

## **AN ANALYSIS OF THE CONSUMER BEHAVIOUR IN ROMANIA FROM THE CARD PAYMENT PERSPECTIVE**

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### **Abstract**

Card use at the point of sale increased extensively in recent years in Romania and many issues regarding patterns of the buying behavior and consumer preferences can now be analyzed. Using primary data of card usage from an important Romanian bank, this paper examines the transactions by the Merchant Category Codes (MCC) and describes the current consumer preferences in Romania from a cards payment usage perspective. The purpose of this study is to examine the consumer behavior in Romania as it can be extract from the card payments. This represents an important study for the Romanian consumer since data of card usage are not public available for researchers due to competitive reasons.

### **Keywords**

Card payments; consumer behaviour; Romania; electronic.

### **JEL Classification**

D12; E42.

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### **Introduction**

The card usage at the point of sale is subject to increasing attention in Romania due to a dramatically increase in recent years. According to National Bank of Romania statistics, one of two card transactions is made at merchants. In this context, questions about consumer's use of cards are becoming more intriguing. Card transactions are electronically registered and can facilitate analysis regarding the consumer behavior in general.

This paper examines issues related to consumer behavior by exploiting a unique set of data obtained from a representative medium size-bank in Romania to capture patterns and preferences of the consumer. We begin this study by examining the current state of the card payments in Romania and then examining in particular data from a bank card portfolio.

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## 1. The Romanian Card Industry

With a card, a consumer uses the credit or debit card by presenting it to the retail merchant as a payment method. The merchant point of sale device initiates a transaction message, which travels over the network to the bank that issued the card or its processor, which in turn checks the record of the cardholder's account. Then, the issuing bank sends an authorization message back to the merchant. The transaction proceeds and the purchase amount is blocked in the cardholder's account in real time until the settlement is done. Then, the transaction runs over the card network and to the issuing bank and the cardholder's account is debited after a short delay, usually within two days (Borzekowski, Kiser and Ahmed, 2008).

According to National Bank of Romania, at the end of 2015 the card market recorded 14.9 million cards at a population of 20.1 million. Of this number, 12.3 million are debit cards and only 2.4 are credit cards that can be used for cash withdrawals at 11,492 ATMs and electronic payments in 144,441 POS devices installed in merchant stores.

**Table no. 1 Cards market in Romania (2013-2015)**

Year	Total number of cards	Debit cards	Credit Cards	Active cards	ATM devices installed in the country	POS devices installed in merchant stores
	(thousands)	(thousands)	(thousands)	(thousands)	(thousands)	(thousands)
2015	14,960.5	12,481.2	2,479.3	11,259.7	11.0	137.4
2014	14,542.2	12,234.6	2,307.6	11,038.4	11.0	135.5
2013	14,148.7	11,921.4	2,227.3	11,332.4	10.8	128.0

*Source: National Bank of Romania*

Despite the increased number of issuing cards in recent years, cash is still the king and remains the dominant form of payment for most of the consumers if we take in consideration the statistic of cash withdrawals vs. POS transactions but, in any case we can see a notable tendency for increasing the electronic payments market correlated with the growth of POS terminals available for the card payment.

**Table no. 2 Cash withdrawal vs. POS transactions in Romania**

	2013	2014	2015 T1
	(mil. Romanian LEI)	(mil. Romanian LEI)	(mil. Romanian LEI)
Cash withdrawals at ATM	114 672,86	122 860,79	30 913,61
POS transactions	20 635,44	23 577,30	5 899,91

*Source: National Bank of Romania*

## 2. The Consumer Behaviour Analysis

The rapid growth of card payments has drawn the attention of the researchers for this area but few data were made public by the banks due to competitive reasons. In recent years there have been various studies on consumer behavior from the card usage perspective ( Dutta and Weale, 2001; Rysman, 2007; Borzekowski, Kiser and Ahmed, 2008; etc.) but most of them have focused on the mature markets of the West and not treated the card adoption in its early stages as occurs now in the East.

Many local academic contributions were made by addressing key issues surrounding card payments in general (Iuga, 2010; Gyula, 2013; Turkes, 2015) and payment network in particular (Ghiba and Avadanei, 2010; Popovici, 2015). Although important findings have emerged from these studies, they have not provided much information regarding the consumer behavior of the cardholder.

This article breaks the existing silence in literature by obtaining transactional data from a representative medium-size bank in Romania whose name we will not mention for competitive reasons as it was agreed with bank representatives. The analyzed portfolio includes almost 300,000 cards with at least 1 transaction in the year 2015 spread throughout the country since the bank mentioned in this study has national representation through its 150 branches. The data delivered was analyzed by segmenting the transactions based on the Merchant Category Codes (MCC) used by VISA and MasterCard systems.

In terms of turnover the analyze revealed that the main destinations of expenses for the cardholder are the food and non-food products for households available in Supermarkets (27.43%), followed by the clothing acquisitions (13.76%). These facts show that individuals seek for new technological opportunities to improve their comfort or lifestyle and to save time.

**Table no. 3 Cardholder transactions by Volume**

	<b>MCC</b>	<b>Main Code</b>	<b>% Volume</b>
1	5411	Grocery Stores and Supermarkets	27.43%
2	5651	Family Clothing Stores	13.76%
3	5541	Service Stations (with or without ancillary services)	8.50%
4	5211	Lumber and Building Materials Stores	4.56%
5	5912	Drug Stores and Pharmacies	3.24%
6	5732	Electronics Stores	2.37%
7	5812	Eating Places and Restaurants	2.31%
8	5712	Furniture, Home Furnishings, and Equipment Stores, Except Appliances	2.20%
9	4900	Utilities — Electric, Gas, Heating Oil, Water, Sanitary	2.20%
10	5691	Men's and Women's Clothing Stores	1.81%

*Source: own adaptation based on primary data obtained from a Romanian bank*

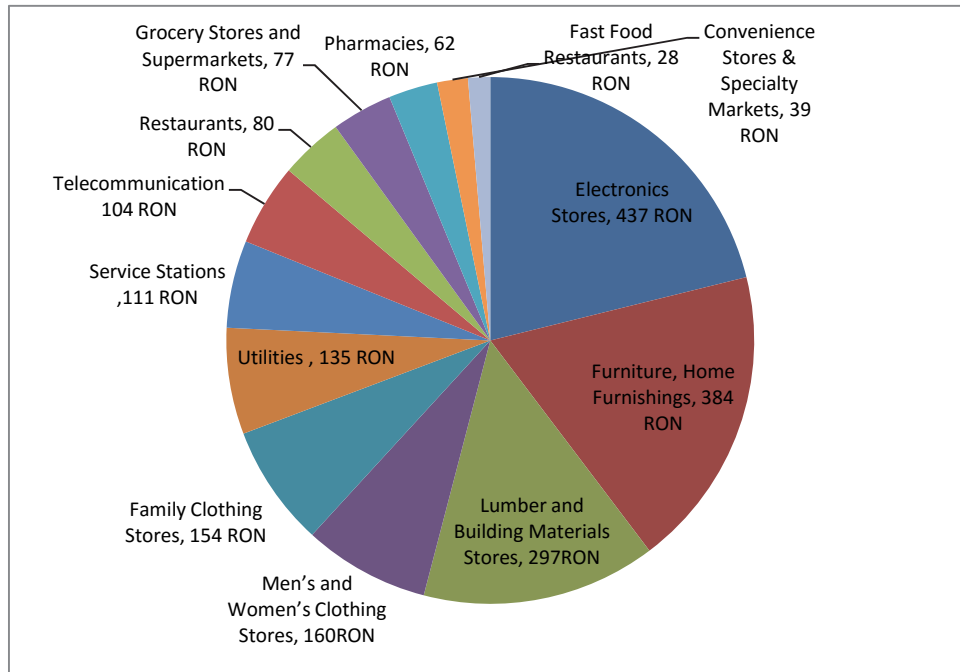
The ranking is almost similar when referring to the number of transactions. The largest number of transactions are in the grocery stores and supermarkets, mainly because of the frequency of these types of shopping (41.11%). On the second position in terms of transactions we found the clothing stores, followed by the service stations and pharmacies.

**Table no. 4 Cardholder transactions by the Number of Transactions**

	MCC	Main Code	% Number of Transactions
1	5411	Grocery Stores and Supermarkets	41.11%
2	5651	Family Clothing Stores	10.30%
3	5541	Service Stations (with or without ancillary services)	8.81%
4	5211	Drug Stores and Pharmacies	6.04%
5	5912	Eating Places and Restaurants	3.35%
6	5732	Telecommunication Services, Including Local and Long Distance Calls, Credit Card Calls, Calls Through Use of Magnetic Stripe Reading Telephones, and Fax Services	1.92%
7	5812	Utilities — Electric, Gas, Heating Oil, Water, Sanitary	1.87%
8	5712	Lumber and Building Materials Stores	1.78%
9	4900	Fast Food Restaurants	1.61%
10	5691	Miscellaneous Food Stores — Convenience Stores & Specialty Markets	1.54%

*Source: own adaptation based on primary data obtained from a Romanian bank*

According to records the average amount for an electronic transaction in Romania is 437 RON to buy electronics. This means that the value for card payments is higher for furniture, home furnishings and equipments (297 RON). Also, Romanians prefer to spend money using a card payment method for the basic needs. The average transaction value for men's and women's clothing is 160 RON and for family clothing stores 154 RON. Romanians use their credit card to pay moderate amounts for food or medicines (eating places and restaurants-80 RON, grocery stores and supermarkets-77 RON, drugstores and pharmacies-62 RON). They make on an average less than 30 RON electronic transactions to eat in fast food restaurants.



**Figure no.1 Card transactions by Value (Romanian Leu)**

*Source: own adaptation based on primary data obtained from a Romanian bank*

From a demographic point of view the South- Eastern Romania scored the most significant numbers in terms of transactions (98, 847), volume (9,458,759 RON), average transactions (96) and average spending (1314). Romanians use mostly electronic payment in Bucharest and surrounding areas (Ilfov) as number of transactions exceeds 450,000 and volume of money spent is 33, 919, 675 RON.

Practically, the value of electronic transactions in Bucharest covers almost half of the total amount of POS payments (926,469) all over the country. This behavior is based on the fact that people living in towns have access to more sources of information, promotion of electronic transactions has been much more encouraged by public authorities and financial partners, stressful and hectic urban life offered them a choice for fast payments and most individuals developed skills specific to new generations.

Table no. 5 Transactions by Region

Region	No of Transactions	Volume (RON)	Average Transaction	AVG Spending/Card
SE	98,847	9,458,759	96	1,314
NE	73,955	5,522,435	75	941
SW	50,132	3,701,725	74	771
Bucharest & Ilfov	454,167	33,919,675	75	1,707
NW	70,129	5,052,505	72	887
Center	35,435	2,532,274	71	786
W	75,965	5,938,347	78	1,062
S	67,841	5,313,321	78	784
<b>TOTAL</b>	<b>926,469</b>	<b>71,439,041</b>	<b>77</b>	<b>1,210</b>

Source: own adaptation based on primary data obtained from a Romanian bank

### Conclusions

This paper provides an unique set of data from the banking industry in order to explore the payment behavior and patterns of the Romanian consumer. Electronic transactions reveal certain particularities of consumer behavior. Card usage for POS transactions in Romania demonstrates tendencies for a maturing market in the area of electronic payments.

Future research can be done in the area of payment behavior as card payment is slowly becoming the dominant form of payment for many consumers and the transactional data will be available for the researchers investigating patterns and preferences in the consumer behavior.

According to statistics, the Romanian consumer prefers to use the card payment mainly for current needs (supermarkets, clothing stores, etc.). Another important aspect is the fact that Bucharest concentrates almost half of the card payment transactions in the country, revealing a lack in card payments adoption for the rest of the country, both for the merchants and the cardholders.

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