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**INTERSOCIAL:** Unleashing the Power of Social Networks for Regional SMEs

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Deployment of tools for social web local enhancement: design of an empirical study

Deliverable D4.2.1 Action 4.2

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*Purpose:* Deployment of tools for social web local enhancement. Literature review on theoretical background on trust and trust building in online stores and on the role of social media in customer-supplier relationships in e-commerce, with particular focus on Small-Medium Enterprises.

*Results:* We outline the design of an empirical study aimed at investigating the role of social media in the process of trust building in the context of a small/medium company that wants to improve its online presence and build a trustworthy image of their stores.

*Conclusion:* Determined the role of social media in fostering affective trust by enhancing the perception of a vendor’s benevolence and openness towards the consumers.

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## Introduction

### Investigating the Effect of Social Media on Trust Building in Customer-Supplier Relationships

Nowadays, interpersonal communication is increasingly affected by the wide diffusion of social software. Most people and companies daily manage their digital identity on multiple online social networks. As an evidence of this, for example, the current number of monthly active users of Facebook has recently reached 1 billion, of which 655 million are active on a daily basis.

Social software is also playing a key role in business as it represents a powerful marketing channel for establishing a direct communication with the customers [2]. Several companies are now investing in social media for building their social digital brand and strengthening trust-based relationships with their customers. The reason for success of social media originates from the classic marketing paradigms and is due to the possibility to manage relationships with customers in a 'people to people' fashion. In fact, trust building is a key issue in commerce [3] and it is established with the salesperson, rather than with respect to a brand [5]. The sales forces play a key role in interfacing with customers if they are able to appeal to the peripheral route to persuasion based on emotional appraisal [12]. Compared to traditional websites, social media allow suppliers to realize this behavior in a virtual environment and provide customers with the possibility of perceiving a company as closer, more reachable and concerned about their needs [2]. Aiming at enhancing trust building, a company should consider exploiting affective appraisal as a key strategy. In this sense, social media offer the possibility to surrogate the affective channel of face-to-face traditional interaction with customers and enhance their perception of a company's trustworthiness and benevolence [2]. This holds not only for large enterprises but also for small companies, which can benefit from the popularity of social networks as a modern version of traditional word of mouth [17]. In this sense, social media have shown to act not only as an instrument for facilitating online interaction but also as powerful aggregators of virtual communities.

In this contribution, we describe a study aimed at investigating the role of social media on trust building in the very early stage of a customer-supplier relationship, i.e., based on first impression provided by a company's online image.

## Section 1: Background and Motivation

### Definition of Trust and Trust Building

Trust is a concept that has been widely studied in several research domains [14], from cognitive science [4] to economy [5], and more recently also in software engineering [1,16]. According to Hung et al. [8], trust may be defined as the belief that the trustee will behave according to our expectation. As far as marketing is concerned, several other definitions of trust have been provided. We consider a good starting point the one provided by Doney and Cannon [5] who define trust as “the perceived credibility and benevolence of a target of trust”. Both definitions involve the propensity of the trustor to take the risk of trusting the trustee. The trustor’s decision is based on both a cognitive and affective appraisal of existing information about the trustee, either statically available or dynamically derived from the observation of the trustee’s behavior in a medium-long term interaction.

### Trust Modeling

The literature proposes several approaches for fostering trust [2,6] and examines the nature of trust between persons and in organizations [5,9,15]. The underlying idea of these studies is that the process of trust building mainly develops along several dimensions that can be identified as trust antecedents [14], i.e., the properties of the trustee that trigger the trustor’s cognitive appraisal when assessing the trustworthiness of the others. With respect to the commercial domain, the envisaged model to adopt in this study is an extension of the ‘tripod’ model defined by Mayer et al. [9], which is highly consistent with the point of view of researchers in this domain [3,5]. According to the tripod model, the trustworthiness of a person or organization is assessed in terms of ability, benevolence, and integrity.

Ability is the capability of the trustee to complete a task, meet an obligation, and provide the answer to a request. It relates to the trustee’s professional skills, knowledge and the competence. It may be assessed by a trustor through the evaluation of available information (e.g., the description of the business provided on a website or the curriculum vitae of a person applying for a job). Benevolence relates to the trustee level of courtesy, positive attitude, availability, intention to share information or resources, willingness to help, kindness and receptivity. A trustee that meets this requirement is usually perceived as a person or company that cares about the trustor’s needs and goals. Integrity relates to a set of moral norms and trustee’s characteristic usually considered as good as, for example, integrity, honesty, fairness, loyalty, and discretion.

As far as the commercial domain is involved, McKnight et al. [11] extended this model with a fourth dimension, that is the predictability of the trustee’s behavior. Predictability is a concept related to Rusman’s accountability [14], that is the degree to which a person (the supplier, in this case) meets the expectations of the trustor (i.e., the purchaser) in terms of reliability and consistence of behavior.

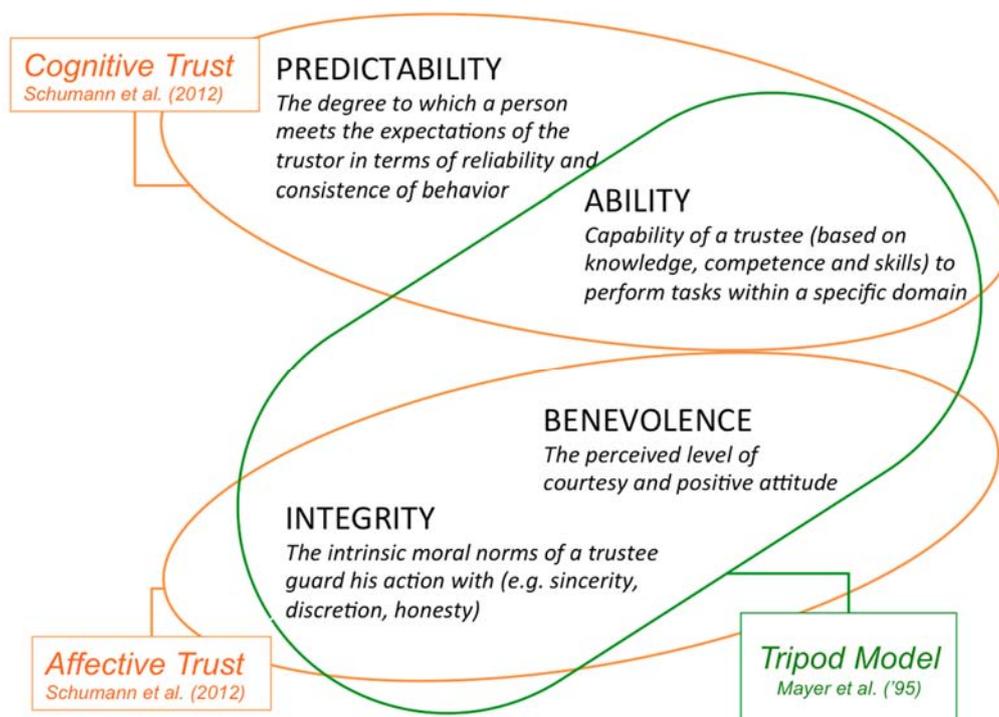
All the mentioned antecedents play a fundamental role in the customer-supplier relationship. The customer (trustor) will base the decision to purchase from a given supplier (the trustee) on the appraisal of available information that will enable the evaluation of the perceived trustworthiness in terms of ability, benevolence, integrity, and predictability.

Cognitive and Affective Trust

The process of trust building has been also analyzed and defined by highlighting the difference between cognitive and affective trust [10]. Cognition-based trust involves deliberate appraisal of the trustee characteristics combined with the process of weighting the benefits of trusting over risks [8,18]. On the contrary, affective-based trust involves “one’s emotional bonds and sincere concern for the well-being of the others” and might be seen as more related to the “intentionality process” [8]. In this study, we maintain the mapping of our four antecedents into the cognitive and affective appraisal mechanism, as suggested in [16] (See Fig. 1). Specifically, the ability and predictability dimensions are assessed by means of cognitive elaboration of personal and professional information. At the same time, affective-based appraisal leads to trust building along the dimensions of benevolence and integrity.

The information elements available in the websites and Facebook profiles of the two companies selected for this study are reported in Table 1. Compared to traditional websites, social media provide customers with the possibility of assessing the dynamic behavior of company owners, that is their commitment in updating and sharing of information and news and in responding to the customers’ feedback.

**Figure 1.** Mapping multidimensional models of trust antecedents into the Affective and Cognitive dimensions.



**Table 1.** Information available in the two conditions and their relation to trust antecedents

Available in	Information element	Relation with Trust Antecedents	Explanation
Website	Description of experience and awards	Ability	A direct description of the company experience and awards.
Website and Social media	Statements and mission	Ability	The type of statements and the mission description, as well as the way they are formulated, provide cues on the SME ability based on its previous experience and awards in the domain.
Website and Social media	Personal pictures of owner/staff	Benevolence Ability	<p>The type of photos can reveal personal attitudes and how open a person is to share information about his daily activities.</p> <p>The style of the picture itself may reveal how formal/informal a person is or give cues on his kindness.</p> <p>Pictures can give a hint on the person ability if portrayed while working (e.g., while cooking) or as an inference based on the estimate age of the owner/staff</p>
Website and Social media	Pictures of food and restaurant (e.g. kitchen, bakery lab)	Ability	<p>Pictures of the restaurant may provide a clues of the SME ability in terms of work organization, cleanliness of the restaurant, competence of the staff.</p> <p>Pictures of food may provide hints on the quality of the ingredient used and of the food served.</p>
Website and Social media	Pictures of food and restaurant (e.g. kitchen, bakery lab)	Ability Predictability	<p>Pictures of the restaurant may provide a clues of the SME ability in terms of work organization, cleanliness of the restaurant, competence of the staff.</p> <p>Pictures of food may provide hints on the quality of the ingredient used and of the food served and may be seen also as a statement of self-confidence about a SME standards.</p>

Available in	Information element	Relation with Trust Antecedents	Explanation
Website and Social media	News and Post on topics relevant to the domain	Ability Benevolence	Sharing lists of updates about food or ingredient may be seen as a cue of both professionalism (the owner and the staff keep updated) and openness (the SME shares his knowledge with its customers to engage them in its mission).
Social media	Pictures of customers in the restaurant	Benevolence Ability Predictability	If portrayed with the staff/owner, pictures of customers may provide hints on the formal/informal atmosphere of the restaurant, as well as the level of engagement and kindness demonstrated by the staff towards the customers.  By accepting to have their pictures shared on social media, customers implicitly provide a positive quality assessment of the SME's food and the service.
Social media	Presence on social media	Benevolence	Being expressed to customer feedback and personalization requests gives information on the general attitude of the SME towards the customers and on how much one is open, reachable, kind, available and committed to pursue the customers' satisfaction.
Social media	Status updates about the SME activity and plans	Benevolence	Sharing ideas and plans may be seen as an cue of openness and faith in intentions.
Social media	Average time to response to the customers' feedback	Benevolence Predictability	Taking care of customers' feedback and promptly reacting to comments (both positive and negative) may be seen as a cue of both Benevolence (in terms of availability, receptivity and commitment) and Predictability (intended as a demonstration of consistency of behavior and responsibility).

## Section 2: Research Goals

### Study Domain

The focus of this work is to provide an insight on the way social media affect trust building based on first impression. The scenario is the one in which customers, who don't know the companies, need to purchase a product by just relying on the information on the Web.

We selected two small companies operating both in the food domain because: (i) quality is assessed according to common-sense based criteria; (ii) the evaluation process does not require any particular skill or knowledge. Company A is an organic restaurant whereas company B is a manufacturer of cake and bakery products. Both companies started their activity about one year ago and developed marketing strategies that involve strong web presence.

### Research Hypothesis

In our model, we assume that cognition-based trust building is triggered by appraisal of professional information that can be usually acquired through a traditional website. On the other hand, social web can help to provide a more informal, closer interaction style between a company or a salesperson and their customers (e.g., answering to positive and negative comments from followers on social media platforms). Therefore, social media may be exploited to enhance trust building by enforcing the affective route to persuasion. We hypothesize that being able to monitor a company's behavior on social networks could affect trust building along the benevolence and integrity dimensions more than traditional websites. In other words, we argue that traditional websites (content-oriented) and social media (interaction-oriented) may have a different effect on trust building in customer-supplier relationships.

Accordingly, our main hypotheses, the context of in customer-supplier relationships, are the followings:

**Haff** – Social media foster *affective trust* more than traditional websites,.

**Hcog** - Traditional websites foster *cognitive trust* more than social media.

### Section 3: Experimental Design

The study has a 2 x 2 design (see Table II). The Web mode (Traditional Website vs. Social Media) is the only independent variable, while the company (Company A and Company B) is simply a blocking factor. In fact, according to the research question, in this study we want to investigate the effect of websites and social media on trust.

We plan to involve at least 50 participants, recruited among the student of the Computer Science master courses and the undergraduate degree in Physics. Each subject will be evaluating the perceived trustworthiness of both companies, following one of the two possible combinations reported in Table II. In addition, for each group the order of web mode visualization will be also randomized and equally distributed among subjects, to avoid any bias due to the sequence of information presentation.

Trust will be evaluated by measuring the perceived trustworthiness of the company, according to three antecedents: ability, predictability, and benevolence. Consistently with literature on trust building based on first impression [13], we do not plan to assess the company's integrity because integrity is peculiar of long-term relationships. In our study, instead, the subjects should be among people who do not know the companies before and it could be impossible for them to guess a company's integrity based on the analysis of the website or fan page.

The evaluation along the three dimensions will be mapped into the broader concept of affective and cognitive trust using both questionnaires and interviews. For each trust antecedent dimension, a set of questions has been defined, according to the domain of the present study. We included 21 questions overall: 7 for ability and 3 for predictability (cognitive trust); 11 for benevolence (affective trust). We defined a questionnaire (see Q1 in Table 3) obtained by integrating guidelines and items included in questionnaires from studies about trust elicitation and perception based on first impression [3,11,18]. The subjects will be requested to evaluate the perceived trustworthiness of a given company by filling out the questionnaire based on Likert scale from 1 to 5.

*Table 2. Study design*

	<b>Company A</b>	<b>Company B</b>
<b>Traditional Website</b>	Group 1	Group 2
<b>Social Media</b>	Group 2	Group 1

According to previous research [7], it is reasonable to assume that trust building might be influenced by personal propensity to trust. In our scenario, two factors may play a role in the individual propensity to trust, that is their familiarity with Facebook and e-commerce, respectively. To avoid any bias, we treat these two variables as covariates. Therefore, subjects will be requested to indicate, on a 4-point Likert scale, how often they use Facebook and make online purchases.

Procedure

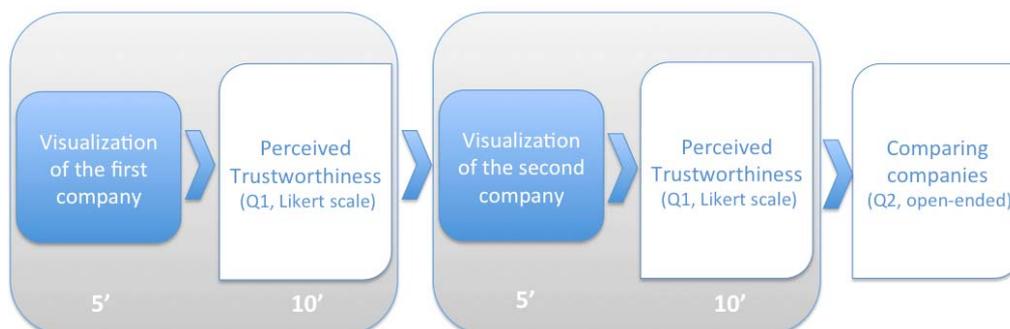
The experiment will take place in a controlled environment. An experimenter will introduce the experiment to the subjects, by illustrating the scenario and providing detailed instructions on the procedure for task execution. The experimenter will remain in the room during the experiment, to ensure that the participants could not interact nor exchange opinions about the two companies and to answer subjects' questions during the experiment. Each subject will work independently and access the experimental procedure through the web.

At the beginning of the experiment, the subjects will be requested to answer a short questionnaire aimed at assessing how familiar they are with web technologies, social networking and e-commerce in order to assess their actual propensity to evaluate trustworthiness of companies based on their web presence. Then, the experimenter will illustrate the experimental task, related to the choice of one company for a catering service. The scenario of the catering has been selected to mitigate the high propensity to risk taking behavior that could derive from the perception of a low inherent risk associated to the food and restaurant retail class. Hence, rather than asking where they would have lunch, we will request subjects to express their preference with respect to a purchase involving a considerable amount of money and having also social implications (i.e., offering a buffet is associated also to self-image in social context).

Once the scenario is presented, participants will be requested to visualize and rate two company profiles (either the company's website or its Facebook profile), according to the random presentation order described before. Subjects will be explicitly instructed to explore the company profile no longer than 5 minutes (see Fig. 2). As a consequence, each of the two phases will last at most 15 minutes, including both the visualization of the webpage of the company and answering the questionnaire for the trustworthiness evaluation. A pre-condition for the participation is that the subject does not know any of the two companies and have never browsed any of the two company websites before.

In Table 3, Q2 reports the questionnaire that will be provided at the end of the experiment to verify the subjects' preference between the two companies with respect to the catering scenario as well as the motivation for their choice. Moreover, at the end of the web-based part of the experiment, an experimenter will interview the participants to clarify the reasons for the preference towards one of the two companies expressed in Q2 to investigate subjects' opinions and perceptions about the role of both traditional websites and social media in web marketing.

**Figure 2.** Study procedure



**Table 3. Questionnaires**

<b>Q1 Assessing Perceived Trustworthiness</b>
<b>AFFECTIVE TRUST</b>
<b><i>Benevolence</i></b>
<ul style="list-style-type: none"> <li>- This company puts customers' interests first</li> <li>- This company is genuinely interested in its customers' welfare</li> <li>- If problems arise, one can expect to be treated fairly by this company</li> <li>- If I got into difficulties with the goods/services provided or I required help, this company would do its best to help me</li> <li>- I feel like it could be hard for me to get in touch with this company</li> <li>- I am confident this company would be available when I need more information/have problems with goods/services provided</li> <li>- I feel like I could be able to contact this company readily when it is required</li> <li>- This company makes an effort to understand what customers have to say</li> <li>- The people working for this company are friendly and approachable</li> <li>- This company keeps customers updated about what is in its plans</li> <li>- The company owners share their thoughts with me/with customers</li> </ul>
<b>COGNITIVE TRUST</b>
<b><i>Ability</i></b>
<ul style="list-style-type: none"> <li>- This company is very competent</li> <li>- This company is able to fully satisfy its customers</li> <li>- One can expect good advice from this provider</li> <li>- In its job this company seems to work efficiently</li> <li>- I have full confidence in the skills of people working for this company</li> <li>- This company does not provides its services / produces its goods with skills</li> <li>- This company does things competently/in a capable manner</li> </ul>
<b><i>Predictability</i></b>
<ul style="list-style-type: none"> <li>- This company's methods of operation are unclear</li> <li>- I would rely on advice from this company</li> <li>- This company does things that promises to do for me</li> </ul>
<b>Q2 – SELF REPORT ABOUT PERCEIVED TRUSTWORTHINESS</b>
1. Which company do you perceive as the more reliable? Why?
2. Which company would you choose for your meal? Why?
3. Which company would you choose for the catering service? Why?
4. Which company seems more competent to you? Why?
5. Which company seems to be more concerned about the wellbeing and needs of its customers? Why?
6. Please leave any comment or suggestion about the experiment.

### Section 3: Conclusions

We have described the design of a study aimed at investigating the role of social media in the process of trust building in the context of a small/medium company that wants to improve its online presence and build a trustworthy image of their stores. With respect to first impression, we aim at understanding whether social media foster affective trust more than traditional websites, by enhancing the perception of a vendor's benevolence and openness towards the consumers.

We plan to involve 50 students with different background, under the condition that they do not know the two companies involved in the study and that they have never browsed the two companies' website nor Facebook profile. Results will be provided by analyzing the trust assessment obtained through Likert scale questionnaires assessing trust along the two affective and cognitive dimensions as well as by analyzing self-report and open-ended questionnaires about perception of trustworthiness of the two companies along the specific trust antecedents included in our model.

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