

Channel Switching Behavior During the Modernization of Grocery Retailing in Turkey

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Abstract

(a) Purpose:

Considering the increasing competition and channel diversity due to retail modernization we aim to study the channel switching behavior progress in a long horizon and the customer-related factors as influencers of channel switching.

(b) Design/Methodology/Approach:

Major channel switching behaviors of households are analyzed during six years, using household panel data covering grocery purchases from supermarket, local market and traditional channels in Turkey. Household demographics and behavioral variables are induced from dataset and Logistic regression model is employed to measure the effects of customer-related variables on the probability of channel switching.

(c) Findings:

Traditional channel still keeps the highest loyal customer base in Turkey. Loyalty to both traditional channel and supermarkets decreases, while to local markets increases by time. Households loyal to traditional channel transfer either a small amount of their purchases to modern channels or make modern channels their major channel occasionally. In any case, there is a transition period experienced in Turkish grocery retail market. A multi-channel usage behavior or higher adoption to modern channel might be the result of this transition.

(d) Research Limitations/Implications:

Channel level analysis limits to define channel-related variables, such as price, place, product-variety specific to each channel format. Excluding these variables might explain partially the low explanatory power of the model.

(e) Practical Implications:

Analyzing channel-switching behavior, its progression and explaining determinants is important for retailers and producers in predicting the future of market structure, modern retail customer base and in designing the growth strategies. The variables influencing channel switching help to explain some barriers of modern retail development.

Keywords: Channel switching behavior, Retailing, Channel diversity

1. Introduction

Retail modernization in developing countries and emergence of new store formats, Internet, mobile channels in all economies continue to increase the channel diversity. Consumers in such environment are expected to evaluate new channel formats and decide to stay loyal or switch their current channels or start to use multi-channels in their shopping. The success of channels is related to retailing their customers and keeping or increasing their channel format share in the total spending of each customer. The continuity of customer base in a channel influences also the continuity of income levels and long-term success of that channel.

Encountering new formats, consumers evaluate their current store choice decisions through comparing current and new store formats in dimensions such as ease of shopping, convenience, price, product variety, quality, new services and so on. Consumers may decide to stay or switch according to their value assessment of new formats. However, there might be other reasons for switching stores in each purchase incidence. Some might switch since they cannot find certain items or whole product assortment they search in the same store, some might be searching for the lowest price or promotion items from different stores, and some others might buy regular purchases from one store and fill-ins from another store (Popkowski-Leszczyc & Timmermans 1997). Majority of consumers use more than one store format for shopping, however allocate majority of their purchases in only one store or store format type (Popkowski-Leszczyc, et al. 2004). Increasing trials and switches to new retail formats grow the importance of investigating the factors influencing store choice and switching.

Channel competition intensifies in Turkey and increasing channel alternatives influences channel preferences of customers. Global retail brands enter in the market in several formats, such as hypermarkets, super stores, discount stores, and grow nationwide while local supermarkets emerge to attack the national chains. Local supermarkets offer similar store format with product and service variety like supermarkets, moreover they offer easy accessibility, locating in more convenient places, like traditional stores and focus on local growth. Traditional store formats, such as groceries and specialty stores, providing the accessibility and one-to-one service advantages, have been threatened with the growth of modern channels. Despite their high investment levels and innovative strategies, several studies claim that supermarkets are struggling to fully exploit their growth potential in developing markets (Goldman et al. 2002, Callichio et al. 2007). The major driver of modern channel adoption is reported as the broad product variety offering that allows consumers to make one-stop-buying and to decrease the number of shopping trips, time and effort spent for shopping. On the other hand, the attractiveness of traditional channels continue in developing markets due to its compliance with existing shopping habits, that is frequent and small amount purchases, allowing social interaction and on-credit purchases (Goldman et al., 2002)

Despite their longer presence in Turkish market, growth and diffusion of modern channels have been speeded up in recent years due to the increasing economic welfare, changing life-styles, increasing invested capital and improvements in retail market. Based on AC Nielsen retail panel data, between the years 2000 and 2005, in six years, the number of Hyper- and Supermarkets increased by 129% and reached to 5545 outlets and medium size supermarkets increased by 14% and reached to 15,076 outlets while number of convenience stores decreased by 19% to 120,397 outlets. The share of modern retail channels increased from 39% to 50% between 2001 and 2005 in the 14 largest provinces in Turkey, where the growth was mainly derived by local supermarket. Similar to other developing markets, market share of modern channels, national and local supermarkets, is also low in Turkey.

This study aims to define consumer-related determinants of channel switching in an environment where modern channels grow and diffuse in different formats with attractive store environments and consumer promotions. We analyze the channel switching behavior using the panel data in Turkey covering the household purchases of all grocery product categories in all store formats during six years. Understanding the channel switching behavior progression and determinant factors helps retailers and producers to consider drivers and barriers of modern retail development in predicting the future market structure and in designing their growth strategies. Besides, the consumer-related factors influencing switching are important in anticipating the future consumer-base of retailers taking into account the demographics and lifestyle trends.

In the second and third sections, the research framework and data are illustrated respectively. The degree and progress of channel switching is analyzed in the third section, and the determinants of channel switching are discussed in the fourth section. In the final section, conclusions, limitations and implications are discussed.

2. Research Framework

In the store loyalty, choice and switching literature, studies using panel data mostly focus on a few similarly structured stores that operate in the same region, excluding traditional stores due to their low trade share in related markets (Popkowski-Lesczyc et al., 2004; Seiders & Teigert 1997; McGoldrick & Andre 1997; Knox & Denison 2000; Morganosky 1997). There are only a few studies that focus on competition between store-formats (Fox et al. 2004). However, in analyzing channel switching behavior during the retail modernization, it is important to cover grocery purchases in all store formats.

In this study, we investigate the extent and determinants of transition between retail channels during retail modernization in Turkey. Majority of consumers use both the modern and traditional channels and they divide their purchases between channels. Instead of defining channel switching as channel format change in each purchase incidence, we describe the channel that takes the largest share in total monthly grocery budget of a household as “major channel” and define “switching to modern channels” as changing the major channel from traditional to modern. For a household, changing the channel type where they spent the majority of their monthly grocery budget is an important change in shopping behavior, compared to changing the channel type in each purchase incidence. Moreover, concentrating on major channel switching helps us not to misinterpret as channel-switch the movement of small-purchases between channels, such as fill-in purchases (Rhee & Bell, 2002). The channel switching incidences are expected to be less frequent than the store switching incidences, since consumers are expected to change less frequently the value of social and economic benefits delivered and the shopping habits formed in that channel.

The channel types households shop in every period and their division of budget among three channels differ remarkably in each period. We aim to analyze consumer characteristics and shopping behavior that influence major channel switching behavior in their monthly purchases. The household-specific demographic and behavioral characteristics are tested as determinants of channel switching decision. Logistic regression model is employed to measure the effects of household-specific demographics and behavioral characteristics on the probability of channel switching. Channel choice decision includes all stores with the same format and it is difficult to define channel specific variables, such as location, variety, quality, price considering the variances among stores included in the same format. We exclude the influence of channel characteristics from the analysis, since we study channel level choice decision and there is scarcity of data in this subject.

3. Household panel data

The data used in this study are derived from the household panel that the HTP Research and Consultancy Co. has composed in order to track the retailing and fast moving consumer goods sector in Turkey. We are allowed to use a limited portion of this database and at some level of aggregation for confidentiality reasons. The data is explained in detail in Batislam & Filiztekin (2010). The original database is an unbalanced panel, compiled through daily diaries of grocery purchases of over 2,500 to 4,700 households, representing around six million households in 14 largest provinces in Turkey¹ between January 2000 and December 2005.

The dataset covers six years and thus enables us to examine the change in the retail market in a long horizon. However, in 2001 Turkey had the most severe economic crisis of its history affecting all individuals and industries. This case offers a natural experiment on how an economic crisis, during and after, influences the consumer store format preferences and competition in the market. To be able to capture the effects of crisis, if any, the sample period is divided into four sub-periods: before crisis (62 weeks), crisis (87 weeks), after crisis (69 weeks) and recovery (95 weeks) periods. The break points are determined endogenously by running a series of moving window regressions of average spending on an intercept and deterministic trend and then choosing the model with smallest mean squared error. Due to high inflation especially in the early years of the sample, nominal prices are converted into real prices using the August 2006 consumer price index.

The dataset covers records of daily grocery purchases of 14 categories named as alcoholic beverages, soft drinks, tea & coffee, confectionery, delicatessen, frozen food products, dairy products, culinary products, pastry, baby products, cosmetics, paper products, cleaning products and miscellaneous products. Only the purchases of fresh produce, cigarettes, and newspapers are excluded in the data set. Daily expenditures of each household are aggregated monthly and share of each channel type in their monthly grocery budget is calculated. Total and weekend visit number of families are determined. Basket variety is calculated using the number of different product categories included in monthly basket.

Data set also includes household demographics, such as socio-economic status (SES) and size of households, and the age of head of the household. The data collector assigned a SES level to each household based on the education, occupation and income level of the household. Among the four SES groups, fewer families are observed in the data set that belong to upper groups, AB and C1, compatible with the distribution of economic well being in the country.

Dataset covers all stores where households make their grocery purchases. We grouped convenience stores, kiosks, specialty stores (i.e. groceries, butchers, pharmacies, delicatessen), and open bazaars are grouped as Traditional channel and national hyper- and supermarket chains as Supermarket channel. We analyze local markets and supermarkets as two different modern channels since local markets have an important role in transition from traditional to modern channels in Turkey. Hence, we grouped them as Local market channel.

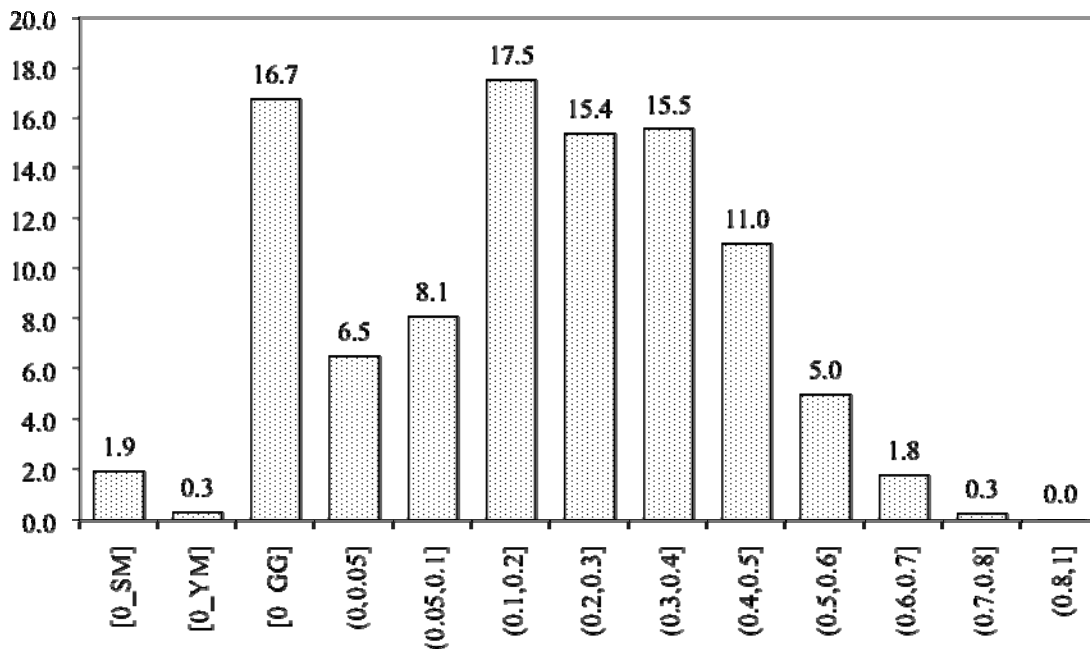
4. Probability of channel switching

Defining the channel switching as changing the major channel on a monthly basis, we analyze the distribution of families according to their frequency of switching during the

¹ The sample is representative of the 14 provinces in terms of age, occupational and education profile of the population.

observation period (72 months). The families who cannot be observed in the panel more than 12 months are excluded in this analysis. As presented in Figure 1, only 19% of all families never change their major channel during the observation period. As an important finding, 16.7% of families keep the Traditional channel and 2.3% of families keep the Supermarket as their major channel throughout the observation period. Besides these highly loyal families, predominantly, families switch their major channels several times. Families who switch their major channel more than 40% times during the observation period make 18% of population. These are the families who switch their major channel in every two months. Rhee & Bell (2002) who studied store-switching behavior in USA, declared that consumers switch stores with 18.3% probability, while the probability of channel switching is 22% in Turkey. Moreover, they report the ratio of families who never switches their major stores as 29.6% and the ratio of families who switch more than 40% during the observation period as 17%. Differences between two countries might be an indicator of continuing modernization process in Turkish grocery retail market.

Figure 1: Frequency of Channel Switching (Families observed more than 12 months)



We identify the major channel types of households in initial and later stages in consecutive months and tabulate as channel switching matrix in Table 1. The probability of keeping the same major channel in consecutive months is the highest for traditional channel with 84,6%, followed by 71.9% for supermarket and 63.3% for local market. High probability of staying in traditional channel is an indicator of a large loyal customer base, while low probability in local market indicates that they have more switchers in their customer base. Around 20% of families who has local market or supermarket as the major channel in initial state, switches to traditional channel. However, families who switch from traditional channel prefer more supermarkets rather than local markets.

Comparing the changing switching behavior by time, it is observed that although it is still high, loyalty, namely, probability of keeping the major channel, decreases around 5% in traditional and supermarket channels between Period 1 and 4. On the other hand, the probability of keeping local market as major channels increases. During four periods,

switches from modern to traditional are still higher than the switches from modern to traditional.

Table 1. Channel Switching Transition Matrix for the Observation Period

| | | Later Channel | | | <i>Initial Major Channel Ratios</i> |
|-----------------|---------------------|--------------------|---------------------|--------------------|-------------------------------------|
| | | <i>Traditional</i> | <i>Local market</i> | <i>Supermarket</i> | |
| Initial Channel | <i>Traditional</i> | 84,6 | 5,9 | 9,4 | 59,7 |
| | <i>Local market</i> | 24,2 | 63,3 | 12,5 | 14,0 |
| | <i>Supermarket</i> | 21,5 | 6,6 | 71,9 | 26,3 |

To conclude, traditional channel still keeps the largest loyal customer base in Turkey. Loyalty to traditional channel decreases by time since some households either transfer a certain amount of their spending to modern channels while keeping the traditional as their major channel, or use the modern as their major channel occasionally. On the other hand, some families who become loyal to modern channels might return occasionally to traditional channel as well. This transition among channels might be an indicator of continuing adoption stage of modern channels or an established new multi-channel usage behavior.

5. Determinants of channel switching

Major customer-related factors analyzed in the related literature are consumer demographics, such as age, income, household size, and shopping behavior, such as shopping frequency, spending amount, current major store type, tenure, shopping basket size and composition (Mcgoldrick & Andree 1997; Bell, Ho & Tang 1998; Rhee & Bell 2002, Popkowski-Leszczyc & Timmermans 1997; East & Harris 2000, Goldman, et al. 2002).

In our study, we incorporate in the model, the SES group, household size and age of household head as consumer demographics, and monthly spending and monthly basket variety of each SES group, total and week-end visit number of families as shopping behavior characteristics. We measure the impact of household specific characteristics on the probability of channel switching, employing logistic regression model using 543,328 observations on 13,162 households. The results are tabulated in Table 2. All variables used in model are influencing channel-switching behavior statistically significantly. However, total explanatory power of the model is not high (pseudo-R-square is around %5).

Model results show that the probability of switching from the traditional channel to another channel type in Period 1 for a small, young, AB household is 20%. The switching probability increases over time, since the loyalty to traditional channel decreases. In the last period, the probability of switching increases by 4.3% and reaches to 24.5% for the base household. Probability of channel switching increases significantly when the major channel in initial state is one of the modern channels. Especially for a household whose major channel is local market, the probability of switching to another channel type reaches to %40.

Families in AB SES group have the lowest probability of switching compared to families from other SES groups. Higher adoption rate of AB SES families to modern channels might be one reason of their high loyalty level. Higher probability of switching of families in lower SES groups might indicate that they are in a trial stage in adopting to modern channels or use the modern channels occasionally. Young-mid age families are less loyal with higher probability of switching while Extended families have higher loyalty with lower probability of switching. Other than AB SES group, families with higher spending amount, switch their

major stores less. Other than DE SES group, families who purchase higher variety switch more. Differences among SES groups might be related to their accessibility to different formats.

Table 2. Determinants of Channel Switching

| | | | |
|-----------------------------------|--------|----------------------|--------|
| Base Probability | 0,202 | | |
| 2. Period | 0,013 | AB*Lntotexp | 0,003 |
| 3. Period | 0,028 | C1*Lntotexp | -0,026 |
| 4. Period | 0,043 | C2*Lntotexp | -0,014 |
| | | DE*Lntotexp | -0,030 |
| Local Market | 0,197 | | |
| Supermarket | 0,099 | AB* Basket variety | 0,356 |
| | | C1* Basket variety | 0,110 |
| SES: C1 | 0,236 | C2* Basket variety | 0,118 |
| SES: C2 | 0,132 | DE* Basket variety | -0,100 |
| SES: DE | 0,231 | | |
| | | Total visit number | -0,001 |
| Young-Mid age (25–34) | 0,019 | Weekend visit number | 0,000 |
| Mid age (35–49) | 0,003 | | |
| Senior (50+) | 0,008 | | |
| Household with child (3-4 people) | -0,025 | | |
| Extended household (5+ people) | -0,034 | Pseudo R-squared | 0,050 |

Base Probability: The probability of switching from Traditional channel to another channel type in Period 1 for a small, young, AB household

6. Conclusions, Limitations and Further Research

As a result of increasing channel diversity, channel loyalty decreases overtime and customers allocate their grocery budget more to new formats. Loyalty decreases in both modern and traditional channels while increases in local markets. Despite losing loyalty, traditional channels have still the largest loyal customer base. However, despite growing loyalty local market customer base still has the highest switcher rate. Probability of switching increases when SES level decreases, it might be due to decreasing search cost in lower SES levels. Increasing basket variety and decreasing spending in monthly purchases increase the probability of switching for most SES groups. Households loyal to traditional channel transfer either a small amount of their purchases to modern channels or make modern channels their major channel occasionally. High transition between modern and traditional channels might be because of a consequence of the continuing modern channel adoption process or the new multi-channel usage behavior. Longer observation is required to decide which hypothesis is true in Turkish retail market.

Major limitation of our study is not to be able to include the channel specific variables, such as pricing level, product variety, location, as determinants of switching behavior. This might be one of the reasons of low explanatory power of the model. As a further research, defining variables characterizing the differences of channel types and including them into the model might enhance the knowledge of factors influencing the channel switching.

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