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Store choice in computer retailing: the case of home users in Greece

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Store choice in computer retailing: the case of home users in Greece

Abstract
Purpose- To evaluate the relationship between demographics and store choice in computer retailing sector and to provide a general understanding of PC home users’ store selection criteria in the Greek context.
Design/methodology/approach- A convenience sample of 600 consumers was employed. The respondents should have purchased a computer or a peripheral at most four weeks prior to the interview. The data were collected through personal interviews. Also, a pilot test for content and face validity was conducted. Descriptive statistics as well regression and factor analysis were performed to evaluate the data.
Findings- Demographics have a strong predicting power over store choice in computer retailing sector in Greece. Retail location that is traditionally considered among the most important store choice determinants is not that strong in the case of computer and peripherals purchase.
Research limitations/implications- In order to generalize the current findings a stratified sample in terms of demographics and geographical coverage would be used and examined. In addition, the influence of e-purchases should be considered.
Practical implications- The results are partially consistent with the findings of previous studies in other retailing sectors and also suggest retailing strategy implication for retailers operating in Greece. As competition in retailing evolves the understanding of consumer is crucial for retailers.
Originality/value- The paper is unique because it analyzes store selection criteria in computers retailing where very few similar research studies exist.
Keywords: Store choice, Computers, Retailing, Greece
Article Type: Research paper
1. Introduction
PC and peripherals retail sales in Europe are estimated at around €10 Billion per year and about 90% take place in traditional retail stores. Store choice in computer retailing is an important issue, however unexplored by academia. In Greece, the vast majority of computers and peripherals retail sales take place through traditional retail stores and particularly through large retail multiples (Kathimerini, 2007). So even though e-sales grow year by year, the importance of physical stores remain high.

In the existing literature, particular attention is paid to store choice criteria as well as individual characteristics in the same consumer decisions (Baltas and Papastathopoulou, 2003). During the last decade the focus of academia has been shifted in the Greek retailing sector and relevant research has been published (Baltas and Papastathopoulou, 2003; Theodoridis, 2004; Daskalopoulou and Petrou, 2005). However, store choice in the computers and peripherals sector remains unexplored in Greece and few studies can be found in the international context (Sharma and Stafford, 2000; Teo and Lim, 2001).

Computer and peripherals purchases differ from other product purchases because they involve specific knowledge or/and skills that are not possessed by all the potential consumers. Phillips (2005) stressed that the technical complexity of the products cannot sufficiently be understood and the consequence of that is not to make properly-informed choice decisions. The aim of this paper is to evaluate the impact of demographics on store choice behaviour in computer retailing. The objectives of the paper is to present the computers and peripherals sector in Greece and stress the importance of the understanding of consumer behaviour in the sector, and to evaluate store choice criteria in the context of the specific sector. For that reason the authors conducted a consumer survey where store choice and individual characteristics were measured.

The paper is divided in five sections. In the first section a brief overview of the Greek computers and peripherals sector is made. In the second section a critical literature review about store choice is presented. The third section discusses the methodological framework of the research. The fourth section the results of the survey are presented and discussed, and finally in the fifth section of the paper conclusions and future research opportunities are addressed.

2. The computers and peripherals sector in Greece
Computers and peripherals sector in Greece accounted €1.1B in 2007 (SEPE, 2008) and shows a moderate growing dynamic over the years (see Figure 1). About 60% of the sales involve purchases of hardware while the remaining 40% involves purchases of software. Home users’ purchases represent about 40% of the total sales while the remainder is purchases by private and public organisations.

[Take in Figure 1]

The main distribution retailing channel for computers and peripherals in Greece is the retail store. Since the early 2000 all the major retailers are developing a multi-channel distribution system that brings online retailing forward. Commentators argue that in 2006 almost 90% of the sales of computers and peripherals were distributed through physical stores (Naftemporiki, 2007), however it is expected that the volume of online
sales will significantly grow in the near future as a result of the growing penetration of broadband internet connections in the households (The Observatory for the Greek Information Society, 2008).

The largest by sales retail chain in Greece is Plaisio, accumulating sales of €300 million (Plaisio annual report, 2007). It is estimated that about €37 million of sales took place through company’s online store. The company operates through a network of 21 stores located in Athens, Thessaloniki, Patras, Heraclion, and Larisa. The largest e-retailer is e-shop.gr. According to press releases e-shop’s sales for 2007 were estimated at about €45 million (Naftemporiki, 2007). E-shop make postal delivery of the orders but also operated a large store portfolio, which numbers 43 branches, where buyers can only collect the order that was placed online.

Computers and peripherals are also distributed through small independent specialist stores and large electrical retail chains. The Greek electrical retail market is rapidly growing during the last years. The expansion of know international retailers in Greece like the English Dixon’s, the German Mediamarkt, and the French Fnac brought to the local market the marketing practices that these companies have practiced for long in the abroad markets. According to a recent market report the expansion of these three international retail chains in Greece has a wider impact on the sector because small retailers cannot compete on the prices that these three retailers can offer so they either have to target smaller niches or they are merged with other small independent retailers (ICAP, 2007).

3. Literature review

Store choice has been characterised as a cognitive process (Sinha and Banerjee, 2004). It is related with the human ability to understand and process data that describes store attributes under an individual filter that is determined by each person’s characteristics. However, the research undertaken up to now is not oriented on hi-tech products thus the applicability of the existing store choice patterns will be challenged by our research.

3.1 Store choice and store attributes

As store choice in retailing is among the oldest research topics most of the fundamental literature was published during 1960’s and 1970’s. However store choice in retailing remains a very popular research field and the fundamental research is further exploited and get more focused on niche areas. Previous studies have shown that product assortment, pricing, and customer services are the most important factors in determining choice of a store (Arnold, 1997). Woodside et al. (1992) found that shoppers look for distinctive characteristics that make stores recognisable like low prices, or accessibility. Later Erdem et al. (1999) stressed that consumers prefer stores that can be identified by their unique characteristics. This is related with the cognitive limitations that are underpinned by Phillips (2005) theory of the limited awareness of ranges of products and services.

Oppewal and Koelemeijer (2005) have reviewed the reasons that make product assortment important for consumers. They suggested that a large variety of products allow consumers to find the products they want in competitive prices, it allows buyers to make simultaneous purchases for more than one household member from only one store and finally can fulfill non-purchase reasons for shopping like learning about
new-product trends. Store location (Kim and Jin, 2001) and proximity (Baltas and Papastathopoulou, 2003) has been found to determine the store choice. Store location is an integral part of retailing strategy and this is why retail companies invest on acquiring and maintaining locations that are suitable for their products and customers (Hernandez and Bennison, 2000). The importance of store environment and atmosphere has been identified by Kotler (1973) who suggested that atmospherics are an important part of retail marketing strategy. With particular reference to the computer retailing setting Sharma and Stafford (2000) showed that store atmospherics positively influence consumers’ perceptions of customer persuasion which is related with the subsequent purchase decision. Earlier, Davies (1992) had argued that retailers change store attributes over time in parallelism with the changing nature of consumers’ needs.

3.2 Store choice and personal characteristics
The effect of personal characteristics on store choice has also been addressed in the relevant literature. Baltas and Papastathopoulou (2003, p. 499) attribute the existence of that relationship on the “heterogeneous preferences that vary over people with different demographic characteristics”. Characteristics like age, income level, education, and location of residence have been found to influence store choice (Moore and Mason, 1969; Robarts, 1969; Bellinger et al. 1977). More specific examples were presented by Lumpkin et al. (1985) who found that elderly shoppers, compared to younger, are less price sensitive and proximity-conscious; Sampson and Tigert (1992) who suggested that warehouse club members are upscale from the general population; and Arnold (1997) whose research revealed significant differences between the demographic profiles of large department store shoppers as compared to non-shoppers. More recently Carpenter and Moore (2006) in their study on US grocery market identified demographic groups that are attracted by different formats and influenced by different store attributes.

4. Methodology and research design
Data for the research is drawn from a larger study that examines general patronage behaviours across the consumer durables retail sector conducted in Greece. Data on the perceived importance of several store characteristics in store choice decisions were collected through 600 personal interviews (n=600). Personal interviewing is the dominant data collection method in Greece (Kouremenos and Avlonitis, 1995). Convenient sampling was employed with the single quota of the respondent to have purchased a computer or a peripheral at most four weeks prior to the interview. This single quota was imposed to ensure that the respondent still had a good recall of the store characteristics. Up to the authors’ understanding this is the first study that addresses the issue of store choice in computers and peripherals sector and this is why the methodological framework is owing to similar studies that investigate store patronage and took place in Greece (Priporas, 2003; Baltas and Papastathopoulou, 2003; Theodoridis, 2004; Daskalopoulou and Petrou, 2005). The data was collected by trained marketing undergraduate students from December 2007 to January 2008. SPSS statistical software version 15 was used to analyse the findings.

4.1 Measurement
Measures for the study’s variables were drawn from previous research regarding store patronage. A pilot questionnaire including 24 statements measured in a Likert type scale was drafted and distributed to academics, researchers and retail managers in
order to be tested for content and face validity. The statements were the result of a literature review of relevant studies that were conducted in Greece (Priporas, 2003; Baltas and Papastathopoulos, 2003; Theodoridis, 2004). Nine of the initial twenty-four statements were accepted for the final instrument as the others lacked relevance with the particular sector. Demographic data including sex, age, income, and education were also collected.

5. Data and results

5.1 Sample profile
Examination of the respondents (n=600) indicated a majority of males (66%) compared to females (34%). Ages of the respondents ranged from 23 to 52 years old, with a median age of 31 years (mean=32.32). About 55% of the respondents indicated that they had graduate degree, while only 11% stated that they have a high school degree. 45% of the respondents indicated annual income over €20,000, about 23% indicated incomes between €10,001 and €15,000 and about the same percentage of respondents reported annual income lower than €10,000. Table 1 describes the sample data characteristics.

[Take in Table 1]

5.2 Consumer demographics and store choice
The effects of demographics variables including gender, age, income, and level of education in store choice were examined using stepwise regression. The resulting regression model was significant including distinct predictors at varying α levels. The regression model yielded a significant statistic \( (F=371.922, \rho=0.000) \) with gender \((\beta=-0.303, t=-13.610, \rho=0.000)\), age \((\beta=2.230, t=28.724, \rho=0.000)\), level of education \((\beta=2.077, t=27.032, \rho=0.000)\), and level of income \((\beta=-1.722, t=-21.099, \rho=0.000)\) producing significant estimates as predictors of the store choice. Store choice criteria were measured with a 9-item Likert scale (1=not important at all– 7=extremely important) and for the purposes of the development of the regression equation the mean of the values for each respondent was used (Churchill and Brown, 2004). Table 2 illustrates the summary of regression models for effect of demographic variables on store choice and Table 3 shows the predictor effects and beta estimates for demographic variables on store choice.

[Take in Table 2]

[Take in Table 3]

5.3 Store attributes and store choice
The means and ranking of store attribute are presented in Table IV. Respondents indicated service of personnel as the most important store choice criterion (mean=5.877) followed by price level, and courtesy of personnel.

[Take in Table 4]

The original measure consisted of a 9-item seven-point scale concerned with the evaluation of characteristics of the respondents’ latest sale purchase point. The analysis employed principal components analysis with Varimax extraction and the
extraction criterion was to derive factors with eigenvalues greater than unity. The
same method was employed in studies referred to the Greek retailing sector
(Theodoridis, 2004; Ness et al. 2006) and was selected in order give indication of
potential similarities between computer and peripherals store choice, electricals store
choice (Theodoridis, 2004) and grocery store choice (see Ness et al., 2006).
A reliability analysis was performed to test the reliability and internal consistency of
each of the 15 attributes. The scale was found to be internally reliable (α=0.886)
which exceeds the minimum standard of 0.60 suggested by Malhotra (1996); Heir et al.
(2006). BTS with 12705.65, p=0.000 and a calculated MSA statistics of 0.69. An
MSA of above 0.60 and bellow 0.70 is mediocre but according to Heir et al. (2006) it
is above 0.50 which is the lowest acceptable value. According to the before
mentioned values the data is suitable for a useful factor analysis. The communality of
each variable could be characterised as high ranging from 0.448 to 0.990, indicating
strong correlations between the indicators and the associated factors. “Courtesy of
personnel” reported a communality score of .448 and was excluded from the factor
analysis because its value was lower than 0.5 which is the threshold for a usable
variable (Heir et al. 2006). Approximately 96% of total variance of the original
variables is explained by the four factors (Table V).

[Take in Table 5]
The first factor is most strongly correlated with the variables “Store brands”, “Variety
of products”, and “Price level” and it is defined as “Merchandise attraction”
(Percentage of variance explained=41.4%, α=.886). The second factor is strongly
correlated with “Merchandising quality” and “After-sale service” and it is defined as
“Product durability” (Percentage of variance explained=23%, α=.685). The third
factor is associated with “Store atmosphere” and “Service of personnel” and it is
called “Physical image” (Percentage of variance explained=19.1%, α=.674). Finally,
the fourth emergent factor is a single-item one related with “Location” (Percentage of
variance explained=12.9%). As a single-item factor it can be accepted in the current
level of analysis (Choi and Chu, 2001) but it cannot be treated with any further
analysis (Susskind et al., 2003).

6. Discussion
The aim of the study was to evaluate the impact of demographics on store choice
behaviour in computer retailing. The study examined whether personal characteristics
have a significant effect on store choice pattern. A regression analysis revealed that
genre, age, level of education and level of income have impact on the store choice
pattern. Similar findings were revealed by Ness et al. (2006) study in Greek grocery
retailing. Baltas and Papastathopoulou (2003) had also reported that older people and
people with family responsibilities may face tight budget constraints and they may
show their preference on discount stores.

The second finding of the research is related the factors that determine store
patronage. Loosely speaking, the comparison of the findings with the findings of the
research of Baltas and Papastathopoulou (2003), Priporas (2003), Theodoridis (2004),
and Ness et al. (2006) indicates that this research share some, but only few, common
underpinnings with the previous ones (where a comparison is possible). Product
quality, product characteristics, and price are factors that are highlighted, and in the
case of computers they are important as computers have a significant cost for the buyer. Location and on the other hand, that is generally perceived as a significant factor of patronage (Fotheringham, 1988; Popkowski et al., 2004) does not appear to have strong impact on the store choice decision of a computer shop. This could be the result of either the fact that large computer stores can be found in the city centres so they are easily accessible by the customer or it can be a signal of strong patronage habits that are defined by the stronger factors that was mentioned before. There is also strong indication that salesperson is an important part of the store choice pattern. This is obviously more important in computers retailing rather than grocery and perhaps it is owed to the technical complexity of computers and peripherals that customer do not understand and ask for the professional help of a skilled salesperson. It shouldn’t be neglected also that computers’ and peripherals’ purchase involves specific skills and knowledge so it is possible so consumers could travel longer distances if they understand that they can be serviced by more capable and knowledgeable shop assistants.

This finding is reflected on the marketing positioning and strategy of retail stores. It is common that computer and peripherals retail companies distribute large product portfolios targeting all genders, ages, and income levels. This strategy is supported by the manufacturers who develop product lines specifically oriented for niche segments of the market. It can also be observed in the two largest conurbations of Athens and Thessaloniki that computer retailers compete on locations and major retail areas have been developed in both cities. Small independent retailers are located around the university campuses in Athens and Thessaloniki and target university students with sophisticated peripherals and hi-tech gadgets offered in discount prices, while at the same time they sell PC-games, software and sometimes even stationary goods.

The other example is the large retail multiples that aim on multiple segments of the market. These companies offer a wider range of products and services and usually are located in high traffic streets. Plaisio computers open stores in city centres or in major traffic arteries and only in the large Greek cities. Recently, Public stores, computer and hi-tech equipment specialist retailer, made a €40M investment and opened a new store in a refurbished building in Syntagma Square in Athens. According to retail commentators Public managers are expecting 10,000 visitors per day in their stores (Naftemporiki, 2008).

Several recommendations for marketing and retailing management practices also resulted from this study. The study showed that store choice is affected by socio-demographic characteristics and this leads to the conclusion that retailers have the opportunity to position their stores with focus on niche markets. Knowledgeable staff is also required in computer shops, which means that retailers would benefit from allocating a part of their budget on training the sale-personnel. Finally, it appears that “location – location – location” is not that important on computer retailing. Location selection is a strategic choice for retail companies, where significant amount of resources are invested (Clarke et al., 1997; Hernandez et al. 1998) but in this sector other features of the retailing mix are more important.

7. Limitations and future research
The results should be interpreted with several limitations in mind. First, there are other factors that could influence store choice. The variables used in this study were
identified as the most important by the retail academics and practitioners that piloted the research instruments. Secondly, a convenience sampling method was selected and although the sample size is larger than other similar research programs in Greece this research will benefit from a stratified sample that could provide statistically generalisable results for the whole Greek territory. Finally, the number of measures associated with the constructs in this research is limited by the size of the questionnaire that was drawn not to induce respondent fatigue.

The study gives an insight on how consumers buy computers and peripherals and future studies would benefit from the latter mentioned findings. Future research could investigate the applicability of the findings of this study on larger populations and other geographic contexts. Finally, it would be interesting if this research could be replicated in other products like books, audio CD’s or movie DVD’s. The retail distribution of these products is gradually shifted from traditional stores to e-stores, which is similar with computers and peripherals, so a study of these sectors could give a better insight on the shift of traditional to e-retailing.
8. References


*Kathimerini* (2007), “Laptop’s are the stars of computer market”, Athens, Greece.


The Observatory for the Greek Information Society. (2007), Profile of Greek Internet Users, Greece.


### Tables and Figures

<table>
<thead>
<tr>
<th>Variable</th>
<th>Level</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
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<tr>
<td>Gender</td>
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<td>66.0</td>
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<tr>
<td></td>
<td>Female</td>
<td>204</td>
<td>33.4</td>
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<td><strong>600</strong></td>
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<td>Age</td>
<td>20-29</td>
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<td>30-39</td>
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<td>33.7</td>
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<td>40-49</td>
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<td>11.3</td>
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<td>50+</td>
<td>67</td>
<td>11.2</td>
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<td>Graduate degree</td>
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<td>56.2</td>
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<td><strong>Total</strong></td>
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<td><strong>100.0</strong></td>
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<tr>
<td>Income (annual)</td>
<td>Less than 10,000€</td>
<td>128</td>
<td>21.3</td>
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<tr>
<td></td>
<td>10,001€-15,000€</td>
<td>136</td>
<td>22.7</td>
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<tr>
<td></td>
<td>15,001€-20,000€</td>
<td>67</td>
<td>11.2</td>
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<tr>
<td></td>
<td>&gt; €20,000</td>
<td>269</td>
<td>44.8</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>600</strong></td>
<td><strong>100.0</strong></td>
</tr>
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**Table 1: Sample characteristics**

<table>
<thead>
<tr>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
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<tbody>
<tr>
<td>0.845(^a)</td>
<td>0.714</td>
<td>0.712</td>
<td>0.424</td>
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</table>

**Change Statistics**

<table>
<thead>
<tr>
<th>R Square Change</th>
<th>F Change</th>
<th>df1</th>
<th>df2</th>
<th>Sig. F Change</th>
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<tbody>
<tr>
<td>0.714</td>
<td>371.922</td>
<td>4</td>
<td>595</td>
<td>2.868E-160</td>
</tr>
</tbody>
</table>

\(^a\)Predictors: (Constant), Gender, Age, Income level, Education level,

**Table 2: Summary regression model for effect of demographic variables on store choice**

<p>| Unstandardized Coefficients | Standardized Coefficients |</p>
<table>
<thead>
<tr>
<th></th>
<th>$B$</th>
<th>Std. Error</th>
<th>$\beta$</th>
<th>$t$</th>
<th>Sig.</th>
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<tr>
<td>(Constant)</td>
<td>-2.653</td>
<td>0.278</td>
<td>-9.531</td>
<td>0.000</td>
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<tr>
<td>Gender</td>
<td>-0.505</td>
<td>0.037</td>
<td>-3.030</td>
<td>-13.610</td>
<td>0.000</td>
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<tr>
<td>Age</td>
<td>1.773</td>
<td>0.062</td>
<td>2.230</td>
<td>28.724</td>
<td>0.000</td>
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<td>Education level</td>
<td>2.384</td>
<td>0.088</td>
<td>2.077</td>
<td>27.032</td>
<td>0.000</td>
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<tr>
<td>Income level</td>
<td>-1.116</td>
<td>0.053</td>
<td>-1.722</td>
<td>-21.099</td>
<td>0.000</td>
</tr>
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</table>

Table 3: Predictor effects and beta estimates for demographic variables on store choice
<table>
<thead>
<tr>
<th>Service of personnel</th>
<th>5.877</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price level</td>
<td>5.697</td>
</tr>
<tr>
<td>Courtesy of personnel</td>
<td>5.653</td>
</tr>
<tr>
<td>Store brands</td>
<td>5.335</td>
</tr>
<tr>
<td>Merchandise quality</td>
<td>5.223</td>
</tr>
<tr>
<td>After-sale service</td>
<td>5.085</td>
</tr>
<tr>
<td>Variety of products</td>
<td>4.912</td>
</tr>
<tr>
<td>Store atmosphere</td>
<td>4.548</td>
</tr>
<tr>
<td>Location</td>
<td>3.895</td>
</tr>
</tbody>
</table>

Table 4: Means of store attributes (ranked from top to the bottom)

<table>
<thead>
<tr>
<th>Merchandise Attraction 41.4%</th>
<th>Store brands</th>
<th>0.880</th>
<th>α=.886</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Variety of products</td>
<td>0.878</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Price level</td>
<td>0.862</td>
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<table>
<thead>
<tr>
<th>Merchandise durability 23.0%</th>
<th>After-sale service</th>
<th>0.891</th>
<th>α=.685</th>
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<tbody>
<tr>
<td></td>
<td>Merchandise quality</td>
<td>0.785</td>
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</table>

<table>
<thead>
<tr>
<th>Physical image 19.1%</th>
<th>Store atmosphere</th>
<th>0.977</th>
<th>α=.674</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Service of personnel</td>
<td>0.682</td>
<td></td>
</tr>
</tbody>
</table>

| 12.9% | Location | 0.931 | - |

Table 5: Rotated factor matrix for importance of store choice criteria
Figure 1: PC and Peripherals purchases by home users (Millions €); SEPE, 2008