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# STRATEGIC BEHAVIOUR AND PERFORMANCE OF INTERNET USE BY SECOND-HAND SPANISH CAR DEALERS

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#### **ABSTRACT**

The sale of second-hand vehicles over the Internet is continuously growing not only in European countries but also in the Spanish market. The development of new information technologies allows dealers to extend their services globally, giving customers a wide range of options in the search for information and gathering of resources.

Questionnaires submitted to Spanish second-hand car dealers have been used to analyse tendencies, behaviour, resource strategy and performance in the electronic medium.

The conclusions reached enable us to show how the differentiation strategy in the Internet channel contributes to a better performance by dealers, with price being a non-relevant variable in the initial stages of the purchase process, only becoming important during the final visit to the actual dealer's.

Furthermore, it is proven that a company's organizational capabilities predict its commitment to the electronic channel, helping to explain the general performance achieved.

### **Key words:**

Second-hand vehicles, Internet, e-commerce, e-business, innovativeness

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# 1. Purpose of the investigation

Although we can find several contributions in the recent literature concerning e-commerce and specific click and mortar strategies (Willcocks and Plant (2001), Sharma and Krishnan (2002), Pentina and Hasty (2009), Saeed et al. (2003), Gulati and Garino (2000), Goersch (2002), Steinfield et al. (1999), Porter (2001)), little empirical research has been done on the subject, especially when we talk about high-involvement products which require physical inspection prior purchase, as the case of automobiles. Our study aims to contribute with a more in-depth empirical investigation at a Spanish national level, whose results could be used by future researchers and managers to choose among the strategic options of the companies.

### 2. The second-hand vehicles' world on the Internet

The approach to marketing has undergone a sea change since companies have started using the Internet. Customers are now in a more proactive position and, at the same time, companies are losing their dominant position. (Zhang, 2004).

However, not everything related to new technologies and the growth of the Internet has been positive.

Borraz Mora et al. (2006) have identified certain disadvantages in their use, such as higher uncertainty, which leads to a more perceived risk, customers' concern about the lack of security regarding data protection and payment methods and doubts about the delivery of goods and services on time and in perfect condition.

Moreover, although it is true to say the Internet is a help, it does not necessarily lead to a satisfying purchase experience. (Polaniecki R. 2007). We should consider that, in spite of its multimedia features, the Internet has yet to replace the leisure experience associated with a traditional purchase.

For all the reasons mentioned above, we contend that knowledge of the advantages and drawbacks involved in the use of the Internet is very important for second-hand car dealers, as the reason for adopting a new strategy is to gain a competitive advantage (differentiation and/or higher profits) in the market. (Varadajan and Yavadav, 2002).

The white paper published by GANVAN (*Spanish Association of Purveyors of Motor Vehicles, Repairs and Spares*) in 2008 has revealed some very interesting data about the sector. Among buyers, 66.4% turn to the second-hand car market as a first option and consider price to be its main advantage (87.5%), followed by the guarantee (4.61%).

62.7% of buyers in this market acquired the vehicle they were initially looking for, although 14.7% of respondents still maintain that one cannot be sure of the condition the vehicle is in when buying it.

In 2007, the number of Spaniards who used the Internet to obtain information about the vehicles available and other value added services (comparative analysis of models, financing, insurance...) grew by 78.8%, consolidating its position as the main search method. (Autoscout24 report)

Of the 21% of households that acquired a car, 44% of them have bought a second-hand vehicle, as opposed to the 56% who purchased a new one (Celetem 2009). The gap between the percentages for the two kinds of vehicles is narrowing each year, and the ratio of sales of second-hand cars to new ones is 1.4. This ratio was 0.9 in 2006, much lower than in other European countries, which points to the sector's high growth potential in the short-term.

Traditionally, new vehicles have sold better than second-hand ones, but the narrowing gap in sales is due to numerous factors: the price factor, lower purchasing power, the credit crunch and the huge stock of "km 0" (zero-mile) vehicles, which have a crucial influence on the development of the second-hand market.

Concerning second-hand car dealers, their sales have decreased, albeit less so than in the new vehicles market. The sector finished the year with 1.5 million units sold, 12.4% down on 2007.

In this atmosphere of crisis, prospective buyers shop around more, and the customer is more demanding, especially when the outlay is high; for example, when buying a vehicle. Internet continues to be the main channel for information and comparison.

As in prior years, young people exceed the mean because they are a population segment that is much more familiar with the Internet and new technologies.

# 3. Theoretical framework, model and hypothesis

# 3.1 Click and mortar strategies

In the recent dynamic environment of the electronic market, firms had been forced to adopt multichannel retailing strategies to remain competitive. Firms are trying to implement diverse click-and-mortar (CAM) strategies in order to achieve superior performance. The benefits of having both a physical outlet and an electronic channel had been deeply researched in the recent literature (Goersch (2002); Steinfield et al. (1999)). Most companies are trying to gain

synergies, and to take advantage of the natural complementarities that arise when both channels keep integrated.

At the very end, as Porter (2001) points out, the ultimate reason of the company will be achieving sustainable competitive advantage, doing things in such a different way than nearly competitors do that the dealer will be able to maintain the superior performance over time.

So companies that want to perform both on the Internet and on the physical channel should choose their type of CAM strategy carefully.

In the chart below, we have summarised the main contributions in the literature of several CAM strategies concerning the relevant variables in our study:

Table 1: Click and mortar (CAM) strategies and its implication on the variables of the study.

FOCUS	OFFLINE	FOCUS	ONLINE
PHYSICAL OUTLET THAT GOES VIRTUAL	TRADITIONAL CAM MODEL	E-TAILING (DIGITALIZE THE BUSINESS)	VIRTUAL BUSINESS THAT DEVELOPS LOCAL PRESENCE
CIR*	CIR	CIR	CIR
<ul> <li>Large Initial investment efforts to establish the channel and to integrate logistics and operations</li> <li>Reduced costs once the channel is established</li> <li>Cross promotions and advertisement</li> <li>Mutual Brand reinforcement</li> <li>Increase of consumer</li> </ul>	<ul> <li>Larger Initial investment efforts to establish the channel and to integrate logistics and operations</li> <li>Reduced costs once the channel is established</li> <li>Cross promotions and advertisement</li> <li>Mutual Brand reinforcement</li> <li>Increase of consumer awareness</li> </ul>	<ul> <li>Huge initial investments to develop a full online purchase process.</li> <li>Alliances with delivery companies when delivery is not possible</li> <li>DIFFERENTIATION</li> <li>Target to a specific low-price customer segment providing a one-</li> </ul>	<ul> <li>Need to create a network of allied physical dealerships.</li> <li>Investments to integrate logistics, information and operation systems with the partner.</li> <li>DIFFERENTIATION</li> <li>Focus on the customer that requires personal interaction.</li> </ul>
awareness	DIFFERENTIATION	stop shop service	- Emphasis on
DIFFERENTIATION  - The Web site simplifies the purchase process (information and search of the	- Added value services such as more personalization, more detailed information, human interaction, pre-purchase test	- Value added online services (financing options, loyalty programs)	Web specialized services (financing options, comparative search) to direct traffic to the partners.

product) and the physical outlet provides additional services

### **BUSINESS MODEL**

- Both channels reinforce each other with the same business model of the product, synchronized CRM systems, coordinated management of customer information... that derives customer traffic to the establishment.

### **BUSINESS MODEL**

- The physical channel remains the main purchase channel
- Both channels follow the same business model and keep integrated to allow the possibility of synergies (natural complementarities , improved consumer trust, market and product extension...)

### **BUSINESS MODEL**

Most of the purchase process can be done online so two different business models can coexist within the same company.

#### **BUSINESS MODEL**

- The dealerships can create a franchising network, establishing an alliance or a joint-venture.
- Each company can have its own business model or their can share objectives.

Source: Own elaboration from Willcocks and Plant (2001), Sharma and Krishnan (2002), Pentina and Hasty (2009), Saeed et al. (2003), Gulati and Garino (2000), Goersch (2002), Steinfield et al. (1999), Porter (2001). \*CIR = commitment of Internet resources

### 3.2 Performance measures

Two different kinds of results will be studied in this article:

- Economic performance results, being those a company obtains when it sells its products/services.

We are aware of the fact that sales over the Internet still account for only a very small percentage of a company's overall turnover, around 1% (Autoscout24 report, 2008). This is why the Internet has not yet had a significant impact when explaining the general performance of dealers. However, there is no doubt that if the company is recording good results over the Internet, those results will also be reflected in its overall performance. Bearing in mind this distinction, we propose that organizational capabilities will influence general performance results, but the specific Internet performance will be affected by other issues that

need not be significantly affecting overall performance, due to its tiny contribution to overall revenue.

- Internet performance variables. These will help us to verify whether the efforts the company is making when investing in the electronic channel are being rewarded in practice.

The first objective of the dealer's web presence is to attract new potential customers who may not have been reached by its physical establishments and draw them in, as most end sales in the sector are made with the buyer physically present.

Secondly, a web presence implies that the time spent by the sales force will be reduced to a minimum to successfully complete the sale of a second-hand car, which means more productivity, as a better informed consumer takes up less of the vendor's time.

Finally, one needs to realise that those customers drawn in via the web, per se, might be more prone to make the final purchase because the mere fact of deciding to visit the physical establishment after viewing the offer on the Internet is already a sign of interest in buying the car, so we could expect higher rates of visits that finally end in a purchase than from those who did not have prior contact via the website.

This sequence could be represented by the following figure:



The study's first dependent variable will be the variation in the number of customers reached via the company's website that visited the physical establishment.

According to Zhang (2004), the Internet allows consumers to compare more products on the same counter, as they can very quickly find products that satisfy them.

Klein and Ford (2003) affirm that the more recent the purchase experience or use of the Internet is, the greater the tendency will be amongst consumers to use the web as their first search resource.

So when promoting the physical establishment over the Internet we are widening the number of potential customers the dealer can cover, as the Net has global access and is not limited to the car dealer's local catchment area.

Another dependent variable we have used is the purchase probability of the customers that were initially reached via the electronic channel. In other words, we want to know whether those customers that have previously had contact with the website are more prone to buy than those who have not visited the web pages of the companies analysed.

Customer assistance can be shared and reduced thanks to the time punters spend on the website. It is even possible to replace some of the duties of the human assistant by employing new technologies. For example, customers tend to ask the sales force a lot of questions, so these are collected and a database of FAQ (frequently asked questions) is finally created and made available online. (Äberg et al, 2000).

Molesworth et al. (2002) observe a changing role for the sales staff of "click and mortar" companies with greater focus on demonstration and negotiation, rather than on information and persuasion.

In the same way, Klein and Ford (2003) find that the amount of time spent requesting information on a visit to a car dealer was inversely related to the levels of customer knowledge (objective and subjective) and their expertise in the Internet. When Internet customers are used to the channel, they acquire more routines in it, whereby the visit to the physical establishment becomes a less important part of the information search, with the process becoming more relevant in the final steps of the purchase process.

# 3.3 Organizational capabilities

# 3.3.1 Market Orientation approach (MO)

The literature often reflects how knowledge is a critical resource for strengthening the competitive position and improving performance. (Darroch and McNaughton, 2003).

Jaworski and Kohli's (1993) classical study defines the concept of market orientation, which involves three kinds of activities: intelligence generation, intelligence dissemination and responsiveness.

In this sense, the Internet provides companies with a great opportunity to obtain up-to-date information about the market instantly, easily and economically, so they can always have current information about customers, new tendencies or changes in it. (Evans and King, 1999; Nordstrom and Pinkerton, 1999). Min et al. (2002) present a more current concept of market orientation, according to the development of new information technologies: Internet Mediated Orientation, defined as "the Internet – mediated, information rich, seamless, agile, and boundary spanning process of generating, disseminating and responding to

market information on the Internet". Hence, the Internet is seen as a transformer of classic market orientation into a more efficient IMO process.

As we have previously seen, market orientation is relevant, so it could influence the company's general performance.

### 3.3.2 Innovativeness (INN)

Levy and Powell's 2005 study affirms that the adoption of information technologies by small and medium companies depends largely on their strategic decisions. Besides, Hult et al. (2004) have shown that higher levels of innovation lead to enhanced performance, regardless of the turbulences in the market in which the company operates.

Following the same opinion, Amabile et al. (1996) contend that creative ideas stemming from the individuals or work groups in the organization form the basis for successful innovation. Zaltman et al., cited by Hult et al. (2003), indicate that the concept of innovativeness resides in a cultural orientation within the organization (beliefs, values...) towards innovation. It is therefore a perception that has a more anticipative character than market orientation because it seeks to harness the new developments in the company's competitive environment in order to improve its performance.

In other words, when the right resources are available, innovativeness facilitates the implementation of new ideas.

In previous studies, Hult et al. (1998) have had already noted that higher levels of innovativeness in corporate culture are associated with a greater capacity for adaptation and, consequently, companies pursuing this line will be more successful in responding to their environments and developing new capabilities that lead to competitive advantage and superior performance.

Consequently, if innovativeness is present within the organizational capabilities dealers have, they will tend to have better general results both directly and indirectly due to the investments they are making in the electronic channel. We consider that innovativeness is a more ground-breaking and more radical capability (compared to market orientation, which is more adaptive) that takes risks to close the gap existing between market needs and the dealers' current offer.

So we formulate the first hypothesis as follows:

# H1: The organizational capabilities of companies positively influence their economic performance.

H1<sub>a</sub>: Market orientation has a positive influence on the dealer's economic performance.

H1<sub>b</sub>: Innovativeness has a positive influence on the dealer's economic performance.

### 3.4 Control variables

### 3.4.1 Company size

We will measure company size as the number of second-hand vehicles sold the prior year. It is a simple identification variable contrasting with item RC2 ("the number of second-hand vehicles sold in the last two years has been..."), which compares the results with those of the dealer's direct competitors. These results are part of the company's general performance.

Company size has always been seen as an important determinant affecting the adoption of new technologies (Thompson S.H. Teo, 2007) and the possibility of carrying out certain kinds of marketing strategies, such as hybrid ones (physical and electronic), pure e- strategies...(Everett R., Chrysler Corporation, 2000).

In the same way, a higher sales volume implies that fixed innovation costs can be better shared and covered.

Porra's (2000) study contends that the strategies adopted regarding the Internet depend on size. Hence, smaller companies use the Internet as a complement or a replacement of catalogue sales, trade fair and exhibition sales, word of mouth... Medium-size companies use their Internet position mainly for promotional activities. Their main objective is to have a virtual presence on the web and also offer customers technical, cost-free support.

For larger companies, the Internet is a bridge between the physical business and the electronic one. The net is used to receive orders, payments and, in some cases, for the distribution of the product. Those companies are seeking to be more dynamic in pricing, improve their marketing and lower their costs.

We have found contradictory positions concerning size in the literature:

Zhu et al. (2006) affirm that large companies - those that have grown and extended their presence over time - are more reticent to change, whereas those of recent creation are forced to operate with greater flexibility.

Rogers (1995), on the other hand, considers that size is crucial in the first stages of the implementation of an innovation because larger companies have more resources available that facilitate the adoption and assimilation of changes.

In view of this, we formulate the next hypotheses:

H<sub>1c</sub>: Company size has a positive influence on the dealer's economic performance.

H1<sub>d</sub>: Company size has a positive influence on the dealer's Internet performance.

# 3.4.2 City size

In order to analyse the competitive environment a company has to face, a population variable has been included in our questionnaire, involving the number of inhabitants in the place in which the main establishment is located. It tends to reflect the type of competitive environment in two different ways:

Firstly, bigger populations will undoubtedly mean greater competitive pressure because the sector leaders will be located in such places and there is a greater presence of close competitors. This situation forces companies to be more aggressive if they want to record good results. Secondly, we believe that dealers located in bigger populations will be able to achieve a greater word-of-mouth effect, so they will have greater chances of attracting customers. For this reason, and understanding this variable as a proxy variable of the competitive environment the company has to face, we propose the following hypotheses:

H1<sub>e</sub>: The bigger the city size, the higher the competitive pressure of the environment will be and companies will be forced to be more efficient, so their economic performance will be higher.

H1<sub>f</sub>: The bigger the city size, the higher the competitive pressure of the environment will be and companies will be forced to be more efficient, so their commitment of Internet resources will be higher.

H1<sub>g</sub>: The bigger the city size, the higher the competitive pressure of the environment will be and companies will be forced to be more efficient, so the integration of their sales force will be higher.

#### 3.5 Internet involvement

### 3.5.1 Commitment of Internet resources

This variable aims to measure the specific efforts made within this channel to attract and retain customers. We measure the degree of commitment as the capacity to allocate resources to one of the sales channels, the electronic one, in order to be able to contrast their efficacy when customers visit the dealer to make the final purchase.

Accordingly, it is crucial for the company to have an e-mail account that facilitates interaction with customers, personalizing the information they require. Likewise, by stating the company's website address on all commercial output

and stationery, the dealer makes it easy for customers to find the establishment and its website, thereby promoting differentiation. When potential buyers know the website, they can access it to obtain information about the different aspects they need. So it is critical to have a web page that allows personalisation, as this variable contributes to customer segmentation, providing a much more direct and specific treatment. Finally, differentiated value cohesion needs to be available, so the updating of the dealer's website should be ongoing, as it has been verified that potential customers will turn to other manufacturers or dealers if they do not find the information they are looking for. (AECEM-FECEMD, 2006).

These considerations have been presented by several authors, as this table reflects:

Variables included on the Commitment of Internet resources construct (CIR)	Authors
Use of email for commercial diffusion	Zhang, Z. (2004), AECEM-FECEMD (2006)
Mention of the Website in any commercial material used	Zhang, Z. (2004),
Usability/personalization of the Website	Free (2005)
Webpage update	AECEM-FECEMD (2006), Badot and Navarre (2003)

The study by Wu et al. (2003) addresses antecedents that affect the adoption of the electronic business. Among them, it is noted that a high learning capacity within the organization facilitates the collection and interpretation of data, so its transition to e-business is easier. Likewise, it is argued that a business oriented towards its consumers will more readily anticipate their future needs and have the capacity for long-term vision. Consequently, organizations of this nature will be more inclined to adopt new technologies to gain a proactive vision of the business, and this also includes the Internet.

# 3.5.2 Sales force integration

Technological integration has been measured by Zhu et al. (2006) as the degree to which the Internet system is connected to the system and databases of the physical office. The Technology-Organization-Environment (TOE) theory proposed by Tornatzky and Fleicher (1990) and cited by Zhu et al. (2006) is appropriate for studying the factors that influence the adoption of the electronic business.

This structure is consistent with Roger's innovation theory (1995), in which technological characteristics (external and internal) are emphasized as drivers of technology diffusion.

Steinfield et al. 2002 recommend a hybrid strategy for the case of dealers. As "click and mortar" establishments are necessary, both channels need to be integrated to meet customers' needs at the different stages of the purchase process. Integration can provide several benefits, such as cost reduction, a high-value service offer, increased trust among potential consumers and market expansion.

There is also another reason for integrating both channels, namely, there are more and more websites dedicated to the automobile sector that cater for the search for information and the comparison of the vehicles online, which means a higher competitive pressure.

Companies that adopt a multi-channel integrated strategy are committing to complementarities that will help them to better adapt to different customer segments and, furthermore, they can benefit from the savings when using shared resources.

In the case of the company's sales force, searching for new opportunities or avoiding threats must focus on the customers and on the different competitive alternatives these have in mind when they reach their purchase decisions. As consumers use the Internet more and more nowadays, the company that is able to integrate both channels into the organization's routines will be more effective in attracting customers and in the design of attractive commercial proposals with high value for them.

There are certainly other elements that can be considered within the concept of integration, but we understand this to be the main one in order to compete successfully in this commercial sector, which is highly dependent on the human factor.

We might therefore expect companies with higher market orientation and innovativeness to show more intent to have a shared sales force for both channels.

In the light of the above discussion, we formulate the following hypotheses corresponding to the commitment of Internet resources and sales force integration:

# H2: The greater the Internet involvement of the company, the better the Internet performance will be.

H2<sub>a</sub>: The higher the commitment of Internet resources made by the company, the better the Internet performance will be.

H2<sub>b</sub>: The higher the sales force integration of the company, the better its Internet performance will be.

# H3: Better organizational capacities will mean a greater commitment to the electronic channel, and also a better sales force integration.

H3<sub>a</sub>: Better organizational capacities will mean a greater and better commitment of Internet resources.

H3<sub>b</sub>: Better organizational capacities will mean a greater and better sales force integration.

# 3.6 Differentiation strategies in the electronic channel.

The literature has clearly shown that companies that are able to obtain a lasting and sustainable competitive advantage ultimately record better results. One of the strategies available to gain this advantage is differentiation, which implies an important effort from the marketing perspective in detecting, meeting and solving consumers' needs.

Subramaniam et al. (2000) classify the administrative strategies of the channel into seven types: (1) The traditional channel promotes the web channel (2) Use of the web channel to enhance the traditional channel (3) The web channel is used to explore new markets (4) Adding of new products and services only in the web channel (5) Integrating the web and traditional channels (6) Cannibalizing the traditional channel (7) Spin-off the web channel and turn it into a another separate business from the physical channel.

Given this range of possibilities, potential customers tend to combine the advantages of both channels, not only in their decision process, but also in every one of the steps in this process. (Badot and Navarre 2003). Hence, the potential buyer can use the Internet to obtain a great deal of information and classify it, or simply because it is very convenient. The physical establishment, on the other hand, allows assessing the material experience (touching the product, trying it...) as well as the act of social interaction with vendors or other buyers. (Badot et al. 2004).

We can thus affirm that dealers have different alternatives, and depending on their resources and capabilities will choose the best option to achieve their objectives. Nowadays, there are car dealers who use the Internet as a simple way of supplying information to their customers, whereas others prefer to have a more anticipative strategy of integration with the physical business, in order to find synergies and reduce costs.

Therefore, we consider that the variable Model differentiation is relevant in our model, being understood as the different options that are offered (and emphasised) outside the physical dealer.

Given that customers coming via the electronic channel normally have a reduced set of options in mind, those are usually reduced to a number of concrete models, as the overall market offer is very wide and this would not allow the consumer to distinguish between all these purchasing alternatives.

When the electronic business has a significant impact on a company's operations, relationships with customers and competitive position on the market, it makes sense to establish an independent strategy for the electronic channel.

Regarding the variable "Electronic price policy", literature on the subject reveals contradictory positions. Whereas some authors, such as Lee et al. (1999), find that prices on the online channel were slightly higher than those found in the physical establishment, others such as Klein et al. (1996), Zettelmeyer et al. (2006) etc. suggest the opposite.

In their research, Lee H.G et al. (1999) found that prices for second-hand vehicles were higher in the online market than in traditional dealers. The reason was that online transactions were risky because the buyers had to buy the vehicles without a physical inspection. This high risk on the perceived qualities of the second-hand cars made purchasers focus on high-quality products only. That is, the vehicles offered online had fewer miles/kilometres than those offered in traditional establishments. This difference in the quality of the vehicles offered was the main reason for the price difference between both markets.

However, Quelch and Klein (1996) contend that the Internet will eliminate the borders that separate the physical and electronic channels, and this will involve an increase in price competition.

Zettelmeyer et al. (2006) have subsequently proved that buyers using the Internet have paid on average 2.2% less than those who did not use it.

According to this perspective, we can find a justification for the differentiation strategy. When dealers use the electronic channel, they are expecting to reach a much wider (and heterogeneous) customer base than those who live near the establishment. Being exposed on the Internet, the dealer is aware of the increased competitive pressure, as potential customers do not visit only one website to find out about the characteristics of the vehicles. This drives companies to implement a differentiation strategy because they need to offer additional value that customers will not find somewhere else. In addition, dealers can offer second-hand vehicles on the web that they do not have

physically. This situation means that, on the one hand, dealers try to provide a differentiated offer on the electronic channel and that, on the other hand, dealers have to deal with much more demanding customers who are better informed, which tacitly leads to the offer of reduced prices in this channel.

Furthermore, our sample comprises solely companies that also have a physical establishment. So we can understand that the end price for customers who have previously made contact via the Internet could be lower in comparison with those who have not used it because the former will be better informed, have reference prices, be better briefed for negotiating and more willing to travel longer distances to go to the physical establishment for the final step of the sale.

A product always presents an environment of complementary solutions based on other products or services. For example, buying a car implies the selection of the model at a dealer's, but it also involves insurance, financing...All these additional solutions surrounding the main product or service constitute the "meta-market", which means the potential market that is originated in consumers' minds when they think about a specific product/service. (Corchado, 2006).

It is in this "meta-market" in which we include the differentiation strategy, whereby the company is able to meet all the customer's needs not only in the purchase of the vehicle at the physical establishment, but also in all the other kinds of services that add value and will induce customers to choose those kinds of dealers instead of those others that have a static website that simple reflects the business's commercial offer.

Following this argumentation, we formulate the last hypotheses for our model:

# H4: Differentiation strategy has a direct and positive influence on the Internet performance of the car dealer:

H4a: Model differentiation has a direct and positive influence on the Internet performance of the second-hand car dealer.

H4b: Service differentiation has a direct and positive influence on the Internet performance of the second-hand car dealer.

H4c: Electronic price policy has a direct and positive influence on the Internet performance of the second-hand car dealer.

With all the dissertation mentioned before, we can formulate the following model:

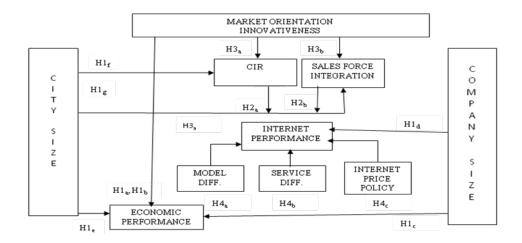


Figure 1. Proposed model and hypothesis

# 4 Data and methodology

In table 1 we summarize the main technical data of the field work. Variables are generally metric and measured on a 6-point Likert scale (1 totally disagree, 6 totally agree). After the questionnaire revision, we had left only 136 valid companies. This is the reason why we decided to analyze the model in two parts because due to final sample size, it would be very complicated to integrate all variables within the same model.

Table 2 Technical data of the sample

Universe	Spanish car dealerships belonging to GANVAM (Spanish Association of Purveyors of Motor Vehicles, Repairs and Spares) association with have a Web site in which is included the offering of second-hand vehicles.			
Sample unit	Commercial manager of the company, or the person within the organization with the closest relationship with the second-hand vehicles sales area.			
Geographical scope	All over the Spanish country			
Questionnaire design	<ul> <li>-Three pilot interviews with second-hand Spanish dealerships to ensure the validity of the questionnaire.</li> <li>-Two interviews with professors specialized in the ecommerce area.</li> <li>- Interview in the head office of GANVAM association (Spanish Association of Purveyors of Motor Vehicles, Repairs and Spares)</li> </ul>			
Method of information's collection	-Electronic questionnaire available only through an specific Web site created for that purpose with an unique password.			

	-Specific phone calls to the companies to give orientation and support to complete the questionnaire form.						
Time of data collection	From December 20 <sup>th</sup> 2006 to March 16 <sup>th</sup> 2007						
Total number of questionnaires received	190						
Number of questionnaires used for the data analysis	136						
Treatment of missing data	Elimination of Database						
Methodology used to analyze data	Exploratory and confirmatory factorial analysis and multiple regression analysis method						
Software used to analyze data	to analyze data SPSS v.17 , AMOS v.17 and Excel 2007						

Regarding the variables used as constructs, we used the scores of the exploratory factor analysis for measuring the commitment of Internet resources. For Market Orientation and Innovativeness we used factor scored weights obtained from a confirmatory factor analysis to create latent variables. The validity and reliability of those constructs are shown in Table 2 and 3.

Table 3:
Factor loadings, validity and reliability of Market Orientation and
Innovativeness constructs

Construct	Standardized loadings	Cronbach's Alpha	Composite reliability	Variance extracted	Model
Market Orientation (MO) *	OM1 = 0.606 OM2 = 0.633 OM3 = 0.686 OM4 = 0.786	0.772	0.774	0.464	CMIN = 16.184 p = 0.239
Innovativeness (INN)	OI1 = 0.600 OI2 = 0.728	0.772	0.797	0.574	GFI = 0.964 CFI = 0.989 RMSEA = 0.043
	OI3 = 0.912				

<sup>\*</sup> Discarded items: OM5, OM6

As we can see in Table 2, the standardized loadings of the constructs are over 0.5 and the composite reliability reaches high values. Nonetheless, discriminating validity has been checked and in no case does the variance extracted exceed the squared correlations between constructs, which allows us to confirm both that the constructs exist and that they there are different to each other.

It is necessary to mention that both the "service differentiation" and "electronic price policy" constructs can be interpreted in two ways: formative or reflective constructs. The reason for choosing the latter measurement method is because

we understand that the car dealers who are responding to the questionnaire are manifesting more a wish than real proof of a differentiation policy, as some companies might not have access to all the characteristics that involve differentiation in the electronic channel. Correlations between items are also high, which statistically suggests they could be reflective constructs.

However, our view is reversed for the "electronic price policy" construct. In our survey we had two items that could serve as indicators of how aggressive dealers are being in their price strategy in the electronic channel. These items are not necessarily correlated (we found significant correlations, albeit not very high) so we treated the construct as formative.

In order to verify the existence of the "service differentiation" construct, an exploratory factor analysis was carried out as we can see in Table 3:

Table 4
Component matrix of the service differentiation construct

Construct	Component	Cronbach's	Variance
	Matrix	Alpha	extracted
Service	DO4= 0.824		
differentiation	DO5= 0.755	0.755	57.85%
	DO6= 0.735		
	DO7= 0.725		

The mere presence of the "Service differentiation" and "Price policy" constructs is a significant fact because our sample is made up of second-hand car dealers with an active website, so this presence indicates that the companies interviewed are trying to emphasize the special offers and characteristics that are available online, but which are not highlighted in the physical establishment.

An exploratory factor analysis was conducted for the constructs of "Commitment of Internet resources" and "Economic performance", obtaining a single factor representative of each one, as shown in Table 4:

**Table 4:** Component matrix for the CIR and EP constructs

Construct	Component Matrix	Cronbach's Alpha	Variance extracted	
Commitment	DO8= 0.691			
of Internet	DO10=0.811	0.7	53.78%	
resources	DT1 = 0.666	0.7	33.76%	
(CIR)	DT2 = 0.757			

	RC1 = 0.819		
Economic	RC2 = 9.820		
performance	RC5 = 0.741	0.884	64.03%
(EP)	RF1 = 0.853		
	RF2 = 0.786		

Several combinations of initial variables were tested for the CIM construct. For example, we had excluded of the final construct a variable of technological integration because it didn't help us to discriminate (similar results were obtained by Pentina and Hasty (2009). The final sense of this construct should be therefore understood as the facility and accessibility to the commercial offer of the dealership.

Finally, for "sales force integration" three items in the questionnaire were designed to cover both technological and sales team integration aspects. We finally used only the integration of the sales team as the most direct way of measuring the integration of resources, and we discarded the section on training focusing directly on a single item variable, which reflects whether the sales force attending to customers via the electronic channel also does so in the physical establishment.

### 5 Results

For a proper understanding of the regression analysis results, it is necessary to mention that the special profile of our sample means that results should be interpreted bearing in mind that 85% of our car dealers have only one or two physical establishments and most of them have a low sales volume. So we understand that this sample profile cannot be generalized to official trademark dealers.

In order to verify hypotheses 1 and 3, a linear regression model was created, whose results are summarized in Table 5.

Regarding the first model, we can state that firm size has a bearing on the results with a positive and significant coefficient, as we also see in the literature (Rogers, 1995), so hypothesis 1<sub>c</sub> is confirmed. Hypothesis 3 is also verified because the variable "innovativeness" acts as a precursor for the commitment of Internet resources construct. As a result, the idea of having an ongoing innovation process to deal with a growing competitive environment leads to specific investments in the electronic channel.

Regarding "sales force integration", we become aware that there is a relationship between the construct and the size of the population in which the main establishment is located, which confirms hypothesis 1<sub>g</sub>. As the variable "city size" is a dichotomy based on the median, we notice that the bigger the

population, the higher the integration process. This could be due to the fact that sales teams in this kind of dealers have to handle a heterogeneous customer base from different parts of the country. Consequently, the same employee attends to customers in both channels, from the initial stages of the search for information through to the final negotiation process.

Table 5
Regression models for hypotheses 1 and 3

**Note**: multiple method

	Economic performance	CIR	Sales force integration
VARIABLES	M1	M1	M1
Constant	-0.368**	-0.850**	5.107***
Company size	0.189**	0.163**	
City Size			0.560**
Innovativeness		0.197**	
Market orientation			
Adjusted R <sup>2</sup>	0.059	0.092	0.023
F	9.511**	7.86**	4.25**
N	136	136	136

regression

Both the market orientation and innovativeness constructs share an important correlation (although we have proved they are different to each other), so it is reasonable that only one of the constructs has an impact on the model. As innovativeness is the most proactive variable, it finally influences the Commitment of Internet resources, corroborating hypothesis  $1_b$ .

We have subsequently studied the effects of the company's differentiation strategies, the assignment of resources to the electronic channel and the electronic price policy in the specific performance of the electronic channel in a step-by-step regression model. (See Table 6)

The first model includes just company size as a control variable (hypothesis 1d), then in model 2 we add the involvement in the electronic channel itself and the third model also introduces the strategies of differentiation (services and models) and the electronic price policy in order to test hypothesis 4.

<sup>\*=</sup> coefficient significant at p<.10

<sup>\*\*=</sup> coefficient significant at p<0.05

<sup>\*\*\*=</sup> coefficient significant at p<0.01

First of all, we see how company size influences the number of customers that visit the physical establishment, with a positive coefficient. This explains that bigger companies - those with more capacity to make specific investments - are ultimately able to attract more customers via the electronic channel than small ones.

This variable is no longer significant in the model's other dependent variable, so we understand that the probability of a purchase depends on other variables, such as the dealer's ability to negotiate, etc.

As Steinfield et al. (2002) posit, companies with greater resources will be in a better position to roll out a click-and-mortar strategy, as they will obtain a higher performance from their investments than those who do not have the resources.

Our model does not feature relationships between a company's organizational capabilities and its differentiation strategies because these are concepts that could be present in the firm independently. The firm's strategy can be formulated apart from the organizational capabilities available, so this is another reason for validating the constructs separately.

Table 6
Regression models for hypotheses 2 and 4

VARIABLES	No. of customers previously reached via the electronic market that visited the establishment			Purchase probability of the customers previously reached via the electronic channel			
	M1	M2	М3	M1	M2	М3	
Constant	2.898***	3.014***	2.606***	n.s	2.685***	1.660***	
Company size	0.258**	0.198*	0.213**	n.s	n.s	n.s	
CIR		0.403**	0.297**		0.441**	0.332**	
Sales force integration		n.s	n.s		n.s	n.s	
Model Differentiation			0.134*			0.201**	
Electronic Price Policy			n.s			0.184*	
Service Differentiation			0.342**			n.s	
Adjusted R <sup>2</sup>	0.038	0.084	0.158		0.053	0.129	
F	6.36**	7.2**	7.33***		8.49**	7.67***	
N	136	136	136	136	136	136	

Note: multiple-step linear regression method

<sup>\*=</sup> coefficient significant at p<.10

<sup>\*\*=</sup> coefficient significant at p<0.05

We have also studied the efficacy of the commitment of Internet resources when explaining the results concerning the electronic channel. As we can see, this construct is conclusive for the dependent variables we are measuring, so hypothesis 2a is confirmed. Concerning "sales force integration", there is no significant effect for the dependent variables, so we cannot verify hypothesis 2b, even if there is a positive and significant correlation between this variable and the commitment of Internet resources (see appendix I). An ANOVA test was carried out to test mean differences in the dependent variables concerning this variable, but the results were not significant either. This effect can be explained because the variable itself presents low variability (67.6% of the respondents answered with a 6 to the question, the highest value), which means that dealers consider sales integration between channels as a matter of fact, as a minimum condition that is present throughout the sample.

Regarding differentiation strategies, we have proved they have a positive influence on securing new customers who visit the physical establishment and who, furthermore, have more purchase probability than those who did not visit the electronic channel. In other words, the commitment of Internet resources and the efforts made to invest specifically in the Internet are rewarded in practice with the attraction of new customers.

Car dealers who have a wider range of car models and are capable of offering a differentiated commercial offer will gain more customers (hypotheses 4a and 4b). Potential customers usually turn to the Internet in order to inform themselves about certain car models they had thought about in advance. They are looking for second-hand car dealers who have those models so as to form a mental picture of the price range they can move in (Autoscout24 report, 2008). Due to this extended practice among potential second-hand car buyers, price is not the most relevant variable in the first stages of the purchase process (indeed, it is no significant in our model), as customers pay more attention to the characteristics and benefits of the specific car model they are looking for.

We should take into account that our sample comprises only multiple-brand dealers, so different models from diverse commercial brands can be offered online to provide customers with a wider range of options.

Concerning the second of the dependent variables (purchase probability of customers previously contacted via Internet), price is a relevant factor besides model differentiation (hypothesis 4c). Purchase probability will be higher when the prices for the models required by the client are the most competitive. When buyers have already visited the establishment and are willing to purchase a second-hand vehicle, they have only a handful of models in mind, which they have previously checked on the Internet. Price then becomes a significant

variable, as customers will be ready to go to a dealer further afield, provided they know they are going to find the model they want at a price they can afford. This is the reason car dealers are forced to be aggressive on the electronic channel, as it is the only way to retain customers through to the final stages in the negotiation of the purchase process.

Appendix I shows correlations between the variables in our study, and we note that all the differentiation strategies have a significant and positive correlation (even if it is not high for the sample size we are using). This indicates that even when some of the strategies are not directly reflected in the regression with a significant coefficient, they all have an impact on the results of the electronic channel, so the better the strategies are, the better the results.

In addition, functional models have been tested in order to achieve better results, but there were no significant improvements in the model.

### 6 Conclusions

Regression models provide some important results regarding the strategies of second-hand car dealers with an active website.

Firstly, we have verified that company size becomes significant when explaining the results. Bigger companies are able to generate better results because they can share better fixed costs and they have greater capacity for investment. Company size is relevant only for attracting customers and has no impact on purchase probability. There seems to be a minimum threshold required to carry out the investments needed to open a new distribution channel. As our sample comprises mainly small dealers, they should consider the possibility of entering into strategic alliances or partnership agreements in order to attain the necessary volume for opening the electronic channel.

Once accomplished, their own differentiation strategies and their final negotiation with the customer will be the key factors for success in the end purchase.

Secondly, innovativeness is an originator of the commitment of Internet resources. Dealers with more facilities for innovation will be more prone to assign specific resources to promote direct actions in the electronic channel.

Ram and Sheth (1989), cited by Molesworth (2002), argue that some innovations represent uncertainty, which could make consumers postpone the adoption of the innovation until they become more experienced. This uncertainty can create perceived risk, which could be more elevated in high-cost purchases, such as second-hand cars. Hence, websites need to incorporate an easy browsing system (which requires specific investments) to raise the level of trust consumers have in this new distribution channel.

Consequently, we have seen how the commitment of Internet resources construct is a relevant variable for our analysis. We show that companies making specific Internet investments are rewarded with a higher number of

customers who have a higher probability of purchase. Even though assigning resources to the website is risky and costly, it provides a better Internet performance in the end.

Therefore, a stronger or weaker presence on the Internet is due to the size factor, but "sales force integration" cannot exist without a commitment to the virtual channel. It thus depends at the same time on the company's commitment to its electronic channel.

Concerning differentiation strategies, we have seen how "model differentiation" is a key factor when attracting customers to the physical establishment. As sector reports also indicate, customers have a small number of options in mind when they access the Internet searching for information. The innovation of our research is that price is not *a priori* a significant variable in their decision. Potential customers consider only a range of prices, but the results show that it is easier to attract them using a well-designed, frequently updated and user-friendly website than by offering very aggressive prices (we have seen in previous literature how low prices are sometimes seen as a sign of low quality products). When the customer has already been to the dealer and is ready to purchase, then price becomes the secret weapon for closing the negotiation. The more independent price policy is in the electronic channel, the greater the price differentiation from the rest of competitors, so the probability of final purchase will be higher.

For all the above reasons, our recommendation for managers in the sector is to attract customers using "model differentiation", involving a carefully designed website that caters for the needs of a diversity of customers, leaving price as a secondary factor.

Besides, given the correlation between the number of customers contacted and the probability of purchase, if a well-designed website can attract customers to the physical establishment, there will be a much greater chance of arranging the end purchase, whereby the customers' decision will be strongly influenced by the offer found via the electronic channel.

### 7 Limitations and future research lines

One of our study's limitations is the model's low explanatory power, especially when explaining the effect of the organizational capabilities in variables such as performance, the commitment of Internet resources and sales force integration.

One of the reasons is that the sample has only 136 components, which could have a bearing on the estimation of the constructs and on the coefficients of some of the regression variables.

Furthermore, there are some variables with low variability, as in the case of company size or sales force integration, which have a low impact on coefficients because they do not have enough variability to influence the results.

There might also be elements that are not allowing the adjustment of the model because we are treating the whole market in a single regression. A possible

extension of the study could involve dealing with the market separately depending on the kind of vehicles the dealer offers: saloons, vans, top-of-the-range vehicles...

Our future research lines are also open to the situation of dealers pertaining to an official brand.

Finally, we also intend to analyse the websites in our database on a simple oneby-one basis to test the quality of the sites so we can add new features to our study, such as the content of the information, appliances included and facility of use, and their relationship with performance.

# 8 Acknowledgements

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### APPENDIX I

Table 7 Mean standard deviation and correlations of the elements of the model

Variables	Mean	Standard deviation	Sales force integration	CIR	Model diff.	Service Diff.	Electronic Price pol.	МО	INN	Company Size	No. customers reached.	Purchase prob.	Economic performance
Sales force int.	5.24	1.37	1										
CIR	0.11	0.95	0.258**	1									
Model Diff.	2.71	1.81	0.127	0.194*	1								
Service Diff.	0	1	-0.054	0.134	0.351**	1							
Electronic price policy	2.67	1.47	-0.03	0.124	0.347**	0.576**	1						
MO	2.99	1.05	0.075	0.188*	-0.01	0.026	-0.046	1					
INN	2.96	1.04	0.132	0.230**	-0.106	0.119	0.04	0.580**	1				
Company size	2.33	1.34	0.089	0.243**	0.064	-0.068	-0.108	0.263**	0.059	1			
No. of customers reached	3.5	1.62	0.134	0.274**	0.269**	0.275**	0.227**	0.12	0.146	0.213*	1		
Purchase prob.	2.74	1.71	0.068	0.244**	0.302**	0.222**	0.254**	0.013	0.028	0.042	0.502**	1	
Economic performance	0.072	0.98	0.02	0.179*	-0.02	0.069	0.009	0.073	0.127	0.257**	0.092	-0.069	1

<sup>\*\*</sup> Correlation coefficient significant at p<0.01 (bilateral) \* Correlation coefficient significant at p<0.05 (bilateral).

#### APPENDIX II

Items from the questionnaire used during this research:

### **DIFFERENTIATION:**

(Chandrasekar et al. (2000), Lee (1999-2000), Varadarajan et al. (2002), Zhang et al. (2004), Thwaites et al. (1994), and self-contributions)

1 = completely disagree; 6 = completely agree N.A = not applicable

DO2 = my company usually uses the Internet to focus on certain specific <u>models</u> that it does not highlight in the physical establishment.

DO4 = my company usually uses the Internet to focus on certain <u>financing</u> <u>offers</u> that it does not highlight in the physical establishment.

DO5 = my company usually uses the Internet to focus on certain <u>insurance</u> <u>offers</u> that it does not highlight in the physical establishment.

DO6 = my company usually uses the Internet to focus on certain services of maintenance and repair that it does not highlight in the physical establishment.

DO7 = I consider that the <u>overall terms</u> offered over the Internet are different to those highlighted in my company's establishments.

### **ELECTRONIC PRICE POLICY:**

(Chandrasekar et al. (2000), Lee (1999-2000), Varadarajan et al. (2002), Zhang et al. (2004), Thwaites et al. (1994) Hoyer et al. (1997))

1 = completely disagree; 6 = completely agree N.A = not applicable

DO3 = my company usually uses the Internet to focus on certain specific <u>price offers</u> that it does not highlight in the physical establishment

FV2 = generally speaking, the <u>final price</u> of purchase of the vehicle agreed with customers previously contacted via the Internet is lower than the final price for those who did not use this service for obtaining information.

### COMMITMENT OF INTERNET RESOURCES:

(Varadarajan et al. (2002), Zhang (2004), Corchado (2006), Gilbert et al. (1999), Plave et al. (2000))

1 = completely disagree; 6 = completely agree

DT2 = my company's website allows customers to browse on a customised basis according to their preferences and needs.

DO10 = my company's website address is included in all its commercial information.

DO8= my company usually uses e-mail to answer questions and send customers and the public at large commercial information.

DT1 = how often does your company update the information on its website? Almost every day/once a week/once a month/several times a year/never

### SALES FORCE INTEGRATION:

(Varadarajan et al. (2002), Zhang (2004), Corchado (2006), Gilbert et al. (1999), Plave et al. (2000))

1 =completely agree; 6 =completely disagree

IN1 = in the last two years we have arranged Internet courses for our employees.

IN2 = the sales force that provides customers with information, answers e-mails etc. over the Internet also deals with customers in the physical establishment.

IN3 = there is a single IT management system that serves both the electronic and traditional channels.

## MARKET ORIENTATION:

(Ming et al. (2002), Álvarez-González (2005))

1 = completely disagree; 6 = completely agree

OM1 = my company regularly makes reports or buys information on our target market.

OM2 = my company regularly gathers information on customer satisfaction.

OM3 = my company regularly has reports on general market trends.

OM4 = my company's managers usually hold meetings to analyze the information available on changes in the market or in the competition.

OM5 = my company individually monitors the resolution of customer complaints or suggestions.

OM6 = my company responds quickly with a concrete action when we see that the competition is acting aggressively in our target market.

### **INNOVATIVENESS:**

(Tornazky et al (1990), Hult et al. (2003))

1 = completely disagree; 6 = completely agree

OI1 = my company gives incentives-rewards to its employees for their innovative ideas.

OI2 = my company has always assimilated quickly the technological innovations generated inside and outside the company.

OI3 = in my company, new and innovative ideas are actively sought and proposed almost every year.

### **ECONOMIC PERFORMANCE:**

(Varadarajan et al. (2002), Groupe Renault (2006))

1 = much worse than direct competitors; 6 = much better than direct competitors

RC1 = sales revenues for second-hand vehicles in the last two years have been...

RC2 = number of second-hand vehicles sold in the last two years has been...

RC5= the overall performance of my company (new and second-hand vehicles) in the last two years has been...

RC6 = inventory turnover of second-hand vehicles by my company in the last two years has been...

RF1 = net income of my company (new and second-hand vehicles) in the last two years has been...

RF2 = average profit margin of a second-hand vehicle in the two last years had been...

### **INTERNET PERFORMANCE:**

(Dixon et al. (2004), Badot et al. (2004), Varadarajan et al. (2002), Molesworth et al. (2002), Äberg et al. (2000))

1 =completely disagree; 6 =completely agree

C1 = In the last year, the number of customers reached via the Internet who visited the physical establishment has increased considerably.

C2 = Purchase probability from customers who were previously reached via the Internet is higher than from those who did not visit the website.

### **COMPANY SIZE:**

(Vescovi (2002), Thompson (2007))

RC3 = Indicate the number of second-hand vehicles sold last year.

0-50/51-150/151-300/301-500/501-1000/more than 1000.

### **CITY SIZE:**

VC1= Indicate the population of the city in which the main establishment is located: <200,000 inhab. / 200,000-500,000 inhab. / >500,000 inhab.

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