ANALYSISOF DOMESTIC TRANSACTIONS WITH INTERNATIONAL CARDSAS PART OFTOURIST EXPENDITURES IN TURKEY

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ABSTRACT

Over the years, everyday transactions have become increasingly card-based. Indeed, debit and credit cards have led the non-cash arena.As such, the number of debit card payments have increased more than any other payment type globally. This study examines the relation between domestic transactions with international debit and credit cardsin Turkey and incoming visitorsover the 2008-2012 period.According to the one-way analysis of variance (ANOVA), there isa significant positive relationship between the variables. In contrast to popular belief, the examine results indicate that the amount growth of withdrawing money with international credit cards is higher than withdrawing money by using debit cards. Unsurprisingly, the incoming visitors use increasingly debit cards for purchasing in Turkey. Although only one country sampleisinsufficient to make a generalization regarding payment preference of international visitors,the findings ofTurkey as a primarytourist receiving countrycan servefor contribution to the consumer theory concerned with how a rational visitormaking purchases abroadwould make payment decisions, and also, use for comparative analysis among other destination countries.

Keywords: Debit and Credit Cards, Destination, Visitors, Turkey

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1- Introduction

Recent searches indicate that volume growth in global non-cash payments transactions have accelerated during the recent years, with developing markets again fuelling the rise. It appears from the World Payments Report (WPR, 2013) that the volumes grew by 8.8% to reach 307 billion transactions in 2011. CEMEA (The Central Europe, Middle East, and Africa) including Turkey and Emerging Asia regions, grew by more than 20%, while Latin America also recorded an above average growth of 14.4%. Mature markets of North America and Europe recorded mid-single digit growth rates but remain the largest non-cash payments markets, together accounting for about two-thirds of global non-cash transaction volumes.

During 2011, cards continued to seizethe market share from every other non-cash instrument in every region studied. Credit card transaction volumes grew by 12.3% globally, while debit card volumes increased by 15.8%. The two payments instruments lead the non-cash arena, with debit cards being the most popular non-cash payments instrument globally (WPR, 2013).

When we look at some regions and countries, for example in the United States in 2012,we see that general-purpose cards (including credit, debit, and prepaid) accounted for more than 60 percent of all noncash payments by number but only 5 percent by value. Debit cards were the most commonly used type of general-purpose cardsaccounting for 64% of total general-purpose card payments by number, followed by credit cards at 32% (Federal Reserve System, 2013). In the same year (2012),Europa-wide debit card using rate in purchasesstood at 65% (Visa Europe, 2013).

In sum, these figures regarding the non-cash transactions of external world are important for Turkey becausethe foreign visitors to Turkeyare mainly from European countries (TURKSTAT, 2014).Hence it is quite conceivable that foreign visitors tend to use debit cards while in Turkey.From this point forth, this paper focuses on domestic transactions with international debit and credit cards in Turkey(including withdrawing and making purchases) and foreigners who had visited Turkey. Thus,this paperaims to emphasizethe payment preferences of overseas consumers.

2- Conveniences of Transactional Medium in Literature

Traditionally, customers pay for their goods and services by cash or payment cards such as credit cards, debit cards, charge cards, and smart cards. Inarguably, credit and debit cards are the most popular tool for electronic payment transactions.Although credit and debit cards may display the same logo and appear to be very similar, they are different.When consumers use a credit card for a purchase or cash advance they are incurring debt, to the credit card issuer. The consumer is then obliged to pay back the credit card issuer the amount borrowed plus any interest accrued.Debit card transactions are processed the same way as a credit card, however instead of going into debt; thepayment is withdrawn (debited) from the consumer's current or other accounts. When the consumer needs cash, the debit card can be used in an ATM machine to withdraw cash from his/her current account. Naturally, there are advantages and disadvantages to each. Credit cards may allow the consumer more spending freedom with a greater amount of money at his/her disposal. However, debit cards offer less freedom than credit cards becausethey do not permit the consumer to pay over a period of time, therefore they limit the size and amount of purchases linked to the current account balance. When a debit card is used, the money is immediately withdrawn from the consumer's account (Blagojevich and Padron, 2013).

To sum up, debit cards are issued by banks to customers with current accounts. They look similar to credit cards but act like cheques because money to pay for purchases is taken out from the current account. Debit cards can be used at cash machines (ATMs) to withdraw money from the current account and, like a cheque, they can be used to purchase items at stores and online. Debit cards can be used over the same worldwide networks (MasterCard, Visa, etc.) used to process credit card payments. (Consumer Action, 2007).Sincedebit cards work differently from credit cards and ATM-only cards,customerscan't use them to make a purchase and pay it back over time, unlike credit cards. For their debit card to work, the customers must have enough money in theircurrent account to cover transactions unless they have an overdraft. An ATM card is limited in its uses—clients can only use it with a PIN to either withdraw cash at certain ATMs or to make purchases at some stores with PINpads (Consumer Action, 2007).

Debit cards can be used to get local currency from almost any ATM worldwide and to make purchases where MasterCard or Visa are accepted. Customers can use their debit card in restaurants and stores simply by signing their name. And debit cards, like credit cards, can be used without the PIN or signature to pay at many stores and gas stations, as well as over the phone or the Internet. Debit cards provide a safe alternative to using cash and they provide a record of all transactions. (Consumer Action, 2007).

Many supermarkets and chain stores let customers use their debit card with their PIN to receive "cash back" when they make a purchase. They can use their debit card almost anywhere in the world to get cash at ATM machines or to carry out purchases. As with credit cards, using their debit card in another country can result in a better exchange rate, even with the currency conversion fees charged by many banks (Consumer Action, 2007).

Credit cards are sometimes referred to as "pay-later cards" By using then, a customer can pay the bills later. Also, credit cards allow customers to pay the bills which exceed their bank account. Debit cards are referred to as "Pay-now cards" (Sugano,2011). At this juncture, some people hesitate to owe credit cards. In fact, according to a surveyin 2009 regarding Americans, 67% of people who do not have a credit card dislike that risk and the high interest rate of credit card. For these reasons, the number of people who have debit cards is more than that of people who have credit cards. Also, Americans use debit cards more frequently than credit cards. According to this survey, it seems that Americans tend to use debit cards more frequently in the shops where the bills are relatively lower, such as coffee shops and convenience stores(Sugano, 2011).

As noted above, using certain plasticcardsas a form of money (instant spending power) provides both the capacity to buy goods and services (i.e., carry out transactions) and the capacity to borrow funds (i.e., gain access to credit) whichinvolve both advantages and disadvantages for individuals. Although credit cards offer same advantages, the high costs of interest and overspending tend to outweigh the benefits of this form of borrowing, from the perspective of personal financial planning. On the other hand, debit cards offer many of the same advantages without the disadvantages of borrowing.

Naturally,debit cards provide an electronic confirmation of sufficient funds at the time of the transaction. On the other hand, credit cards allow users to borrow money very easily in order to satisfy their purchasing desires (Brito and Hartley, 1995). Credit cards perform two functions. First, they may be used as a transactional medium, as a substitute for cash. Second, they may be used as credit, as a substitute for other forms of short-term, small-dollar value credit, such as layaway plans, pawn shops, and short-term bank loans. Credit cards provide flexibility for consumers in matching their income and expenditure streams by alleviating the need to maintain sufficient funds at all times to covercurrent expenditures (Zywicki,Undated).

Althoughmobile payments are well beyond the scope of this paper, we have to acknowledge that today there are people/experts who believe that swiping mobile phones to pay for items could replace cash and credit cards both online and in stores within the next decade. Indeed, we can easilyverify that technological companies and financial institutions around the world are taking considerable steps to take advantage of mobile phones to replacecash and plastic cards.

To cite an example, Bloomberg has recently reported that Apple Inc. (AAPL) plans to turn its next iPhone into a mobile wallet through a partnership with major payment networks, banks and retailers. The agreement includes Visa Inc. (V), MasterCard Inc. (MA) and American Express Co. (AXP) (Townsend, 2014). If the reports prove true, iPhone 6 owners may be able to make payments without cash, credit or debit cards. The NFC (Near Field Communication) chip embedded in the logic board of an iPhone would enable users of iPhone 6s to exchange data with point-of-sale systems without having to stand in line for the chance to slide a piece of magnetized plastic through a reader. With approximately 800 million iTunes accounts already connected to major credit and debit cards, Apple already has the infrastructure in place to launch a virtual wallet (Townsend, 2014).

In a Turkish context, TurkcellCompanyisproviding GSM servicesinternationally andhas developed a technologic infrastructure/software based on NFC for Turkcell SIMcard to be able to make mobile payments with uploaded credit cards (TURKCELL, 2011).

It goes without saying that worldwide payment service providers such as American Express, Visa and MasterCard, andtechnology/phone companies such as Apple –IPhonework to extend their support for mobile paymentsin cooperation to enable retailers, financial institutions and developers to create new ways to pay via smartphones.

Apparently, making a purchase with a mobile device at a physical retailer or online will become commonplace in the close future, particularly in countries with a high penetration of smartphones. As was the case in the past for bank cheques, smart phones, thanks to NFC technology, will completely take the place of plastic cards over the next decade. Consumers will be able to buy a cinema ticket, a sandwich or cup of coffee without the need of a card or cash.

Getting back to the subject of this paper, it looks like that consumers tend to consider mostly the benefits of credit cards, such as delayed payment (buy now pay later), the rewards earned by cash back, frequent flier miles, or other enticing spending opportunities (Schuh et al.,2010). Consumers paying their expenses by credit card are the ones who tend to make additional purchases which increase the amount of their spending (Lo and Harvey, 2011). Most consumers/households and businesses keep on gaining astounding benefits from the immense extension in the use of credit cards in the economy (Keating, 2009).

However, overseas payments are considered high-risk because fraud and chargebacks are both more likely than with domestic payments (Kiernan, 2014).Contrary to this popular opinion, as an option in payment instruments, credit cards (future funds), providing liquidity services by allowing consumers to avoid some of the opportunity costs of holding money, or debit cards, providing a needed level of spending restraint, may be preferred/favored from international visitors.

To sum up, while cash, mobile tools, debit and credit cards are competing at a foreign destination, the primary use of the credit cards today is probably as a source of credit, not as a transactional medium, or the number of debit card payments may increase more than the credit cards. Contrary to all these assumptions, cash may still be widely-usedas a transactional medium due to having some benefits for some transactions such as providing a speedy way of effectuating a small transaction.

In this context, we perform this researchregarding visitor payment preferences in Turkey in the expectation that itcan contributeto similar countries as well as Turkeyto develop tourism policies and planning towards international visitors' spending.

Aim and Method

Doubtlessly, visitor expenditures impact positively destination economics (Corpo et al. 2008; Brida, et al. 2009).When making purchases in a foreign country destination, international visitors, in the same ways as in their country, can benefit of the advantages of using credit and debit cards. From this point froth, this paper focuses on Turkeyand examines the relation between domestic transactions with international debit and credit cardsin Turkey and incoming visitor numbers (2008-2012).Within the context of different payment options, it aims to reveal the truth regarding the foreigners' payment preferenceswhile we arouse the sector players' interest to the ancillary services (such as payment facilities) ranked among prominent properties in a destination choice of visitors (Hu and Ritchie, 1993; Buhalis, 2000).

Simply,Turkey is one of the world's top ten tourism destinations asstated in the world tourism rankings compiled by the World Tourism Organization (UNWTO, 2013). The findings of Turkey canprovide insightsinto thetendency of outbound visitorsespecially when buying international package holidaysto debit or credit cards, and also our research approach can serve as a model to the other country destinations.

In this frame, this research seeks to answer the following research question:

1) What is the relative share of domestic transactions with international credit-debit cards in international tourism income of Turkey?
2) Is there a volume growth of their transactions with the cards?
3) Is there any underlying trend in their purchasing from credit cards to debit cards?
4) Is there a volume growth of withdrawing money from ATMs and CDs (Cash Dispensers)?

The domestic transactions with international debit and credit cards in Turkey from The Interbank Card Center (BKM, 2014) and tourist data were gathered from the Association of the Turkish Travel Agencies (TURSAB, 2014). We perform also a statistical analysis of variance (ANOVA) to test the relation between some variables. SPSS is used for the analysis of the data.

Research DatawithSome Facts and Figures of Turkey

Overseas expenditures can vary by holiday type. The number of people taking package holidays has increased according to the findings of the ABTA Consumer Trends Survey. In 2012, nearly half (48%) of people who took a foreign holiday, booked it as a package (ABTA, 2013). As for the application in Turkey, we can deduce from some previous studies that Turkey is one of the prominent countriesin all-inclusive holidays. For example; in 2004 nearly 70% of holiday packages to tourists by the outbound tour operators was realized in this way (Üngüren et al, 2009).

We can also understand from Overseas Development Institute's study that about 45% of total economic activity generated package holidays in the 2009 season (including selling packages overseas, flights to and from Turkey, the hotel operation, rents and tourist discretionary spending) was related to expenditure taking place outside Turkey. Principally, activities was coordinated by the outbound tour operator, such as selling holiday packages to tourists and transporting tourists from their destination to Turkey. The remainder, approximately 55%, was spent within Turkey (ODI, 2011). Tourist surveys suggest an average discretionary expenditure (out-of-pocket expenditure over and above the holiday package) of about €119 *(152 Dollar)* per guest per stay, or approximately €12 *(15 Dollar)* per guest per day (ODI, 2011).

In sum, Turkey welcomes mostly European visitors (TURKSTAT, 2014). Europa-wide debit card using rate in purchases is 65% (Visa Europe, 2013).At this juncture, the first question that comes to mind is described as follows: Are debit cards be the preferred purchasing mechanism for foreigners in Turkey? Naturally it would make senseif this question is analyzed. Frankly, the advantages of the non-cash age are that they allow a cleaner comparison and that data are now available to track debit and credit transactions as opposed to the anonymity of cash.

a- Non-cash System in Turkey

The bulk of businesses, be it hotels, retailers, restaurants, gas stations, and art galleries, all accept major payment cards – be it credit or debit – such as MasterCard or Visa.

ATMs are the common feature of the public spaces in Turkey. They can be found at bank branches (indoor or outdoor) in the cities, in shopping centers, on campuses, etc., the number of which is considerable.

As is seen from table 1, ATMs and point-of-sale (POS) terminals have shown a considerable increase during the recent years.

Table 1: The POS and ATMs Numbers by Years

Years	2009	2010	2011	2012
POS (Million)	1,7	1,8	1,9	2,1
ATMs (Thousand)	23,8	27,6	32,4	36,3

(BKM, 2014)

b- Accessing Currencyin Turkey

There are three commonly used ways of withdrawing cash from a bank account in Turkey: using an automated teller machine (ATM), getting cash back at a store, and in a bank with a teller. One very popular way is using an ATM because these machines are located all over main streets. An ATM is a way of making a cash withdrawal without needing to interact with other people or queue in a bank. Also, these machines are becoming increasingly easier to use for blind and deaf people with the implementation of braille keys, voice prompts, and headphone jacks. For the last two years, many stores also have allowed customers to make purchases of a min 10 Turkish Liras (TL) with Visa Electro and Master Card Maestro Bank Cardand to withdraw money, min 10 TL and max 100 TL through a POS (Visa, 2013). The card user can make cash withdrawal a few times in a day according to the daily usage limit from the stores displaying the POSMoney symbol. Each bank card with a debit logo (Visa Electro, Visa Debit or Master Card Maestro) has no specialty of withdrawing cash from a POS terminal. It is tiedto the readiness of bank infrastructures connected with the cards.

Lastly, the traditional way to make a cash withdrawal is through a teller at a bank. All of these different ways to make a cash withdrawal have advantages and disadvantages, leading many people to prefer one way over another.

When visitors use debit cards in Turkey their banks impose a charge to access their checking accounts. In general, there are two types of extra debit card-related fees they might incur:

1. Foreign/International ATM Fee – Generally a flat fee of $3charged for each use of debit card at an ATM to withdraw foreign currency. For example, if a visitor withdraws foreign currency worth $100 USD, he/she will be charged an additional $3 (given his/her bank charges a flat fee of $3 for such transactions).

2. Foreign/International Transaction Fee – Generally a 3% fee for using their debit credit card in a foreign currency. The fee is calculated as a percentage of the converted transaction amount and is essentially the same as a credit card foreign transaction fee. For example, if a visitor makes a foreign purchase worth $100 USD, and his/her bank charges him/her a 3% fee, he/she pays an additional $3 as a foreign transaction fee.

Banks and financial institutions vary in what fees they charge, depending on whether they are using their debit cards to withdraw cash or if they are using it to make a purchase, e.g. at the point-of-sale (POS).

We analyzed fees at some of the biggest banks in Turkey. The most common fee structure we encountered was that where both fees are charged for an ATM withdrawal (e.g. $3 + 3% of the withdrawal amount), and only the percentage of transaction fee is charged for a POS debit card purchase.

c- International Inbound Visitors

As specified in report of The World Bank Group (2014), international tourism receipts are expenditures by international inbound visitors, including payments to national carriers for international transport. These receipts include any other prepayment made for goods or services received in the destination country. They also may include receipts from same-day visitors, except when these are important enough to justify separate classification. For some countries they do not include receipts for passenger transport items. Data are in current U.S. dollars.

A recent statistics by TURKSTAT/Turkish Statistical Institute (2014) revealed that tourism incomes from foreigners (international inbound visitors) in 2012reached $22.410.365.000. The visitors spend on average of $715 in Turkey. According to TURKSTAT/Turkish Statistical Institute (2014), 54 % of Turkey's foreign visitors came from European countries. In the forefront were respectively Germany, Russia, England, Bulgaria and Georgia. 56 % of the foreigners visited Turkey for leisure, cultural and recreationalpurpose.

Number of foreignerswho visited Turkey in total realized as 31.7 million at the end 2012 (TURSAB, 2014).

Table 2: MonthlyForeignVisitors

Months	2008	2009	2010	2011	2012
January	782 786	751 817	809 974	975 723	981 611
February	896 482	898 927	953 848	1 079 505	997 571
March	1 305 297	1 207 729	1 414 616	1 617 782	1 460 563
April	1 647 903	1 750 281	1 744 628	2 290 722	2 168 715
May	2 748 564	2 718 788	3 148 337	3 283 125	3 232 926
June	3 305 832	3 263 089	3 500 024	3 780 637	3 882 592
July	4 084 764	4 343 025	4 358 275	4 597 475	4 571 389
August	3 762 136	3 760 372	3 719 180	4 076 783	4 470 202
September	2 981 044	3 136 010	3 486 319	3 923 546	3 991 415
October	2 462 497	2 617 193	2 840 095	3 039 754	3 050 981

November	1 267 996	1 403 740	1 491 005	1 596 295	1 631 647
December	1 091 376	1 226 143	1 165 903	1 194 729	1 343 220
Total	26 336 677	27 077 114	28 632 204	31 456 076	31 782 832

Domestic Transactions

In an attempt to perform some statistical analysis, monthly data is as below.

Table3: Debit Cards Transactions (Million TL)

2012	Purch.	Withdraw	Total	2011	Purch.	Withdraw	Total
January	72,52	145,30	217,83	*January*	50,72	120,90	171,62
February	74,30	139,80	214,11	*February*	57,26	117,04	174,31
March	98,09	179,22	277,31	*March*	81,12	154,86	235,99
April	130,63	252,20	382,84	*April*	99,02	195,99	295,02
May	158,81	307,20	466,02	*May*	126,84	255,53	382,37
June	181,25	357,79	539,05	*June*	141,32	285,15	426,48
July	220,73	533,67	754,40	*July*	183,18	483,46	666,65
August	220,28	527,43	747,71	*August*	179,86	457,89	637,76
September	197,38	420,35	617,73	*September*	166,36	375,53	541,89
October	173,00	337,26	510,27	*October*	141,97	297,04	439,02
November	113,14	224,28	337,42	*November*	88,81	193,93	282,75
December	92,11	194,19	286,31	*December*	69,38	161,53	230,91
2010	Purch.	Withdraw	Total	2009	Purch.	Withdraw	Total
January	36,22	94,11	130,34	*January*	27,82	86,97	114,80
February	42,10	93,47	135,58	*February*	30,24	83,90	114,14
March	56,71	126,68	183,40	*March*	41,89	107,91	149,80
April	57,95	160,53	218,48	*April*	49,85	143,54	193,40
May	87,48	218,48	305,96	*May*	68,05	185,52	253,58
June	104,36	256,21	360,57	*June*	85,13	227,10	312,23
July	132,31	431,63	563,95	*July*	98,81	367,01	465,83
August	127,59	437,31	564,91	*August*	106,20	420,34	526,55
September	106,70	294,40	401,10	*September*	84,03	251,35	335,38
October	99,69	246,80	346,50	*October*	77,59	212,64	290,24

November	61,56	150,17	211,74	*November*	46,55	134,40	180,96
December	50,73	135,37	186,10	*December*	37,61	124,19	161,80
2008	Purch.	Withdraw	Total				
January	24,31	72,10	96,41				
February	26,15	68,73	94,88				
March	37,23	91,62	128,85				
April	43,43	115,88	159,32				
May	62,08	145,92	208,01				
June	73,31	191,64	264,95				
July	91,12	347,10	438,23				
August	92,07	346,83	438,90				
September	71,58	211,76	283,35				
October	64,66	197,54	262,21				
November	40,83	124,26	165,10				
December	28,99	107,44	136,44				

(BKM, 2014)

Annual figuresregardingthe domestic transactions with international debit-credit cardsare indicated in table 4.

Table4.Figures of Receipts by the Cards($ 000)

Years	2008	2009	2010	2011	2012
Receipts by Credit	$ 3.401	$ 3.261	$ 4.199	$ 5.126	$ 5.568
Receipts by Debit	$ 2.053	$ 1.994	$ 2.395	$ 2.672	$ 2.972
Total	$ 5.454	$ 5.255	$ 6.594	$ 7.798	$ 8.540

BKM-2014

Note: Turkish Lira(□)figures is converted into Dollar ($) to obtain this table.

$ 1 is calculated □ 1.3 for 2008, whereasit is □ 1.8 for 201.

When going into more detailon the cards basisit appears that the number of domestic purchasingtransactions with International credit cardshave increased by 91.9 % in the recent five years whereas withdrawing money has seen an increase of 84.9 %. (From 2008 to 2012 (See table 5).

Table 5: Domestic Transactions with the International *Credit* Cards

Years	Transaction Number					Transaction Amount(Million□)				
	Withdraw		Purch.		%	Withdraw		Purch.		%
2008	2.711.670	100	8.153.206	100	33	910,12	100	3.522,32	100	26
2009	2.986.810		8.722.414		34	1.029,58		4.039,75		25
2010	3.649.457		11.107.157		32	1.248,80		5.076,45		24
2011	4.255.746		13.240.187		32	1.637,43		6.964,97		24
2012	5.014.919	*84.9*	15.649.221	*91.9*	32	2.044,31	*124.6*	7.979,07	*126.5*	26

When examined in table 6, it appears thatthe number of domestic purchasingtransactions with international debit cardshave increased to 152 % in the recent five years, whereas withdrawing money saw an increase of 36.6 % from 2008 to 2012. Besides the increase in purchasing amount volume with debit cards in the same period is 164.4 %, while 79 % for withdrawing money.As things stand, the purchasing with debit cards outruns in proportion to the withdrawing.

Table 6: Domestic Transactions with International *Debit* Cards

Years	Number of Transaction					Amount of Transaction (Million□)				
	Withdraw		Purch.		%	Withdraw		Purch.		%
2008	6.411.248	100	2.658.063	100	41	2.020,89	100	655,81	100	32
2009	6.782.327		3.003.569		44	2.344,93		753,83		33
2010	7.747.227		4.004.916		51	2.645,23		963,46		36
2011	8.054.687		5.161.637		64	3.098,91		1.385,89		44
2012	8.762.254	*36.66*	6.698.590	*152*	76	3.618,75	*79*	1.732,31	*164.4*	48

BKM-2014

While in other cases related to the cards, the surge of withdrawing money with international *credit cards* is far above those of international *debit cards* in terms of both transaction number and transaction amount (See tables 5-6).

3- Findings

As things stand, from the figuresregarding Turkey,the infrastructure of non-cash system and accessing currency have shown a considerable increase during the recent years. The international card transactions increasingly go on in the country, but interestingly enough,the volume of thedebit plus credit cardtransactions was not even 2%in the total receipts based on discretionary expenditureby 2012. As follows, the share of international card transactions in the receipts is quite low.

$$\frac{\text{Amount of International Debit and Credit Cards}}{\text{Foreign Visitors Number} * \text{ Discretionary Expenditure of Per Guest Per Stay}}$$

$$= \frac{\$\,8.540.000 \ * \ 100}{(\ 31.782.832 * \ \$\,152\ )} = = \frac{\$\,854.000.000}{\$\,4.830.990.464} = 1.7\%$$

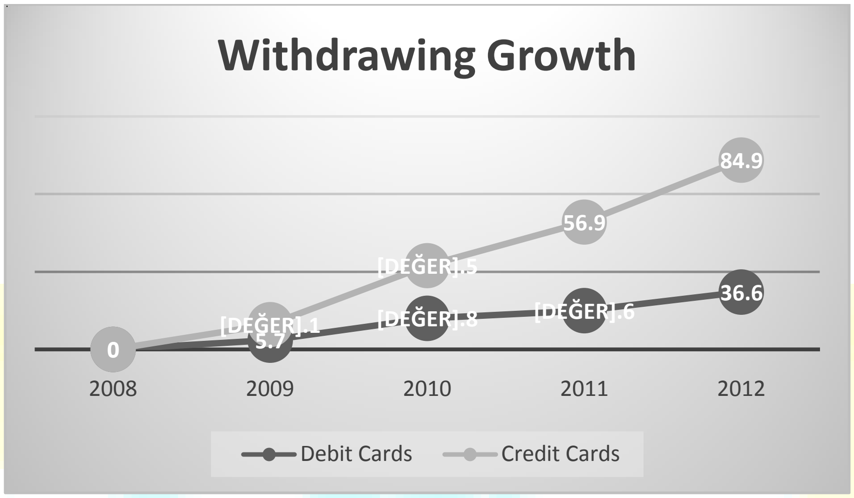
Starting from the average discretionary expenditure of about $*152*per guest per stay, or approximately $*15* per guest per day, the share of international debit card transactions in the receiptscan be calculated as below.

$$\frac{\text{Amount of International Debit Card Transactions (Purchasing + Withdrawing)}}{\text{Foreign Visitors Number} * \text{ Discretionary Expenditure of Per Guest Per Stay}}$$

$$= \frac{\$\,2.972.000 \ * \ 100}{(31.782.832 * \ \$\,152\ )} = \frac{\$\,297.200.000}{\$\,4.830.990.464} = 0.6\ \%$$

When examinedfrom the point of using ATMs, apparently the amount growth of withdrawing money with international credit cards is higher than those of the debit card transactions (see figure 1). While withdrawing money with credit cards, the average annual amount growth rate is 21%, on the other hand, withdrawing money with debit cards average annual amount growth ratehas been 9% in the recent years (2008-2012).

Figure 1: Withdrawing Amount Growth by the Cards(%)



When examinedfrom the point of using credit in their purchasing, we can say that foreigners prefercontemporaneous payments, namely to withdrawborrowed money with heavy interest from ATMs with their credit cards. Figure 1 indicates that this tendency is growing.

Figure 2: PurchasingAmount Growthby the Cards(%)

On the other hand, the purchasing amount growth with the debit cards is higher than those of the credit card transaction. While average annual amount growth rateof purchasing with debit cards is 38%, on the other hand, average annual amount growth rateof purchasing with credit cards has been22% inthe recent years (See figure 2).

Unsurprisingly, foreigners can increasingly use debit cards for purchasing while in Turkey since they provide a needed level of spending restraint.

In addition to all these, with reference to the monthly datafor the last five years (2008-2012), the rate ofamount growth in domestic transaction bydebit cardstothe growth in incoming visitors is estimatedas 3.8 as indicated bythe formula of elasticitybelow.

$$= \frac{\begin{array}{c}\Delta \text{ Changing in Withdrawing Currency Amount} \\ \text{(from 2008 to 2012)}\end{array}}{\text{Withdrawing with International } \boldsymbol{Debit} \text{ Cards (2008)}} \; x \; \frac{\text{Visitor Numbers (2008)}}{\begin{array}{c}\Delta \text{ Changing in Visitors Numbers} \\ \text{(from 2008 to 2012)}\end{array}}$$

$$\frac{\$\,1.598}{\$\,2.020} \; x \; \frac{26.336.677}{5.446.155} = \frac{\$\,42.086.009.846}{\$\,11.001.233.100} = 3.8$$

On the other hand the rate of amount growth in domestic transaction with international *credit* cards to the growth in incoming visitors is estimated as 6.0.

$$= \frac{\begin{array}{c}\Delta \text{ Changing in Withdrawing Currency Amount} \\ \text{(from 2008 to 2012)}\end{array}}{\text{Withdrawing with International } \boldsymbol{Credit} \text{ Cards (2008)}} \; x \; \frac{\text{Visitors Numbers (2008)}}{\begin{array}{c}\Delta \text{ Changing in Visitors Numbers} \\ \text{(from 2008 to 2012)}\end{array}}$$

$$\frac{\$\,1.134}{\$\,910} \; x \; \frac{26.336.677}{5.446.155} = \frac{\$\,29.865.791.718}{\$\,4.956.001.050} = 6.0$$

Namely, whileinternational visitor number increasesby 1 percent,the amount of withdrawing money with debit cards from ATMs increasesby 3.8 percent, but this rate is 6.0 for credit cards.

This paperalso performs a regression analysis, a statistical analysis of variance (ANOVA), to test general differencesbetweentwovariable means as stated below.

y = α + βx

y= Dependent variable (amount of withdrawing with debit cards)

x= Independent variable (Visitors numbers)

α= Constant

β= Slope of the line

Analysis of variance

The regression results comprise three tables, and the ‘Model summary’ table provides information about the regression line’s ability to account for the total variation in the dependent variable.

As can be seen from Table 7, the value of R^2 is 0.849, which means that 84.9 percent of the total variance in the amount of withdrawing with debit cards has been ‘explained’. The R is the square root of R^2.

Table 7: SPSS Output: Results of the Analysis of Variance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,923[a]	,852	,849	47,96068

a. Predictors: (Constant), Visitors numbers

Table 8, generated from SPSS as one of a few tables in its one-way ANOVA analysis, shows the output of the ANOVA analysis and whether we have a statistically significant difference between the variables means. As seen in the table 8, the level of significance is less than 0.01. Therefore, there is a statistically significant difference.

Table 8:Analysis of Variance (ANOVA)

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	765587,829	1	765587,829	332,831	,000[b]
	Residual	133413,184	58	2300,227		
	Total	899001,013	59			

a. Dependent Variable: withdrawing money with debit cards

b. Predictors: (Constant), Visitors numbers

Table 9 presents the results of the regression analysis. In the light of the findings, the regression equation is: Withdrawing with debit cards = 8,656 + 9,093 Visitors.An increase of one percent in visitors numbers lead to an increase of nine percent in debit cards withdrawals.

Analysis of the regression results indicates that the slope parameter is significantly different from zero at the 0.01% level. There is a significant relationship between withdrawing with debit cards and visitors numbers.

Table 9: Analysis of Significance for Coefficients

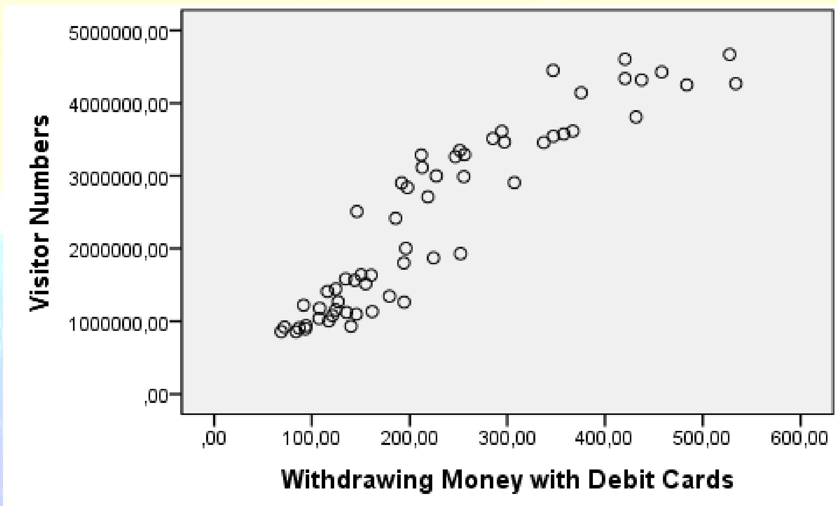
Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	8,656	13,563		,638	,526
	Visitors	9,093E-005	,000	,923	18,244	,000

a. Dependent Variable: withdrawing money with debit cards

The scatter diagram below compares the withdrawing money with debit cards and the number of foreign visitors. Figure 3 indicates a Strong Positive Correlationbetween the two variables.

Figure 3. Scatter Diagram of the Relation



Conclusion

Recent searches indicate that volume growth in global non-cash payments transactions have accelerated during the recent years. Debit and credit cards have led the non-cash arena.

The international card transactions increasingly go on in Turkey, but interestingly enough, the volume of the debit plus credit card transactions is not even 2 % in the total receipts based on discretionary expenditure by 2012.The amount growth of withdrawing money with international credit cards is higher than those of the debit card transactions in the 2008-2012period**.** While withdrawing money with credit cards average annual amount growth rate is 21%, on the other hand, withdrawing money with debit cards the average annual amount growth rate has been 9%.

The amount growth of purchasing with international debit cards is higher than those of the credit card transactions. While purchasingwith debit cards average annual amount growth rate is 38%, purchasing with credit cards average annual amount growth rate has been 22% in the 2008-2012.

We can say with reference to our research findings that although the cards offer known transactional advantages over cash such as making it unnecessary to maintain cash reserves sufficient at all times to cover current expenditures, foreign visitorsin Turkey use cash money for discretionary expenditure. The cash using corresponds to 98 % of the expenditures. Although potential reasons are not the subject of this article,possible but not necessarily,this may derive from overseas payment habitor risk perception concerning fraud and chargebacks.

According to our reliable estimates based on several interrogation in the course of this research, the foreigners have had their share of worries forpossible credit-debit card fraud in a foreign country, and couldn't find any English-speakers for getting assistance.

Consequently, the growth in purchasing with debit cards increases more than credit card.The regression analysis results indicate that there is a significant relationship between withdrawing money with debit cards and the visitors' numbers. On the other hand, using of credit cardsdraws the attention as a source of credit, not as a transactional medium.

This paper leaves one with an indisputable fact: cash is still the preferred payment type for overseas visitors. Given this reality we claim that credit and debit cards becoming two dominant instruments of today in non-cash arena, whatever may come, they will never replace cash in overseas payment.

Alternative payments, which the authors define as "any payment type that is not a credit or debit card" and which includes bank transfers, direct debits, e-wallets, mobile payments, cash on delivery, local card schemes, pre-pay, post-pay, e-invoices and digital currencies. When viewed from the WorldPay expects aspect, e-wallet will make up 41 percent of the payments market in 2017 (Worldpay 2014). With reference to this WorldPay report and recent development regarding NFC we can prejudge that overseas visitors will be able to buy services and goods without the need for a card or cash as well whereby the technology that will allow them to make purchases by swiping their mobile phone. With one swipe of a smart phone, overseas visitors will be able to pay for their shopping, and thus, they will be able to check bank accounts and card payment/receipts.

However, whileoverseas visitors have distinctive acquired behaviorssuch as using cash money rather than credit and debit cards as more popular payment instruments of nowadays,the dominance of cash in overseas spendingmay partially be overtaken by the mobile payments. As things stand,since certain risks of purchasing with credit and debit cards will be removed with mobile technologies,mobile systemwill reduce the popularity of credit and debit cards in non-cash arena.When it comes to overseas touristic expenditures,we can claim that using cash money will routinely appeal to overseas visitorsbecause of planning spending better, staying within budget, or spending less and bargaining in overseas markets.

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