Loredana Di Pietro

PhD, is a Post-doc Fellow of Management and Organization at University of Molise. She has been involved in researching consumer behaviour, organizational behaviour and business organization.

Eleonora Pantano

PhD, is a post-doc fellow at University of Calabria (Italy) in cooperation with Technical University of Eindhoven (Netherlands). Her research interests involve innovation and advanced technology and management for retailing, with emphasis on human behaviour.

Keywords: consumer behaviour, Facebook, e-commerce, technology acceptance model (TAM), purchasing decision

The importance of social network for marketing aims

Loredana Di Pietro
Department of Management
University of Molise
Via de Sanctis, 86100
Campobasso, Italy
Tel: +39 0874 404 461
Fax: +39 0874 418924
E-mail: loredana.dipietro@unimol.it

Papers

An empirical investigation of social network influence on consumer purchasing decision: The case of Facebook

Loredana Di Pietro and Eleonora Pantano

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Abstract

Social networks are becoming an efficient tool for IT-based business, by providing several services for both consumers and marketers. The aim of this paper is to investigate to what extent social networks, as Facebook, influence consumer's purchasing decision through a quantitative analysis, which integrates a revised technology acceptance model. The findings confirm that enjoyment is a key determinant of social networks usage as tool for supporting the purchasing decision. This research moves beyond social networks usage to factors related to the Facebook-mediated marketing communications, by providing significant data on the weight of this channel for the development of new direct marketing strategies.

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Introduction

Current advances in internet-based communication processes represent an emerging framework for creating business opportunities to reach a wider amount of clients in a direct way, as well as for creating a competitive advantage.^{1–5} Especially, social networks allow to link actors across market boundaries, to share common knowledge and to create new connections among users and between firm and clients, due to the low cost of the connections. From a marketers' point of view, these interactions provide data on diverse target demographics, which marketers might exploit⁶ for delivering new direct advertising messages and customized promotions.

In this scenario, the popular social networking system, Facebook, is emerging as new powerful tool for social and marketing communication,^{4,7} with more than 750 million active users.⁸

Furthermore, it is one of the most popular social networks among students.⁹ The social network represents a free virtual space where users can share opinion, upload and download digital material such as photos, videos and so on discuss, chat, retrieve information, ask suggestions through several user-friendly tools, which allow to keep in touch with friends in a fast and easy way. Hence, they can share

The use of Facebook for business purposes

judgments and experiences about brands and products, as well as they can make recommendations.

As a consequence, many firms are forced to create pages on Facebook to provide information and e-services to attract new clients and maintain the existing ones. These pages on Facebook are very often related to the online shopping space or consumers' contests. Hence, on the one hand, the firms overcome the problem related to the advertising attractiveness among youth;⁹ on the other, they can reach up to over 200 million of active Facebook users and target people by exploiting their own profiles. In fact, several studies identified the possible advantages for organization to achieve information on consumers profile and preferences and extend products support services in a fast and efficient way,^{3,6,10} by exploiting the data uploaded by consumers during their interactions and tracking their behaviours and preferences while online.

Despite the increasing attention towards Facebook phenomenon, researches investigating this social network are mainly devoted to aspects such as privacy or psychological traits (ie identity presentation).⁹⁻¹¹

This paper aims at investigating the use of Facebook from a consumer's point of view, by analysing the determinants capable of motivating consumer to use this channel as tool for supporting the purchasing decision.

The current study extends the traditional technology acceptance model, in order to outline the factors capable of influencing consumer decision of brands and products through the new channel concerning the social networks. Furthermore, our findings are important in interactive social media context, where marketers have opportunities to involve consumers in the service and product creation process.

Theoretical background

Technology Acceptance Model (TAM)

This research exploits the Technology Acceptance Model (TAM), which allows predicting users' attitude towards a new technology and the subsequent acceptance in terms of intention of use and effective use.^{12,13} This model helps explaining determinants of computer acceptance and users' behaviour towards a broad range of computing technologies.¹⁴ In particular, this model is based on the Theory of Reasoned Action and Theory of Planned Behavior developed by Fishbein and Ajzen,¹⁵ and allows investigating the process of accepting information systems by focusing on the main constructs of perceived ease of use and perceived usefulness, attitude and intention.¹⁴ Perceived ease of use and perceived usefulness represents the degree to which a user believes that using a certain technology will require no effort; whereas perceived usefulness represents the degree to which a user believes that using that technology will enhance his/her performance.¹⁴ In particular, TAM proposes that perceived usefulness affects user acceptance due to reinforcement values of outcomes.¹⁴ In fact, perceived usefulness predicts IT use and intention to use¹⁶ and exhibits a stronger and more consistent relationship with attitude if compared with other variables reported in

the literature.¹⁴ Attitude represents user's assessment towards the technology, whereas the behavioural intention represents the degree to which a person is willing to perform certain behaviour.¹⁴

Attitude

Researches on users' acceptance of new technologies outline the key role of attitude for the success of these systems.^{12,14} In fact, the utilitarian value of the technology is strictly linked to its effectiveness and efficiency.¹⁷ Thus, perceived ease of use and perceived usefulness affect users' attitude towards the technology.^{18,19} If a technology is ease of use, then encountering subsequent user's positive perception of its usefulness is obvious, due to the belief that the system is free of effort. Accordingly, users may be interested in using more technology and they are motivated in making an extensive use of it.¹⁸

Perceived enjoyment

Other constructs might be added to the previously identified (perceived ease of use and usefulness, attitude and behavioural intention), such as emotional factors.^{18–20} In fact, many authors suggest the introduction of a new construct based on the perceived enjoyment,^{1,18} which is significantly associated with web use. Enjoyment can be defined as the degree to which performing an activity is perceived as providing pleasure, aside from performance consequences.²¹ Attracting and retaining users by providing an enjoyable website has gained researchers attention.¹

Due to the voluntariness of internet shopping and the impulsivity of searching and buying behaviours through this channel, it seems likely that shopper's intentions become stronger if they perceive higher enjoyment from the website.²² In fact, individuals who experience pleasure and joy from using a computer are likely to use it more extensively than others.²³ While perceived usefulness emerged as the major determinant of computer acceptance in the workplace, enjoyment and fun have a significant effect beyond perceived usefulness. Furthermore, enjoyment has a significant impact on customer's behaviour on the web, such as increasing consumer's intention to return.²⁴ Davis *et al.*²³ also identified a positive relationship between perceived usefulness and enjoyment.²⁵

Consumer to consumer approach

Research model and hypotheses

According to the literature, the main reason that influences users in using Facebook is the need of keeping in touch with friends and sharing messages with them, by facilitating their interactions.^{9,18,26,27} Furthermore, users can interact with firms and manager through the pages and profiles on the social network, by posting comments, asking for more information on products, complaining and so on. Hence, on the one hand, Facebook promotes a consumer-to-consumer approach, exploited by consumers to share experiences and create a common knowledge on products and services; on the other, it provides managers a direct channel for communicating with clients through a business-to-consumer approach. In fact, firms can use the pages and profiles to contact clients, to propose strategies, show new products and advertising campaigns, as well as to ask consumers their opinion on the firm. Thus, the social network plays a new role as intermediary

Business to consumer approach

between firms and client with consequences on the Customer Relationship Management. As a consequence, social network increases the productivity and efficiency of marketing strategy, by supporting companies to directly reach their customers and offer them customized promotions and sales.⁴

In particular, the usable and interactive interface stimulates consumer's interest to further explore the provided contents,¹ with benefits for timesaving in information searching. Furthermore, previous studies found that the general causalities of the TAM are expected to be applied also in the social networking context.¹⁹

In this research, we analyse both interactions among consumers (C2C approach) and between firms and consumers (B2C) from a consumers point of view, in order to deeply understand how these interactions influence consumers perception of products/services promoted online and the subsequent choice to buy these ones. Therefore, we focus on the role of Facebook as tool for supporting consumers' choice, which they can exploit as main source for achieving information.

Therefore, we suppose the following relationship:

Hypothesis 1: Ease of use of the social network Facebook has a direct influence on perceived usefulness on the system as supporting tool for the purchasing decision.

Hypothesis 2: Ease of use of the social network Facebook has a direct influence on the attitude towards the usage of this system for achieving information for the purchasing decision.

The importance of Facebook on purchasing decision

A social networking system such as Facebook usually contains consumers' evaluations of products and services, thus it represents a *common* source of information on brands, products, firms, and it represents one of the main ways consumers can use to express satisfaction or dissatisfaction towards a firm. This source consists of photos, videos, audios as well as comments posted by consumers and firms' representative constantly available and updated.

Since perceived usefulness has a positive effect on the users' belief of an increasing performance emerging by the interaction with the technology,¹⁷ we suppose that consumers interactions through Facebook and the provided messages may supports them on purchasing decision, and choosing of products in order to finalize the purchasing decision.

As a consequence, the hypotheses are as follows:

Hypothesis 3: Perceived usefulness of the Facebook-mediated messages has a direct influence on consumers' attitude towards the use of this system for achieving information for the purchasing decision.

The hedonic characteristic of the technology

Hypothesis 4: Attitude towards social network Facebook has a direct influence on behavioural intention to use Facebook itself as support tool for the purchasing decision.

Due to the social networks such as Facebook features for transmitting and sharing information and experiences about products from both a consumer-to-consumer and a business-to-consumer point of view, it plays an important role in information diffusion among consumers and influencing their attitudes and decisions.^{4,28} In fact, previous studies showed the importance of verbal communication for consumer's judgments and purchasing decision,²⁹ as well as the consumers' preference of products and brands of those firms that allow them to submit their feedback.²⁷ Consequently, the messages mediated by social networks have positive or negative effects for consumer's product judgments and on their subsequent purchasing decision.

Furthermore, consumers' choice of a specific online channel (ie virtual communities, social networks, websites) affects consumers' attitude in using the channel as informative source and the subsequent behaviour towards the products promoted by this medium, whereas the trust in the other users has a weak influence in the effective gathering of information in the channel,³⁰ as well as the messages content and related appeal (in terms of level of detail, interactivity, etc) influences individuals' inferences about the firm and thus the loyalty to the channel as informative source and supporting tool for purchasing decision.²⁵

Since previous studies outlined that experienced users appreciate participating in the social life promoted by the online channel due to the provided fun,¹³ the hedonic characteristic of the technology should be taken into account for predicting consumers' adoption of it. In fact, several researches identified enjoyment as one of motivating factors for persisting in such behaviour;^{9,26,30} thus, this variable might play a key role in the acceptance of social networks as supporting tool for purchasing decision.

Therefore, we integrated the enjoyment construct into our research model and we hypothesize the following relationships:

Hypothesis 5: Enjoyment has a direct influence on the perceived usefulness of the social network Facebook as supporting tool for the purchasing decision.

Hypothesis 6: Enjoyment has a direct influence on attitude towards the use the social network Facebook as supporting tool for the purchasing decision.

Hypothesis 7: Enjoyment has a direct influence on behavioural intention to use the social network Facebook as supporting tool for the purchasing decision.

Hypothesis 8: Ease of use has a direct influence on enjoyment.

Figure 1: Research framework

On the basis of the literature analysis, the variables of the research model are perceived usefulness, ease of use, enjoyment, attitude and behavioural intention. Figure 1 represents the relationships among them.

Methodology of research

A questionnaire has been developed, consisting of 19 items, including 14 items on perceived usefulness and ease of use, enjoyment, attitude, behavioural intention, which have been measured through the 5-points Likert scale (1=strongly disagree; 5=strongly agree), and 5 items on consumer profile including gender, age, education, favourite place for connecting to Facebook, experience with the social network in terms of months spent from the first registration to the system (from less than 3 months to more than 1 year) and duration of each visit.

A pilot study was carried out in Southern Italy to evaluate the effectiveness of the research instruments. The pilot study suggested some clarifications to the survey instruments. The pre-test has been carried out to calculate the minimum time to complete the questionnaire. It was 4.5 min (mean=4.1, maximum=4.9). To avoid the increased error variance introduced by such subjects, 4.5 min was used as a cut-off for inclusion in the analysis.

Due to the effectiveness of Structural Equation Model (SEM) for solving problems concerning to casual relationships between latent construct measured by observed variables, as well as its effectiveness for modelling several paths among variables in one analysis,^{31,32} this research exploits the use of SEM for testing the hypothesized model through a confirmatory analytical technique. Thus, the same test evaluates both the factor analysis and the hypotheses. In particular, LISREL statistical software has been involved for the covariance-based SEM analysis.

Sample

Since Facebook is the most popular social network among students,^{9,25} our sample consists of undergraduate students from four different majors in various areas of study (Economics, Humanities, Social Sciences, Communication Sciences, Tourism and Hospitality) at University of Molise (Italy). Participants were approached and asked to complete anonymous surveys within a period of 2 months from March 2011 to May 2011.

Table 1: Consumers' profile

	Per cent
<i>Gender</i>	
Male	20.30
Female	78.60
Missing	1.10
<i>Age</i>	
Under 25	67.90
26–35	28.90
36–42	1.60
Missing	1.60
<i>Education</i>	
High school	57.80
Master degree	38.00
PhD/specialization	2.70
Missing	1.60
<i>Place for connecting to Facebook</i>	
Home	89.30
University/office	7.00
Other	1.60
Missing	2.10
<i>Experience in Facebook</i>	
Under 3 months	5.30
3–6 months	17.60
More than 6 months	74.90
Missing	2.10
<i>Duration of each visit</i>	
Less than 1 hour	32.60
1–3 hours	50.80
More than 3 hours	14.40
Missing	2.10

Among the distributed questionnaires, we obtain 187 usable responses.

The data were edited by checking and adjusting errors, omissions, legibility and consistency in order to ensure completeness, consistency and readability.

The demographic characteristics of sample are presented in Table 1. In particular, the sample consists of 38 male and 147 female (two missing data), whereas the age of respondents is between 22 and 42 years.

Despite the wide number of respondents are university students, their favourite place for connecting to Facebook is home (89.3 per cent), which provides a fast connection and more privacy if compared with university laboratories or meeting rooms for students. Thus, the substantial presence of people under 25 years (68 per cent) who prefers connecting Facebook by home (89 per cent) is a noteworthy characteristic of the sample, as well as the majority of female users (78.6 per cent). Experienced users may pay more attention to Facebook contents and feel more comfortable using this social network for purchasing decisions, or have stronger pre-existing notions about the product categories. Data on how long the subjects have been using Facebook and frequency of visits were collected to evaluate effects related to experience with the channel. This information allows

Table 2: Questionnaire reliability

Factors	KMO	Bartlett's test of sphericity	Cronbach's α
Perceived Usefulness (PU)	0.737	Approximate χ^2 150,615 df 3 Significance 0.000	0.731
Perceived Ease of Use (EOU)	0.834	Approximate χ^2 196,639 df 3 Significance 0.000	0.783
Perceived Enjoyment (ENJ)	0.706	Approximate χ^2 162,993 df 1 Significance 0.000	0.867
Attitude (A)	0.847	Approximate χ^2 212,665 df 3 Significance 0.000	0.827
Behavioural Intention (BI)	0.756	Approximate χ^2 429,706 df 3 Significance 0.000	0.925

understanding the level of technology being used, both in terms of ease of navigation, uploading and downloading of material.

Furthermore, respondents reported a high mean for involvement in the social life in the network due to the duration of each visit (51 per cent spends 1–3 hours each time) and the long lasting presence on Facebook (75 per cent is Facebook user from more than 6 months); thus, the involvement plays an important role for consumers' perception of advertising messages mediated by the system.

Key findings

Exploratory analysis

The internal validity of the questionnaire has been evaluated through the Kaiser-Meyer-Olkin (KMO) and Bartlett's Sphericity tests, as well as to the analysis of the Cronbach's α (Table 2). In particular, both KMO and Cronbach's α values overcome the limit of 0.7, whereas the significance of Bartlett's Test of Sphericity is 0.000. Since each index to measure the constructs overcomes the acceptable suggested ones, the proposed model of research is very reliable.

SEM results

The statistical validity of the constructs proposed in the model and their relationships have been further investigated by using the SEM.

According to literature, we took into account the following acceptable fit indexes:^{18,19} GFI (goodness-of-fit index), AGFI (adjusted goodness-of-fit index), NFI (normed fit index), CFI (comparative fit index) and RMSEA (root mean square error of approximation). Each index overcomes the recommended values, thus the proposed model provides a suitable fit (Table 3).

The subsequent path coefficient analysis evaluated the proposed relationships among variables, as presented in Figure 2.

Figure 2 shows the standardized LISREL path coefficient with the related significance level. These results support the hypotheses (Hypothesis 2, Hypothesis 3, Hypothesis 4, Hypothesis 5, Hypothesis 6, Hypothesis 7, Hypothesis 8), except Hypothesis 1. In fact, the path between perceived ease of use and perceived usefulness (H1; $\beta=0.07$, $p<0.05$) were found to be non-significant.

Table 3: Fit model indexes

Fit index	Recommended value	Result
X ² /degrees of freedom	<3	2.87
GFI	>0.8	0.912
AGFI	>0.8	0.862
NFI	>0.9	0.954
CFI	>0.9	0.978
RMSEA	<0.08	0.064

Figure 2: Results of the SEM * $p < 0.001$; ** $p < 0.05$

Findings suggest that consumer's usefulness perception of recommendations and suggestions on products on Facebook (H3; $\beta = 0.19$, $p < 0.001$), consumers' enjoyment in the use of the social network Facebook for information searching on products and brands (H6; $\beta = 0.57$, $p < 0.001$), and perceived ease of use of the provided tools (H2; $\beta = 0.19$, $p < 0.001$) influence consumers' attitude in using the system as supporting tool for their purchasing decision; whereas the influence of ease of use of the system plays a marginal role on the perceived usefulness (H1; $\beta = 0.07$, $p < 0.001$). Furthermore, perceived ease of use has a direct influence on perceived enjoyment (H8; $\beta = 0.17$, $p < 0.001$).

Results also suggest a casual positive relationship between attitude and behavioural intention (Hypothesis 4; $\beta = 0.71$, $p < 0.001$). Moreover, enjoyment also has a direct influence on both perceived usefulness (Hypothesis 5; $\beta = 0.15$, $p < 0.001$) and behavioural intention (H7; $\beta = 0.76$, $p < 0.001$).

Furthermore, the model explains substantial variance in perceived enjoyment ($R^2 = 0.90$), and attitude ($R^2 = 0.74$), which might exclude the presence of other unexpected variables, whereas it was found modest in perceived ease of use ($R^2 = 0.20$) and perceived usefulness ($R^2 = 0.13$).

Conclusions

The current study aims at deeply understanding consumers' acceptance of social networks as supporting tool for purchasing decision, by focusing on the case of Facebook. The results advance our knowledge on the use of Facebook for marketing purposes, underlying how users appreciate the presence of firms/products on the social network and take into account the recommendations and suggestions mediated by this system.

Consumers' acceptance of social networks as supporting tool for purchasing decision

Furthermore, this research confirms the robustness of TAM, explaining technology acceptance behaviour in terms of usefulness, ease of use, and provided fun that motivate consumers to use the system for achieving information on products and brands. Information can be requested and accessed via several tools consistent with the findings, which show the considerable role of enjoyment in purchasing intention and consumers' purchasing decision. In particular, findings identify enjoyment as critical belief. In fact, the fun provided in Facebook, as well as the possibility to ask for suggestions in an ease and entertaining way motivate users in both actively participating in the social life and paying more attention to the products and services promoted via Facebook. Managers could improve the fun provided by the pages by adding games, contests and applications, which can attract clients and communicate the brand through funny elements.²⁰ Hence, marketers would consider the link between a high level of enjoyment and more information available for positively affecting consumer purchasing intention, by providing more applications and contests, which can be developed through the current advances in computer graphics and targeted on clients' profiles.⁶ For instance, many current Facebook-based applications allow users to create a new customized product, answer to questions on a products and compare the results with other users, create a virtual product and share with friends, and can motivate consumers to use them and involve other ones as anticipated by previous studies.¹ These interactions among users are not shaped by the consumers' use of the system tools. In fact, the social ties play a more important role in determining the acceptance of social networks than its effective ease of use.¹²

Moreover, the study underlines the strong tie between attitude and behavioural intention to use the social network Facebook as tool for supporting the purchasing decision, in accordance with previous studies.^{17–19}

These findings can be considered as one of the emerging attempts to investigate empirically consumers' acceptance of computer-mediated advertising messages in social networks as supporting tool for purchasing decision. In addition, the results are important in interactive social media where marketers have opportunities to involve consumers in the service and product creation process.

Limitations and future works

A limitation emerges from the representativeness of the sample. This study involved a prevalence of experienced Facebook users in the age less than 25 years (67.9 per cent). Generalization of the results drawn from their responses is limited although the current users of social networks are mostly younger generations. If considering the impact of age on the model and facilitating conditions, more attention should be given in promoting social network usage for older subjects.

Despite, many studies are being conducted across the globe in this topic, a country as emerging economy such as China where Facebook is banned could not be included in the generalization. Due to this lack

of global component, our study is limited to only the western hemisphere, but future researches might assume a worth dimension.

Moreover, the research does not focus on a specific product or firm; as a consequence, the information on different products may affect consumers in different way, according to their involvement towards the product or firm.

In addition, members of social networks can show different behaviours, because they can use the social networks as a source of information in different way. Thus, according to consumers' participation, different advantages for marketers might emerge. As a consequence, future researches would focus on the new ways for exploiting online consumer-to-consumer and business-to-consumers interactions for creating effective customized communications.

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