers who decided not to buy, first were asked when exactly they decided not to buy (e.g., they had no buying intention already before entering, immediately after entering the store, when browsing, while waiting for the sales assistant, while having a closer look at the product, at the cashier, etc.). Then they were asked for the specific reason. From results of the qualitative study we were able to derive a number of reasons for "not-buying". Two raters interpreted these reasons and categorized them into the single phases of the shopping process. This way we developed 18 reasons for not-buying (three were related to the entering phase, seven were related to the browsing phase, four to the sales assistant contact phase, and three to final purchase decision phase, see Table 1).

2.2. Quantitative study. In the second phase of the study data, conversion rates in three sales regions were measured. For confidentiality reasons, we can not disclose the exact sales regions, the type of stores (mall stores, strip center stores, or main street stores) and the exact time (peak season, off-season). Overall, more than 1,300 customers were interviewed. In a two-week period, customers of several stores in each country were randomly selected and approached immediately after the shopping experience and before leaving the stores and they were asked to fill in a self-administered, standardized questionnaire. Customers were asked whether they had a buying intention before entering the store, whether they did buy or did not buy a product, and – if they did not buy – in which of the four phases (immediately after entering, while browsing, during contact with sales staff, or during the purchase act itself, e.g. at the cashier) they decided not to buy a product. Then they were asked to indicate the main reason for not buying on the list in the questionnaire. Data collection took place in major cities of each sales region. As an incentive they could choose between several products sold in the store as a gift worth between 30 and 70 Euro.

Figure 2 presents the results of the quantitative study for two sales regions. The overall conversion rate in region one is 46%, compared to 36% in region two. In sales region 1 (left diagram, Figure 2):

- 5% of the customers that entered the store had no buying intention;
- 5% decided not to buy immediately after entering (Gap 1), compared to 13% in region 2;
- 22% decided not to buy during browsing (gap 2), compared to 15% in region 2;
- 1% decided not to buy during staff contact (gap 3), compared to 9% in region 2;
- 21% decided not to buy during the final stage (purchase act, gap 4), compared to 31% in region 2.

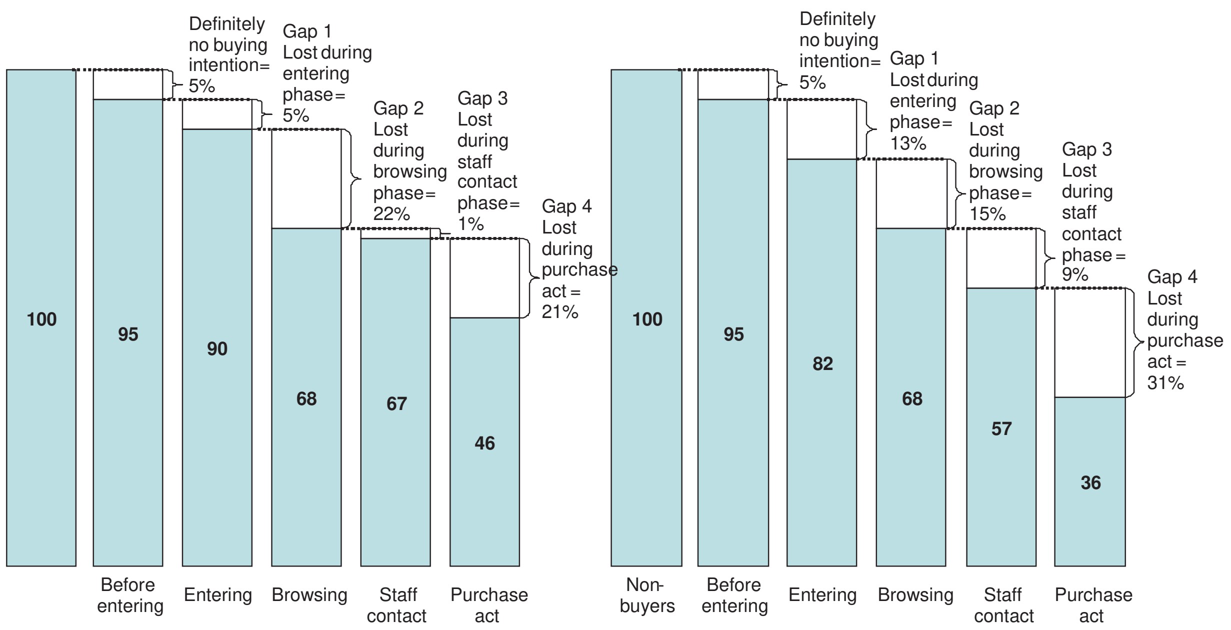

Fig. 2. Conversion rates in two regions

The decomposition of the conversion rate into these single phases yielded interesting and valuable insights into the sources of conversion rates. These single gaps deliver much higher diagnostic value than a single conversion rate.

To derive managerial implications and concrete actions, the specific reasons for non-buying in the single phases were identified. As many customers do not go linearly through these phases, and some customers have more than one reason for not buying, multiple answers were allowed. Table 1 presents the results. Some customers who did not buy came to return, exchange, or pick-up a product (14%, and 21%). In sales region 2, 9% decided not to buy immediately after entering, as they were not greeted by the sales assistant(s), 9% because they had the feeling that they were not welcome. Not finding the product on their own (16%), the fact that the products are locked in showcases (12%) were the main reasons during the browsing phase. Uninspiring sales staff (8%), and insufficient support (5%) were the main reasons during the staff contact phase. Finally, during the purchase act the price (23%), the fact that the product is out of stock (8%), or not in the company's product range (8%) were the main reasons for not-buying. The analysis also yields remarkable differences between the two sales regions.

Table 1. Reasons for the single gaps of the conversion rate

Phase	Reasons	Region 1	Region 2
Entering	♦ Return/ exchange/ pick up product	14 %	21 %
	♦ Was not greeted by the sales assistant(s)	1 %	9 %
	♦ Had the feeling that I was not welcome	2 %	6 %
Browsing	♦ Could not find the product on my own	32 %	16 %
	♦ Because products were in showcases	5 %	12 %
	♦ The atmosphere did not inspire me	3 %	8 %
	♦ The product presentation did not inspire me	3 %	7 %
	♦ Did not have enough space to browse/ try products	3 %	5 %
	♦ Store is not well arranged	0,4 %	3 %
	♦ It was too crowded	3 %	3 %
Staff contact	♦ Sales assistant(s) were not able to inspire me	1 %	8 %
	♦ I did not get support from sales assistant	1 %	5 %
	♦ Sales assistant wasn't able to help finding the right product	1 %	5 %
	♦ Sales assistant(s) were too pushy/ intrusive	-	2 %
Purchase act	♦ The product was too expensive	8 %	23 %
	♦ Product is not part of XXX's product range	13%	8 %
	♦ Product was out of stock or retired	5 %	9 %
	♦ Product was not convincing	7 %	5 %

Conclusion

Conversion rate is defined as the rate at which traffic is converted into sales. In this paper, we have argued that such a definition may be too rough to yield specific insights into the reasons of low conversions, and that a more detailed, decomposed conversion rate is needed to increase its diagnostic value and to infer managerial actions. Drawing on the idea of hierarchy-of-effects models in consumer behavior, we propose a general framework to analyze conversion rates along the shopping process. A case is presented which illustrates the managerial relevance of the framework. The framework of our analysis of conversion rate can be applied in or adapted to a wide variety of shopping contexts, especially in those where comparison-shopping occurs and customers can be "lost" in the single phases of the shopping process.

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