

The Selected Implications on Effects to Traditional Business Sectors of Increasing Marketing in WWW – tentative findings

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Abstract - The use of internet marketing of the durable goods has provided many implications on trading and service processes such as real estate and car trading business in Finland. The objectives of transaction and trading, i.e. the houses and cars, are not yet actually sold via internet. Hence, the digitalized services and modern market places should be constructed in order to satisfy future coming needs of e-business.

In this paper of time serial research and data concerning internet utilization and its implications on business process of car trading and real estate business. The phenomena are pointed out by multivariate analyses, especially factor analyses in time serial data 2002-2006.

The use of internet in information retrieval has increased from 66% (2002) into 81% (both 2004 and 2006) of questionnaire fulfilled customers in real estate business. In second hand car trading business the comparable amount of internet users has increased from 56 % (2003) to 75 % (2005) of all answered customers.

The main focus is to analyze the development of phenomena concerning the increasing role of internet as information source in purchasing process, especially comparing value chain theories and information retrieval in real estate and used car markets.

The time serial analyses points out at least the main competitiveness factors of the website marketing. Also some expected development of competitive capabilities are presented in the conclusion part of study.

Keywords — e-business, purchasing process, Internet usage level, competitiveness factors, real estates, cars

I. INTRODUCTION

A. Presentation

Real estate and second hand car business are good examples of business sectors selling expensive durable goods or investments for households. The idea of continuous time serial study concerning the development of internet marketing utilization in durable goods was

developed in co-operation by the producer of www-site portal, Alma Media Interactive, and the research group. The primary target was to measure the level of internet utilization in purchasing process of the durable goods. Therefore, the most used information sources were measured. The questionnaire was given for the customers at the end of bargaining process when they had already signed the trade agreement.

In order to describe different kind of customer groups and their behaviour, the questionnaire included Likert-scale from 1 to 5 opinion and attitude statements concerning the purchasing process, decision making and satisfaction to the certified estate dealer or car dealer. The data was analysed by multivariate analysis, especially factor and cluster analyses.

These studies were produced annually, started on 2002, 2004 and 2006 in real estate business, then 2003 and 2005 car trading business. The questionnaires in both of the business lines follow the equal basis, so the comparability of factors can be consider reliable and adequate. The data basis is fulfilled by study of car traders 2006 in order to validate opinions considering role of internet in purchasing process and future coming competition factors.

A value adding element of internet in information retrieval in traditional trading and service business for consumers is also clearly verifiable according data. The earlier literature of value chain and customer management theories in e-business and purchasing process is briefly presented in next section II. Section III introduces the research methods and data basis, section IV the empirical results. In section V we conclude the study and take part in to discussion considering future coming competitiveness factors of website marketing and studied business lines.

II. THEORETICAL BASIS

A. Value adding through internet utilization

The unitization of the internet has rapidly changed the former consumer marketplaces and trade practices already. When the idea of e-commerce was developed, the role of information systems was central. [1,2] From marketing

platform the role of internet has changed into online information source and exposition stage of any available goods. Especially in real estate business, which is an information-intensive and information-driven industry and in which firms act as intermediaries [3,4].

According to the modern value chain theories there are close connections between delivery chain and consumer's satisfaction [5]. Value Chain Management is promised to provide a firm flexibility, and through flexibility a competitive advantage. A company needs ability to adapt constantly developing business environment and awareness of the emerging opportunities [6]. Corporations' responses to individualized and changing needs are expected to be carried out with evolving technology.[7].

Another remarkable competitive advantage can be gained through CRM (an acronym for Customer Relationship Management) and its latest version eCRM. The core of eCRM is providing all information concerning the customer throughout the company allowing every employee to see "the whole picture" of the customer relationship [8]. In some technologically advanced companies (usually doing e-business) and organizations this idea has expanded to the level of letting the customers themselves access the same information.

The earlier studies on knowledge sharing in business networks have concentrated primarily on identifying the conditions of co creating to take place and information flows mainly in dyadic inter-organizational business relationships [9, 10]. Importance and variety of different types of business nets are studied by Möller and Svahn (2006). They introduced the framework for roles of knowledge and learning in three types of business nets [11]. They contribute to the theory of network management focusing in corporate collaboration and therefore fail to integrate the customer to the process of value creation in information sharing. Basically value networks are born in the process of out-sourcing corporations functions.

Much more attention needs to be given to the customer perspective. Customers could and should be brought in to the network. On the other hand, dependability makes a corporation vulnerable. To make the network profitable, corporation needs to define its own special business area clearly and focus on that [12].

Some attempts have been made to enlighten the possible inter-action between SCM Relationship Management). The key to the integration of the two traditional operating process could be KM (Knowledge Management)[13]. The framework of KM offers means to sharing knowledge between individuals in terms of creating and sustaining competitive strategies to build more efficient organizations. E-business is greeted with warmth as the producer of new solutions to interact with customers, rivals and colleagues.

Presuming that corporations' primary function is creating customers, we must accept the fundamentals of the firm to be gaining, satisfying and retaining customers. Three core operating processes and central organizational requirements

must be fulfilled for the organization to be capable continually deliver superior customer value in the customer preferable forms. Taking advantage of the interaction of product development management process, the supply chain management process and the customer relationship management process can competitiveness advantage be developed. It is inevitable to analyse both the firms internal content [6] and external content to prosperous e-business to come true [13][14].

B. Earlier studies and literature on customer behaving in e-commerce

Thou e-business has its barriers [15,16,8], especially trust involving issues[17], its rapid development leads us to believe its usage continues to grow [4]. The major concerns, technological infrastructure, regulatory environment and economic dimensions, produces difficulties mainly when doing business abroad, which seldom is the case when dealing used cars or real estates. Nevertheless, several researches have proved the multidimensional and context-dependent nature of perceived customer value [18]. Also has been shown how the different aspects of e-commerce affects perceived customer value [12]. For greater efficiency and productivity corporations should be more open to empowering the customers and letting them to control the purchasing process in their own terms.

Naturally, customer joining in these information processes sets increasing number of possibilities in the disintermediation of market intermediaries. To mention an example, in the USA publications lists for-sale-by-owner (FSBO) properties are increasing [19] by-passing traditional real estate brokers (Fletcher 1997).[20].

In this tightened competition situation, real estate industry is going through enormous change. Some realtors have adopted new technologies and used it successfully, while others are adapting to the situation creating new forms of brokerage and other value-adding mechanisms. [21]

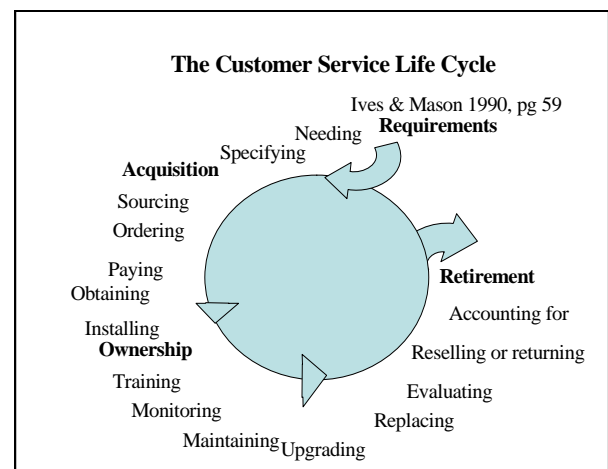


FIGURE 1
THE SERVICE LIFE CYCLE ACCORDING IVES AND MASON 1990

TABLE 1

Study	Kaiser-Meyer-Olkin.	Bartlett's Test of Sphericity			N
		Approx. Chi-Square	Df	Sig.	
2002 real estate	0,737	4690,97	1540	0,000	267
2003 car trade	0,732	4221,21	1653	0,000	221
2004 real estate	0,764	5878,52	1326	0,000	339
2005 car trade	0,700	3057,29	1081	0,000	273
2006 real estate	0,741	2873,41	1035	0,000	200

The framework of Customer -service Life Cycle points out the four stages and the twelve steps in the customers purchasing process. CSLC clarifies the aspect of each step and suggests that each and every one of those phases could be intensified with assistance of the information technology. In spite of the on-going technical revolution, the winning strategy still lies on the corporation's ability to provide service over customers' expectations [12, 22].

CSLC provides examples and initiatives for every step of the way to assist the customer with IT-solutions. The difference between CSLC and traditional customer service theories is that the CSLC widens the perspective of the purchasing process to the time before the actual functioning (e.g. requirements stage =customer observes the need for a product or a service) and to the time after the purchase (e.g. usage monitoring, upgrading, disposal and evaluation).

III. RESEARCH DESIGN

A. Systematic in data collection

The focus was to point out the purchasing process and its information retrieval, instead of the selling problematic of flats, houses and used cars. Therefore, the questionnaires were given by the estate dealer or car trader to the consumers at the selling deal signature gathering.

The answer percent varied between from 12% to 23 % of printed coupons. Beside the questionnaire there was also given a postage free envelope to University of Tampere. All of the answers got a free number of new magazines or some other small present.

The paper format of questionnaire was selected to avoid distortion in sample, like selectivity of daily internet user consumers. During the last real estate study 2006, the questionnaire was also available on e-questionnaire format, but only 17 consumers used that possibility.

B. Data basis of the summary study

The data of this time serial analyze is collected in five different consumer studies on 2002-2006 by authors. In three different real estate business studies, the number of consumers answering to paper format four pages questionnaire varied between 200-339 consumers on 2002, 2004 and 2006. Equally based literary questionnaires concerning car trade business were answered by 221-273 consumers in two studies 2003 and 2005. Hence, altogether 1300 consumers have taken part in to this study.

The data was analyzed by SPSS 12.0.1 for Windows statistic software. The factor analyses variables tested by KMO and Bartlett's Test of Sphericity. The Kaiser-Meyer-Olkin measure of sampling adequacy tests whether the partial correlations among variables are small. Bartlett's test of sphericity tests whether the correlation matrix is an identity matrix, which would indicate that the factor model is inappropriate.

Besides above mentioned consumer time serial studies there is also one research already done in winter 2006 to chart the corresponding opinion development among car traders. The focus of trader study was to compare, whether the traders and consumers find equally effects of internet usage in trading business. That internet questionnaire was answered by over 230 car sellers and car trade managers all over Finland. These results are just lightly commented in discussion part of paper, not equally analyzed as the data of five consumer studies.

C. Research questions analyzed in this paper

Altogether there were 70-90 questions concerning information retrieval and purchase decision making process for the consumers, who had just signed their car or apartment selling documents. The internet utilization percentile in information retrieval of purchasing apartments and used cars and its development in time serial are the primary results reported here.

For the multivariate analyses presented main factor results in this paper, were taken about 50 opinion and attitude questions in Likert scale from 1 to 5. In these questions were asked the opinions about purchasing process and information retrieval in different media, satisfaction to their dealer behavior and activity in seeking the best result for the buyer's needs. Also the main criteria of purchased apartment or car were included in these analyses.

There are also plenty of research questions, which results are not presented in later publications of authors. For example, these are the results of questions concerning principal reasons to start the purchasing process, the final purchasing price and amount of loan. The consumer clustering formations as well as the socio-economical background information of answers are left for later publications. The background information indirectly reported in this paper is the age group of answers and geographical distances from car dealers' to consumers comparing internet users and other answers. There are so many different variables in real estate business, so the same effect can not be pointed out in that context.

IV. PRIMARY RESULTS

A. Internet utilization level in information retrieval

None of altogether 1300 consumers had bought either their real estate or second hand car without visiting at dealers and having target perception by themselves or by their family members; exclusion the new built flats in building site. Therefore, the decision making process concerning apartments and second hand cars purchasing is not still basing just by using internet sites. All of the deals were done after subjective excursion and/or trial drive at traders'.

The trends of consumers' internet usage and its increase have become obvious already in earlier studies. At the beginning of the time serial studies produced by authors, only the younger generations used internet as a primary information source looking for advertisements concerning houses and second-hand cars. The elder generation strongly preferred newspapers and print media advertisements for the same purpose. In the later follow-up studies the internet has become prevailing media among almost all consumers' age groups.

During the last two years the overall majority of all other age groups, except the oldest consumers i.e. those over 60 years, have pronounced using themselves at least some websites in information retrieval process of real estate and second hand car markets. Figure 1 presents the development in real estate business and figure 2 in car trading business sectors.

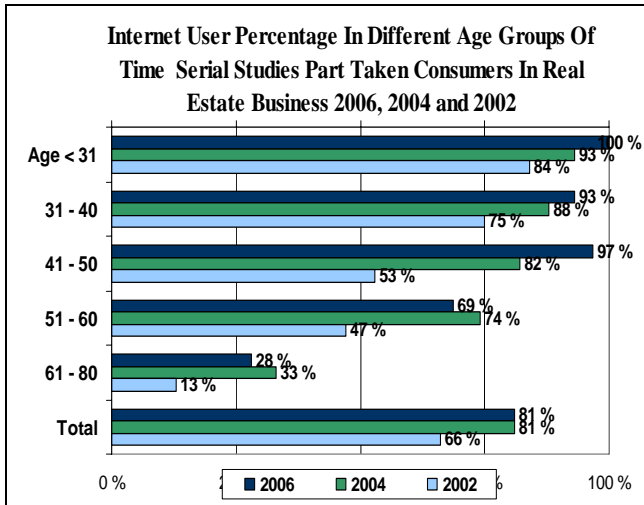


FIGURE 2

INTERNET USER PERCENTAGE IN DIFFERENT AGE GROUPS OF TIME SERIAL STUDIES PART TAKEN CONSUMERS IN REAL ESTATE BUSINESS 2002, 2004 AND 2006

The similar phenomenon is also happening in used car trading business, even more early compared to real estate sector.

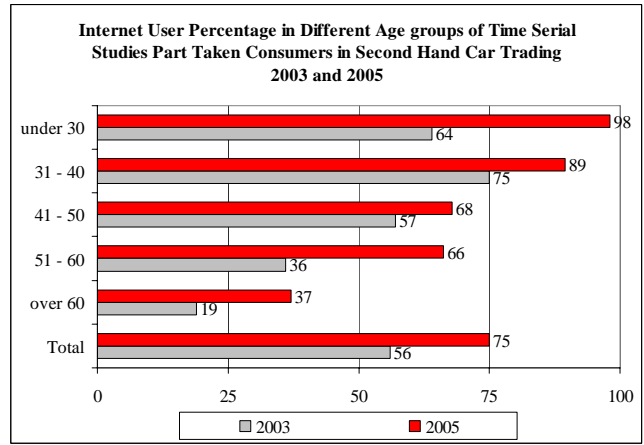


FIGURE 3

INTERNET USER PERCENTAGE IN DIFFERENT AGE GROUPS OF TIME SERIAL STUDIES PART TAKEN CONSUMERS IN SECOND HAND CAR TRADING 2003 AND 2005

B. Main factor development

The changes both in internet utilization and in dealer's role in decision making process have occurred very recently and rapidly. Therefore the major phenomena and its factors are analyzed carefully by using multivariate analysis in this large scale data basis.

Factor analysis attempts to identify underlying variables, or factors, that explain the pattern of correlations within a set of observed variables. Factor analysis is often used in data reduction to identify a small number of factors that explain most of the variance observed in a much larger number of manifest variables.

TABLE 2
MAIN FACTORS AND THEIR EXPLANATION PERCENTAGE IN DATA OF REAL ESTATE BUSINESS 2002, 2004 AND 2006

Factors 2002:	Eigenvalue	% of variance in data explained
Good service level of realtor	4,85	8,66
Internet's primary position in information retrieval	2,54	4,53
Safe surroundings of the apartment	2,50	4,46
Active communication by realtor	2,48	4,43
Good reputation of certified estate realtor	2,10	3,75
Entertainment in home seeking	2,08	3,71
Also: Cost level of housing; Wide selections of targets at certified realtor; Service level of surroundings; Just a perfect apartment itself		
Factors 2004:	Eigenvalue	% of variance in data explained
Good service level of realtor	4,85	9,34
Internet's primary position in information retrieval	3,10	5,96
Keeness to pay for extra services like real prices or mobile services	2,77	5,32
Safe surroundings of the apartment	2,05	3,93
Entertainment in home seeking	1,85	3,55
Just a perfect apartment itself	1,70	3,26
Also: Service level of surroundings; Good reputation of certified estate realtor; Cost level of housing; Assistance of capable realtor was needed; Wide selections of targets at certified realtor; Irritation caused by too active realtor		
Factors 2006:	Eigenvalue	% of variance in data explained
Good service level of realtor	4,93	10,71
Internet's primary position in information retrieval	3,53	7,67
Safe surroundings of the apartment	1,92	4,16
Just a perfect apartment itself	1,81	3,93
Service level of area surroundings	1,77	3,85
Entertainment in home seeking	1,72	3,74
Also: Assistance of capable realtor was needed; Good reputation of certified estate realtor; More pleasant experience than expected; Systematical seeking process gave results; Open mind for different alternatives		

In real estate business the Eigenvalue of internet i.e. meaning internet as a favorite information source in retrieval process has grown systematically. The good service level of realtor has kept its place as the most powerful position in the list of data explanatory factors. The factor of internet as primary retrieval source in realtor business has also remained its second position in factor explanatory position list.

TABLE 3
FACTORS AND THEIR EXPLANATION PERCENTAGE IN DATA OF CAR TRADING BUSINESS 2003 AND 2005

Factors 2003	Eigenvalue	% of variance in data explained
Usefulness of car shows	4,01	6,91
Guaranty and safety properties	3,84	6,61
Internet's primary position in information retrieval	2,58	4,45
Budget funding offers	2,28	3,93
Newspaper is the primary information source	1,84	3,17
Experiences in certain car mark	1,77	3,05
Also: Skillful purchaser by oneself; Good reputation of car trader; Irritation caused by too active trader; Rapid purchasing process; Wide selections of cars at traders		
Factors 2005	Eigenvalue	% of variance in data explained
Entertainment in good car seeking	3,12	6,64
Performance abilities of car	2,91	6,19
Good service level of car trader	1,95	4,16
Internet's primary position in information retrieval	1,83	3,89
Newspaper is the best information source	1,48	3,14
Experiences in certain car mark	1,46	3,10
Also: Budget funding offers; Rapid purchasing process; Irritation caused by too active trader; Assistance of capable trader was needed		

In car trading business the factor variation has not been as equal as in real estate business; the selection variation of factors is wider and has more variation than in real estate business sector. One of the explanations might be the internet utilization has become primary advertisement media much earlier as business as usual comparing to real estate business.

C. Some other obvious phenomena of internet

In data can be pointed out some other interesting phenomena comparing internet users and other consumers.

The distances between traders and consumers have increased a lot during the time research period, because internet advertising offers nationwide marketing field. The interesting cars can be trial run by a keen custom coming as well from 10 to 1000 kilometers distance.

TABLE 4
DISTANCE IN KILOMETERS FROM CAR TRADERS' TO CONSUMER'S HOME IN AVERAGE 2003 AND 2005

Distance from home km	2003	2005	Change in %
Non-internet users	29	42	45
Internet users	51	60	18
All answers total	42	55	31

Another trend to contribute for success of new shopping malls is concentration of retailing to ever-bigger complexes. In daily consumer goods this development has continued a while already and is currently maturing.

Generally consumers prefer to do their daily purchases in few kilometer radius from their home, but in Finland this issue is not so important according to AC Nielsen's international Shopper Trends study. Finnish consumers prefer shopping places from where they can easily get everything they want and that offer comfort of visit. In special goods area this development is currently pronounce as huge amount of plans demonstrate. And this development has potential to proceed much further, as distance is even less important factor when purchasing special goods [24].

D. Connection between internet usage and factor of internet's primary position in information retrieval

The connection between internet using and explainer level in data variation follow same directions. The correlation level between those variants is strongly positive, $R^2 = 0,626$.

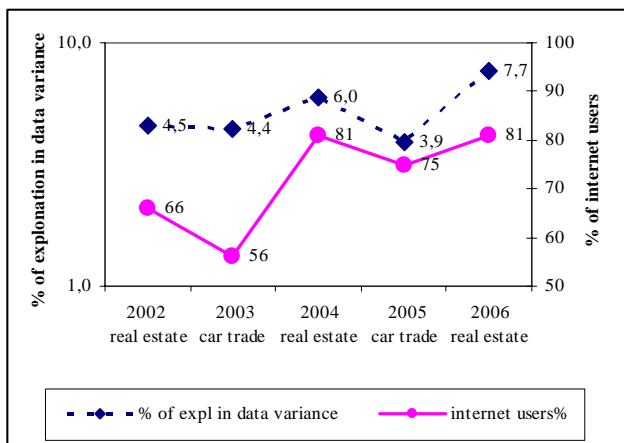


FIGURE 4

TIME SERIAL CONNECTION BETWEEN INTERNET PRIMARY FACTOR AND INTERNET USAGE LEVEL

The more customers use internet in information retrieval, the more they expect to get value adding knowledge through the websites.

This phenomenon is according our time serial studies became equal in different lines of business.

V. CONCLUSIONS

A. Role of dealer in change

The basic of the phenomena of growing internet advertisement is partly lying on different time valuation concept of consumers. Time is money and customers are less willing to use their leisure in trade shops or common housing showings. The trend seems to expect almost 24/7 service level in trading services or at least in the information retrieval process of purchasing.

The information seeking process before purchase decision making by consumers has become more target oriented comparing to the 1990's. In earlier times an impulse and even the purchasing making process for an apartment or a car, could get started easily in local well-

known car shop or neighborhood housing show. The role of dealer was to give the basic information and also some pleasure from entering into the shop in order to encourage the purchase decision making.

B. Widening market area through internet portals

The purchasing process of second hand car was in earlier times more like a nice experience or performance for the whole family, not so much a compulsory achievement as it seems to be usually common nowadays according both consumers and car traders.

The development has multifunctional reflections in trading process. The service process at car dealers' is already developed quite effective and comfortable. The benefits on the traders' side are that the consumers visiting at their shop have quite serious intentions to buy a car or a house they are visiting for.

The cost-benefit relationship comparing internet and printed media is frothing out in the longer distances of consumers and car trades. The markets in especially seek special cars have become national instead of local. On the other hand, the price comparisons by consumers have become business – as – usual; therefore also the sales profits are limited. The less coverage the dealers get, the less they have possibilities to invest in multimedia advertising. So far the costs of internet advertisement in sale portals are cheaper than costs in printed media; therefore most of car dealers prefer electronic media.

The major challenge, especially concerning the car trade business, is nowadays how to attain consumers into car shops. Therefore, the role of internet has altered into the source or free arena in comparing the attractive alternatives and seeking the most interesting targets, before any shop visits are needed. The information monopolies of realtors' days seem to be over forever.

C. Effects of internet usage in real estate companies point of view

In real estate business the consumers are more critical than earlier to the behavior of realtors. Because of the large selection of real estates and houses available on the internet sites customers have become more independent from the realtor or dealer. Also their expectations towards their realtor have grown. It seems that as customers are getting more eager to gather the information needed by them; therefore the realtors need to redefine their work tasks. Expanding their professional skills to new areas (e.g. consumer advising and protection, taxes, other services associated with real estates, like decoration services) should be taken under serious consideration as realtors want to develop new competitiveness advantages.

In a situation with consumer having all the information needed, ineffective work diminishes. Resource allocation will become more effective as consumers select the real estates markets worth seeing based on adequate information before contacting the realtor. As consumers' awareness of

the possibilities offered by internet grows, open forums allowing customer to customer sales, are likely to increase lowering the transaction costs to next to nothing.

D. Demands of new media by consumers

There is a huge difference between real estates sites and other online services: the impossibility to carry through the whole transaction online. Clearly, the value adding element for the customer in online services should be charted open-minded.

The demands of internet advertisement have grown rapidly. For the first, the information concerning trade selection should be trustable and as real-time as possible, updated at least daily. More and more efforts should also be put on visualization, like 360 degree video shows and many different high quality photographs.

Optimal situation would be for the consumers the possibility to replace the common shows of an apartment with ability to familiarize themselves with the interesting apartment at their own time, when ever they want, where ever they want. One possibility is to provide consumers a portal, which includes the ground plan equipped with links to 360 degree panorama scenes of every room.

There are also some interesting points of view and gaps concerning service response rapidity. Some consumers, who are very interested to purchase a certain car or house, are so eager to get more information about their just-found dream; they were not even willing to wait until next business hours in order to call the trader or getting email from him/her.

Therefore, the careful analysis of potentials in personal response services and information sources 24/7 basing on internet leads could produce value-added benefits both for the traders and consumers. These modern services and IT-solutions should build to be operating and functioning perfectly entity in totally digitalized environment.

WWW has caused also many reflection effects also into traditional trading and service processes. The markets mentioned in this paper concern real estate business and car trading business. The objectives of transaction and trading, i.e. the houses and cars, are not yet actually sold via internet. Hence, the digitalized services and modern market places should be constructed in order to satisfy future coming needs of e-business.

E. Discussion

The contribution of this paper is in bringing the connection between internet users, data concerning main factors development of consumers in the time serial studies, and the reflecting effects on increasing internet utilization. Yet we do not know the strategic decisions making process and criteria, how the car traders and realtors really select which media they use for advertisement. The next phase is to ask realtors their opinion about competitiveness abilities of different media in order to identify, if the consumers results shown in this paper have sustainability and

continuity. Also it is interesting, if the internet portals keep - or even if they wide - their primary position in information retrieval in traditional sectors of business.

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