THE MEASUREMENT OF TRUST IN MARKETING STUDIES: A REVIEW OF MODELS AND METHODOLOGIES

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Abstract

Marketing literature has repeatedly shown that trust between firms, and between firms and consumers, is a crucial factor in the move from discrete market transactions to continuous exchange relationships. Although there is a general agreement about the fundamental role of trust in the management of market relationships, there is as yet no complete agreement about its definition, nor about its measurement. This paper presents a review of marketing literaure on trust. The aim is to emphasize some problems still open in defining the meaning of the trust concept and in identifing its origins and effects in market relations; and to illustrate the main approaches and methodologies that have been used in the measurement of the concept itself. Results indicate a great variety of definitions and measurements in the different contexts studied and, as a consequence, a lack of completely satisfying and widely agreed models and methods of operazionalization, suitable for evaluate the role of trust in market relationships and its process of generation and growth over time.

1. Introduction

The evolution of the competition forces firms to cope with an increasing difficulty in the management of technological options and market relations. Technologies are in continuous, incessant, development; market relations are frequently threatened by new or more aggressive competitors. In this situation, the behaviour of entrepreneurs and managers is turned in search of new models to manage market relations, suitable for operating with success in front of continuous change and a high level of uncertainty[228].

Most firms have reacted to this dynamics by trying to develop long-term cooperative relationships with other firms (Valdani 1997; Lanza 1998) and, above all, with the clients, final and intermediate (Busacca 1994; Castaldo 1994; Costabile 1999). Such relationships are

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[228] Such uncertainty is mostly caused by the increasing variety and great variability of technological options, and these impact on the value propositions offered to the market, influencing at the same time the stability of demand preferences and the competitive positioning of the firm (Vicari 1991; Rullani 1992; Busacca 1994; Valdani 1995).

based on mutual trust, and are intended to control the variety, the variability and, as a consequence, the indetermination of the development's trajectories that markets are taking (Vicari 1991; Rullani 1992; Busacca 1997). Trust established between firms, and between firms and consumers, is one of the fundamental resources that firms can make use of in order to control complexity[229]. The continuous growth of trust makes it possible, according to several authors, to pursue the objective of the firm's value generation and diffusion (Guatri 1991; Vicari 1991; Guatri and Massari 1992; Busacca 1994; Costabile 1996b and 1998; Vicari, Busacca and Bertoli 1999).

Although there is general agreement about the fundamental role of trust in the management of market relations, there is as yet no complete agreement about its definition, nor about the conditions that determine its development. Measurement of the construct of "trust" by means of processes and methodologies that satisfy the basic requirements of validity and reliability is more problematic still (Churchill 1979; Bayle 1995).

As a first approach, trust, whether in someone or something, can be defined as an attitude, characterised by the belief in the counterparty's reliability, for example supplier or client. More specifically, according to some authors, this is the belief (Castaldo 1995) that the behaviour of the counterparty is predictable in terms of its direction and intensity, which means that future actions of the counterparty will conform to obligations assumed, implicity or explicit. In general, this perception of reliability comes from experience, and more particularly from a sequence of satisfactory interactions, that is a series of evaluative processes from which a systematic confirmation of expectations emerges (Costabile 1996a).

Although the concept of trust is now used in many disciplines (Rousseau et al. 1998), it was originally the object prevalent of study in social psychology and sociology (Rotter 1967; Mutti 1987 and 1998; Gambetta 1989; Roninger 1988 and 1992). Within these disciplines, as it results evident in the review of studies about this topic performed by Castaldo (1995), trust appears to be defined by two constitutive components: the first one is predictability of the behaviour of the subject – or organization – in whom trust is placed, which comes from learning process based on experience; the second one is the certainty that the person concerned could not behave opportunistically and that his actions would be aimed to achieve joint benefits.

Interest in trust in marketing studies arose, instead, in the second half of the 1980's, but researches about this topic are become frequent only in 1990's, generating a copious literature and a broad debate (Swan, Trawick and Silva 1985; Shurr and Ozanne 1985; Dwyer, Schurr and Oh 1987; Anderson and Weitz 1987; Anderson and Narus 1990; Andaleeb 1992; Busacca 1994; Morgan and Hunt 1994; Castaldo 1995; Smith and Barclay 1997; Doney and Cannon 1997; Guibert 1998). This was coupled with the development of *relationship marketing* and refered especially to the context of *business to business* markets.

The trust concept has been the object of particular attention in research about markets relations in which two specific parties are involved: one which gives trust (*trustor*) and one to which trust is given (*trustee*) These relationships can take place at different levels: between individuals, between firms, or between firms and individuals (Baccarani 1995); there has

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[229] Trust is a business resource in a broad sense, as it concerns both relationships with suppliers and partners (towards whom a principle of reciprocity is generally in use) and relationships with customers. With reference to the latters, trust is a business resource, but it resides in the cognitive system of the customers (Vicari 1991; Busacca 1994; Castaldo 1995).

been no lack of efforts to differentiate trust towards the individuals from that towards the organizations (Doney and Cannon 1997; Zaheer, McEvily and Perrone 1998), but most of these studies do not hypothesise any distinction on this point. Besides, they assume that there is a symmetry in the trust relationships. Trust is perceived, then, as a dyadic phenomenon that is characterised by reciprocity, even if this symmetry is not always confirmed (Ganesan 1994).

Marketing literature has been much inspired by social-psychological works and, like them, has not developed any models for trust management, nor any agreed definition about how to operazionalize and measure the concept. The huge quantity of research work on trust offers, in fact, a great variety of definitions and measurements from the different contexts that have been studied, although it is this heterogeneity of methods and contexts that, probably, inhibits the consistent development of agreed models about components of trust and its role in exchange processes.

In the light of these considerations, this paper offers a review of the marketing literature on trust with the objective of illustrating the main approaches that have been used in the measurement of the concept itself, showing the methodologies and techniques of measurement that seem to offer the best reliability from the viewpoint of the evaluation and control of intangible assets of firm.

In order to achieve this objective, some problems still open in defining the meaning of the concept and in identifing its origins and effects in market relations will first be dealt. A review of the principal methods of measurement that have been proposed in marketing literature as a way of operazionalizing the construct of trust will then be presented; this will show the limits and advantages of the methods concerned. Finally, some guidelines for future research on the subject will be identified.

2. Trust in marketing studies: origins, effects, open problems

Marketing literature has repeatedly shown that trust is a crucial factor in the shift from discrete market transactions to continuous exchange relationships (Dwyer, Schurr and Oh 1987). Trust has thus a central role in the development of *relationship marketing*, which refers to all activities intended to establishing, developing and maintaining exchange relationships with clients (Morgan and Hunt 1994).

The most significant contributions to the conceptualization and measurement of the trust construct can be found, in particular, in studies of inter-organizational relationships, and therefore in the area of *business to busines* marketing (Ferrero 1992; Castaldo 1995; Blois 1999). The fields *of business to business* marketing that have particularly encouraged the research on trust are *sales management* (in the industry and service sector) and *channel management*, where the attempt is to understand how trust develops between seller (of supplier firm) and buyer (of buying firm or distributor).

Some recent studies have also considered the trust concept in the area of *consumer marketing*, that is in the relationships between firms and final consumers. This is particularly the case of studies aimed to analize the constructs involved in the customer buying behavior, such as satisfaction, brand image and customer loyalty (Valdani and Busacca 1992; Busacca 1994; Vicari 1995; Berry 1995; Gruen 1995; Gurviez 1995; Busacca and Castaldo 1996; Fletcher and Peters 1997; Costabile 1999).

On the grounds of exhaustive review done by Castaldo (1995), it is possible to affirm that the conceptualization of trust concept in the marketing literature has been at the beginning unidimensional. In particular, the meaning recognized to trust by some authors, both in the area of *sales management* (Swan and Nolan 1985; Swan, Trawick and Silva 1985; Hawkes, Strong and Winick 1996) and in the area of *channel management* (Schurr and Ozanne 1985; Dwyer and Oh 1987; Dwyer, Schurr and Oh 1987), reflects the first of the elements proposed in social psychology, that is to say it refers to expectations of the counterparty's behaviour and, more specifically, to the certainty that the counterparty will keep his promises (Rotter 1967). Trust has thus been defined only with reference to the dimension of "reliability", considered as probability, more o less high, that the expections of performance – tipically from a firm – are followed by actual performance lined up with the expectations.

Subsequently, other definitions of trust, as those provided by Anderson e Weitz (1989) and Anderson e Narus (1990) in the studies on distribution channels and by Crosby, Evans and Cowles (1990) in the study of the relationships between salespeople and consumers in the services sector, have emphasized some new dimensions (Castaldo 1995). The conceptualization of the construct and its dimensions is certainly one the most controversial issues in the studies about the topic. Indeed, most of authors have offered a conceptualization of the trust in terms of multidimensionality, but there is not agreement about number and nature of these dimensions.

According to some authors, for example, trust would depend on the perception that there is not opportunism from the counterparty, which would be, in its turn, reinforced by the certainty that a behaviour is intended to achieve a joint objective (goal congruence). This is the view, even if there are some other changes, of Andaleeb (1992) who, refering to channel relationships, has affirmed that trust is influenced by the party's perception about the motivations governing the other party's actions. The stronger the belief is that these motivations are debatable, or even opportunist, the more difficult it is to grant trust. The same author says that the formation of trust can be adequately explained only by taking into account another dimension: exchange partner ability, or rather the perception of that competence.

To come to the point, Andaleeb (1992), who is quoted subsequently by Fletcher and Peters (1997), suggests to conceptualize the trust of a party "A" in a party "B" by reference to two basic elements: A's perceptions of B's motivations (or intentions); and/or A's perceptions of B's ability to produce the desired outcomes. On the basis of these considerations, Andaleeb (1992) identifies a scheme for categorizing the different levels of trust that can be found in market relationships, by using two dimensions combined in different ways to form different types of trust (figure 1).

Figure 1 – Categories of trust

		ABILITY	
		High	*Low*
MOTIVES	*Positive*	Bonding trust	Hopeful trust
	Negative	Unstable trust	Distrust

Source: Andaleeb (1992)

This matrix, subsequently considered also by Busacca and Castaldo (1996), allows both to conceptualize the multidimensional nature of trust and to hypothesize different configurations of it. Indeed, it would not exist only one type of trust, but different types, which can be identified by combining the perceptions about motivations and ability of the counterparty – tipically the supplier[230].

Also Ganesan (1994), to whom more recently Doney and Cannon (1997) also refer, proposes two dimensions of trust, which are very similar to those identified by Andaleeb (1992):

a) credibility, which depends on the buyer's belief that the supplier has the required expertise to carry out his role effectively and reliability;
b) benevolence, based on the buyer's belief that the supplier acts on the basis of intentions that are beneficial to the buyer himself.

In the same point of view, finally, Castaldo (1995) and Busacca and Castaldo (1996) propose a conceptualization tri-dimensional of the construct, taking account both the dimension originally identified in the studies of social psychology, that is the predictability of the behaviour, and the dimensions identified by Andaleeb (1992): the perceptions about ability and the perceptions about motivations of the firm.

Among the authors who have proposed a multidimensional definition of trust, Moorman, Zaltman and Deshpandè (1992), in a study of the relationships between providers and users of market research, identify a cognitive and behavioural dimensions of trust. The cognitive dimension would consist of the belief in the partner's reliability (*trustworthiness*), or

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[230] When the ability of the exchange partner is expected to be high, and when the perceptions of his motivation are also positive, trust in the partner is "bonding", or "full" as it is defined by some authors (Blois 1999). When the perceptions about the partner's motivations are positive, but those about his ability to produce the desired outcomes are not favourable, this leads to the situation defined by Andaleeb (1992) as "hopeful trust", in the sense that an improvement of the ability of supplier is expected, but the commitment in the relationship is related only to the perception that there is not opportunism in the conterparty. The third category of trust is called "unstable trust", because it results from a positive perception of the other party's competencies, but negative perceptions of his motivations. In these conditions, the relationship is potentially full of conflict. When, finally, both the motivations and the competencies of the other party are perceived as negative, this creates a situation in which trust is transformed into distrust, and the termination of the relationship becomes a realistic possibility. For further details about different types of trust, besides Andaleeb (1992), see also Castaldo (1995) and Busacca and Castaldo (1996).

credibility, which comes from his motivation and knowledge – therefore taking form in the same way proposed by Andaleeb (1992) and Ganesan (1994). The behavioural dimension, instead, would concern the behavioural intention, that is the concrete act of placing trust in the partner, and this implies vulnerability and uncertainty in the trustor, the person doing trust.

Morgan and Hunt (1994) do not agree with last definition. Indeed, even though they identify two different dimensions of the construct, they hold that trust also exists in the presence of the cognitive component alone. That is, it would be enough that the buying firm believes in the honesty and reliability of the supplier firm. The behavioural intention incorporated in the willingness ("*willingness to act*") identified by Moorman, Zaltaman and Deshpandè (1992) would be implicit in the concept of trust itself. Morgan and Hunt (1994), on this point, argue that, although it might be appropriate to have items that incorporate "declared willingness" into a measure of trust, willingness is redundant to its definition: *willingness to rely* should be seen as a result (or, alternatively, as a potential indicator) of trust, and not as one of its constitutive dimensions.

The most recent marketing studies are characterized by a further development, still as regards to the discussion about multidimensionality of the construct. More specifically, recent works on the conceptualization of the trust have been dominated by two trends (Fenneteau and Guibert 1997): the first one suggests a distinction between the cognitive and affective dimensions of trust; the second one, conversely, leads to the conceptual differentiation of the concepts of *perceived trustworthiness*, that is the degree to which a subject perceives his partner as trustworthy, *trust* and *trusting behaviour*, which is the behavioural manifestation of trust.

Regarding the first tendency, researchers seem to maintain that trust is based on both knowledge (*cognition-based trust*) and feelings or emotions (*affect-based trust*) that the trustor has in dealings with the trustee (McAllister 1995). Regarding the second tendency, the contribution of Mayer, Davis and Schoorman (1995) is emblematic. They hold that perceived trustworthiness and trusting behaviour are, respectively, a determinant and a consequence of trust and, therefore, that these two concepts are distinct from trust concept itself. According the authors, the three factors that lead a subject to consider a partner trustworthy (that is the three components of trustworthiness) are: ability, which relates to the partner's competence to supply what the trustor expects; integrity, which relates to the fact that the partner is guided by principles acceptable to the trustor; benevolence, which relates to the intention of the trustee to do his best for the trustor, putting to one side his egoistic profit motives, and generally always acting in the interest of the trustor.

In the light of these distinctions, trust can be therefore defined as the willingness of one party to be vulnerable to the actions of the other party, on the basis of the expectation that the other one will carry out a particular action for the trustor, irrespective of the ability to control that party. This definition is very similar to that of Gambetta (1989), to which it adds the critical element of vulnerability. Making oneself vulnerable means taking a risk, but according to Mayer, Davis and Schoorman (1995) trust does not represent the real assumption of the risk, rather it is the willingness to assume it. The risk is only inherent in the behavioural manifestation of the willingness to be vulnerable. The difference between the willingness to assume the risk and the assumption of the risk itself sanctions the difference between trust and trusting behaviour. On the basis on what these authors hold, then, trust would be an unidimensional construct, which is strongly related with others classes of constructs: some

cognitive constructs, as the perception of ability and absence of opportunism – similarly to what Andaleeb (1992) and Ganesan (1994) have proposed – and perceptions of goal congruence in a broad sense (sharing principles); and some comportamental constructs, as behavioural intention to trust – as originally proposed by Moorman, Zaltman and Despandè (1992) – and vulnerability.

Similarly, in a study of the relationships between partners in sales alliances, Smith and Barclay (1997) consider the concepts of perceived trustworhtiness and trusting behavoiur as two distinct, but linked, dimensions of trust. These impact on the effectiveness of the relationship, that is on perceived performance objectives and reciprocal satisfaction. In particular, mutual perceived trustworthiness, which is defined as the degree to which partners have joint expectations of a fiduciary responsability in the performance of their individual roles and believe that each of them will act in the best interest of the partnership, is composed of four dimensions. The first three of these are character, role competence and motives – which can be assimilate respectively to the integrity, ability and benevolence identified by Mayer, Davis and Schoorman (1995). The fourth dimension is judgement, defined as the belief that each partner is able to apply his own knowldge to a given situation, and thus to decide and act appropriately in favour of partnership interest. Mutual trusting behaviours are the actions of both partners, that reflect a willingness to vulnerability in the face of uncertainty, and are defined by five components: relationship investment, influence acceptance, communication openess, control reduction and forbearance from opportunism. Although the relationship between mutual trustworthiness and mutual trusting behaviour is iterative from a dynamic point of view, Smith and Barclay (1997) think it is appropriate to hypothesize that the former occurs prior to the latter at any given moment.

The differentation between trust and perceived trustworthiness is of great importance from the conceptual point of view, as it leads to revise, one more, the meaning of trust and to reflecte on its development process. In relation to this aspect, the conclusions of review about trust done by Castaldo (1995) are agreeable. The most part of authors propose a definition of trust related to the perceptions of counterparty's reliability, ability and absence of opportunism. Nevertheless, it is also quite recurrent the distinction between cognitive dimensions, always related to the above components, and comportamental or emotive dimensions.

In this sense, then, the problem is still open, taking account that the distinction between different dimensions of trust has not conceptualized yet enough, nor supported significantly by researches or experiments which can do definitely evidence of it[231].

Similar problems, in terms of incomplete evolution of studies about the topic, concern the exam of trust's origins and effects. For management purposes, besides, the analysis of determinants of trust is more important. The results of this analysis, in fact, would allow to identify the factors on which investiments should be made in order to increase business resources and, thus, the competitive capacity of the firm; similarly, the analysis of

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[231] Taking account only the cognitive dimension, it is possible to observe, for example, that perceived reliability, conceptualized by some authors as one of the different dimensions of trust, is mainly due to the satisfation accumulated from previous interactions between parties, and is evaluated, in its turn, with respect to two dimensions: the ability to perform the obligations and, in achieving them, the motivation to behave in a non-opportunist way. It can be hyphotized, then, that the perceptions refered to the ability and to the lack of opportunism of the counterparty impact on the expectations and perception of reliability, but do not belong directly to the domain of trust concept.

consequences would allow to evaluate the role of trust in the context of relational activities (Castaldo 1994; Costabile 1999), and thus its value in the process of increasing the firm's intangible assets (Busacca 1994). The figure 2 shows the factors most frequently identified as determinants and consequences of trust, which are drawn from Castaldo (1995).

Figure 2 – The antecedents and consequences of trust in market relations
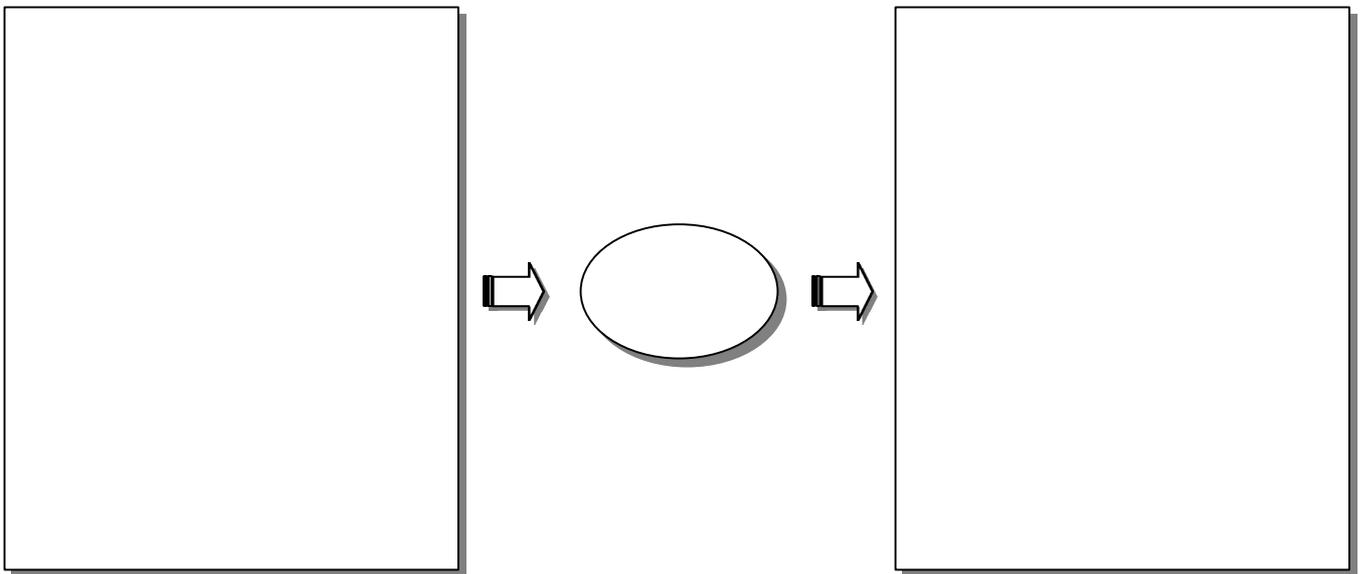
Source: adapted from Castaldo (1995)

Although the figure 2 gives a wide picture of the variables identified as determinants and consequences of trust by numerous empirical studies and previous review about this topic (Castaldo 1995; Blois 1999), several controversies can be found in marketing literature. Generally, these can be lead to the different meaning recognized to trust construct and, consequently, to the distinction between determinants and consequences. Many authors have defined trust with elements that others, instead, have considered as its determinants. At the same time, there are determinants intended as consequences by some authors and both as determinants and consequences by others.

Generally speaking, the antecedents and consequences variables can be related to the communication and interaction processes, to the structural elements of relationshp and to the personal factors of the exchange actors.

Among these antecedents, still as regards to the study of Castaldo (1995), it can be found: personal characteristics of the partner, such as honesty, sincerity, moral integrity, frankness, emphaty, reliability and affinity with trustor (Swan and Nolan 1985; Swan, Trawick and Silva 1985; Moorman, Deshpandè and Zaltman 1993; Doney and Cannon 1997); transaction specific investments (Ganesan 1994); similarity between the partners (Crosby, Evans and Cowles 1990) and shared values which the partners pursue (Morgan and Hunt 1994); goal congruence (Anderson and Weitz 1989); reputation (Anderson and Weitz 1989; Ganesan 1994; Doney and Cannon 1997); partners' organizational structure and culture and characteristics of the transaction object, in particular its degree of complexity and difficulty of expressing certain evaluations of its qualitative level (Moorman, Desphandè and Zaltaman 1993).

Among the consequences of trust, many variables have been also discovered: *commitment*, in the sense of the lasting effort that individuals make to maintain a relationship (Moorman, Zaltman and Desphandè 1992; Morgan and Hunt 1994; Ganesan 1994; Geyskens et al. 1996; Nielson 1998); the level of conflict (Anderson and Narus 1990; Morgan and Hunt 1994); non-coercive power (Morgan and Hunt 1994); greater probability of allocating resources in favour of subjects who are trusted (Anderson, Lodish and Weitz 1987; Nielson 1998); reduction of transactions costs (Zaheer and Venkatraman 1995; Cummings and Bromiley 1996); greater ease in persuading or influencing the partner (Swan and Nolan 1985; Swan, Trawick and Silva 1985) and consequently greater sales (Crosby, Evans and Cowles 1990; Dion, Easterling and Miller 1995; Dahlstrom and Nygaard 1995; Kumar 1996; Doney and Cannon 1997); in general, facilitation of collaborative behaviour and continuity of the relationship (Anderson and Weitz 1989; Crosby, Evans and Cowles 1990; Ganesan 1994; Mohr and Speckman 1994; Kumar 1996).

Nevertheless, as previously seen, the results of the studies and researches present some controversial issues with reference to some types of antecedents and consequences, mainly because of the ambiguity of their roles (cause and effect) and the objective difficulty of classifying them. These ambiguities come from the existence of circular causal links and concern quite always crucial factors in defining the construct and its main causal links. For example, some authors have proposed to consider the ability and the motivation of a subject as antecedents of trust (Swan and Nolan 1985; Swan, Trawick and Silva 1985; Crosby, Evans and Cowles 1990; Moorman, Deshpandè and Zaltman1993; Morgan and Hunt 1994; Selnes 1998). These elements have been, instead, considered as components of trust by Andaleeb (1992), Ganesan (1994), Busacca and Castaldo (1996), Doney and Cannon (1997), Fletcher and Peter (1997).

The problems of identifing the determinants of trust are connected to the effects that it produce, in a retroactive way, on the determinants themselves. The discussion about categorization of some variables which interact with trust as determinants or consequences is still open, but it will not matter if it is carried out from a dynamic viewpoint, that is refered to the evolutive path of trust relationship. The finding of an element as determinant or consequence of trust is, in fact, the result of the causal circularity of relationships, and this can be examined only by taking on a dynamic perspective. The level of satistaction generated in the relationship, the quality of communication between parties, the propensity to cooperate, the reputation, are all elements which can emerge as determinants or consequences at a given point in the time, but can have – in a presumible way – a prevailing role of antecedentens or a preaviling role of consequences in the dynamic process of trust development.

As intuition suggests, for example, from a static viewpoint satisfaction feeds trust, not vice versa[232]. Nevertheless, when the relationship develops, an high trust stock can affect the quality and quantity of communication between parties, and consequently the understanding of customer expectations, and the correct formation of expected performance that the firm can offer. Then, in a dynamic prospective, trust affect satisfaction, by means of communication variable.

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[232] The opposite relationship may be found in presence of faith rather than trust. About the distinction between the concepts of faith and trust, see Luhmann and Hart, which are the authors of two papers in Gambetta (1989), and Castaldo (1995)

Because of the same reasons of perspective, other ambiguous variables are communication and reputation. With reference to the first, many authors believe that trust is a substitute of information (Vicari 1991; Castaldo 1995), and consider it as an element that makes the communication timely, credible, and so more effective. In these cases, communication would be considered a consequence of trust and not an antecedent (Dwyer, Schurr and Oh 1987; Morh and Nevin 1990). Other studies, however, have intended communication as a determinant of trust (Anderson, Lodish and Weitz 1987; Morgan and Hunt 1994; Selnes 1998). As said before, an effective communication contributes to define with clearness the expected performance, thus increasing the probability that satisfactory transactions happen, and reinforcing in this way satisfaction and trust. In practice, the communication can be considered as an antecedent of trust only when the phenomenon is seen from a static viewpoint; in dynamic terms, however, it is required to hypothesize a circular and recurrent relationship between communication and trust (Anderson and Weitz 1989; Anderson and Narus 1990), that, nevertheless, at the beginning of the relationship, is based on the role of antecedent of the communication on trust.

Finally, the same evolutive path can be hypothesized with reference to the relationship between reputation and trust. Reputation is certainly a determinant of trust, but it is equally certain that it is one of its main consequences, which become again determinants to make active new trust relationships. The problem of the circularity of causal links, in short, would seem to be capable of solution only by clarifying a priori the analytical perspective that is intended to be pursued: static or dynamic, relating to one dyadic relationship or to all the market relationships that firm develops. Although there is general agreement that trust is a process that develops over time, most of the studies designed at understanding the determinants of the phenomenon have not esplicity considered the temporal element (Morgan and Hunt 1994; Smith and Barclay 1997), or have evaluated time through a synthetical variable (stock) such as the length of the relationship, or past experience (Swan and Nolan 1985; Anderson and Weitz 1989; Ganesan 1994; Doney and Cannon 1997). This has certainly fed the confusion between the antecedents and consequences of trust[233].

The problem of the development of trust over time puts two questions that inevitably overlap: on one hand, that of the stages of trust development; on the other hand, that of the role of trust in the different stages of relationship development, and thus the various "types"of trust (Andaleeb 1992; Guibert 1998). In both cases, the conceptualization and the empirical studies allow to assume that different elements can be important in the formation of trust at different stages of the relationship development: the strength and nature of determinants change over time[234]. This perspective would explain why some elements have been found important in some studies, but not in others. Not all relationships are at the same stage of development, and some may not have reached the level of maturity necessary for full trust (Andaleeb 1992; Costabile 1999).

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[233] Most of the studies on trust try to test the validity of causal models using transversal data (cross-sectional design); in order to examine the direction of causal links between variables, however, the use of longitudinal designs would be required.

[234] In this regard, Andaleeb (1992) proposes a model of *trust continuum*, after took again by Busacca and Castaldo (1996); Costabile (1999) proposes the model of *relational trust*, in which trust has a fundamental role in the development of relationship.

3. Approaches and methodologies for the measurement of trust: a review

The progress of marketing knowledge and of exchange processes management depends largely on the development of valid and reliable measures of the variables and constructs involved in these processes (Churchill 1979). It is possible to formulate original theories and to propose management models particularly effective, but without the adequate measurement of the constructs and variables which characterize the phenomenon examined, there is the risk that knowledge produced cannot be generalized, and then diffused, both in the academic and business context.

Generally speaking, the measurement is influenced by the particular nature of many marketing phenomenon, where the variables of greater importance are often latent, that is they are theoretical constructs which cannot be observed, and thus they are not directly measurable; what are generally measurable, however, are some specific variables linked to the underlying theoretical concept, and caused by it (for this reason these specific variables are assumed as indicators of the latent variable). It is from this point that fundamental questions arise about the links between the indicators used – the observed variables – and the latent variables, that is about the underlying constructs; in other word, questions about the validity and reliability of measurements, the first being their capacity to express effectively those theoretical concepts, and the second being to do so with stability in measurements repeated over time (Corbetta 1992)[235].

The measurement of marketing constructs, then, is the process of linking abstract concepts to empirical indicators, which is aimed to meet two fundamental psychometric properties of the resultant measures: reliability and validity. There are different types of reliability and validity that are important in the social sciences. Regarding reliability, a distinction has to be made between *internal consistency*, which relates to the degree of agreement between two or more measures of the same theoretical concept obtained at the same time, and *stability*, which relates to the consistency over time of repeated measures of the same concept. Regarding validity, it should be remembered: *face* or *content validity*, that indicates the extent to which the domain of the concept is captured by the measure; *construct validity*, consisting of *convergent* and *discriminant validity*, the first of which is the extent to which a measure is correlated with the measures of the same concept, and the second is the extent to which the measure is distinct from measures of differents concepts; there is also *nomological validity* which, by relating the measure of a concept to a theoretical model, consists of the confirmation of the hypothesized relationships (Carmines and Zeller 1979; Corbetta 1992; Bagozzi 1994a; Bayle 1995).

Marketing scholars have used different approaches and methodologies to measure the construct of trust. Generally speaking, the methodological path followed by most of them starts with the identification of the variables of operationalization, goes on with the

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[235] Technically, the process of measurement involves "rules for assigning numbers to objects in order to represent quantities of attributes" (Nunnally 1967). Typically, measurement produces an observed score (X_O) that does not coincide with the true score (X_T), due to the presence of errors that can be random (X_R) or systematic (X_S). Considering therefore the relationship:

$$X_O = X_T + X_S + X_R$$

it will be said that a measure is valid when it allows for the exact measurement of what is intended to measure, that is when $X_S = X_R = 0$; it is reliable when it allows for the same results to be obtained in repeated measurements of the same concept, that is when $X_R = 0$. The fundamental objective of the measurement process is to produce an observed score that is as close as possible to the true score, and thus to obtain a measurement that is as reliable and valid possible. The reliability represents a condition necessary but not enough to have valid measures, and it can only provides negative evidence of the validity of a measure.

development of a set of items, establishing an adequate measurement scale, and then provides for the evalution of reliability and validity (convergent and discriminant) of the scale that has been defined (figure 3). However, the ways of operationalization, the techniques applied and, often, the results achieved vary considerably from one author to another.

By the light of these considerations, and of the increasing needs of trust management models in market relationships, a review of methods for the measurement of trust in marketing studies has been considered having the right of priority, trying to emphasize peculiarities, benefits and limits of them. This is done in order to identify the methodological paths which are suitable for evaluate the role of trust, its process of generation and growth over time and, all things considered, the more important variables for management purposes.

This review of the measurement of trust divides the different works on the basis of the exchange context studied: distribution channels (table 2), sales management (table 3), and relationships with final consumers (table 4). Regarding each author, the following are shown for each context: the definition of the concept of trust, the research design, the variables of operationalization (or the trust components that have been identified), the number and types of items used, the measurement scales, the methods of data analysis, and the main results achieved. Consistently with the logical path underlying the different stages of the measurement, the studies reviewed will be commented in terms of the operazionalization process, the measurement techniques and the results; besides, in order to show the advantages or limits found in the methodological approaches described and draw useful guidelines for future research on this topic, a transversal analysis will be proposed.

Figure 3 - The process of measurement
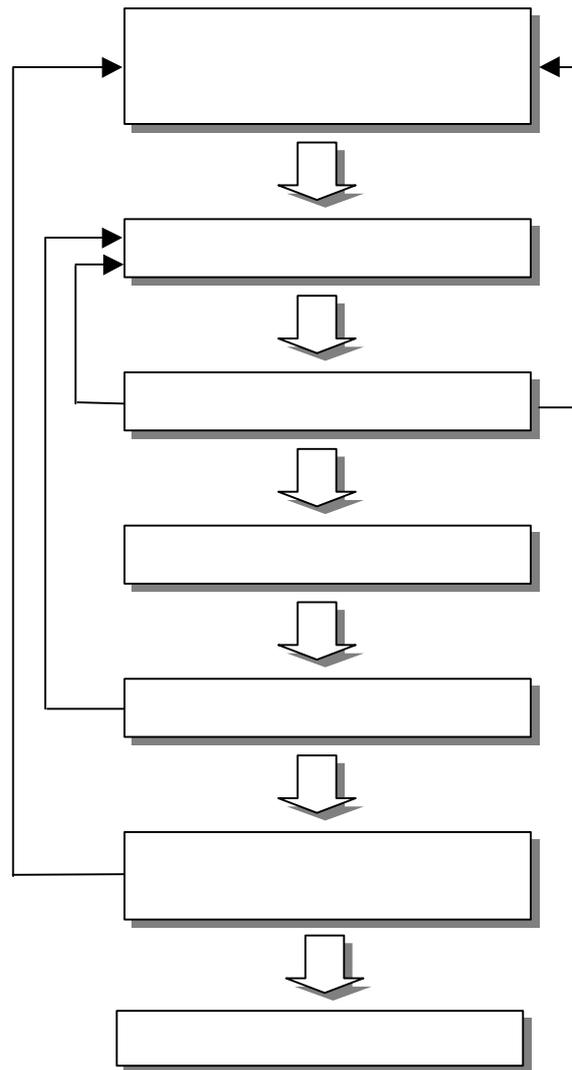
Source: adapted from Churchill (1979)

The process of operationalization: from definition of the construct to the choice of the scale

The need to illustrate the definition of trust used by each author arises from the fact that the first step in developing good measures of marketing constructs is the conceptual specification of the construct itself, aimed to exactly delineate what is included and what is excluded from its domain. This step leads to the determination of the construct dimensionality, that is the definition of the dimension or dimensions that form it, and thus its variables of operationalization.

As previously underlined, trust has been conceptualized by some authors as a unidimensional construct. In particular, among the articles reviewed, the definition proposed has emphasized the "reliability" facet in some cases (Mohr and Spekman 1994; Selnes 1998) and the "motivation" facet in others (Anderson and Weitz 1989; Anderson and Narus 1990; Crosby, Evans and Cowles 1990; Zaheer and Venkatraman 1995). The scholars that, on the contrary, have identified two dimensions of trust, both cognitive, are Ganesan (1994), Geyskens et al. (1996) and Doney and Cannon (1997). These authors argue that trust should be evaluated by

reference to the "benevolence" and "credibility" of the partner. Besides, Fletcher and Peters (1997), similarly to Andaleeb (1992), refer to the "ability" and "motivation" dimensions.

Ganesan (1994) shows that the two dimensions defining trust are validated by a confirmatory factor analyisis. Also Geyskens et al. 1996 maintain that the correlation coefficient between "benevolence" and "honesty/credibility" is signifcantly less than 1 (p<0.0001), thus supporting the discriminant validity of the two factors.

Doney and Cannon (1997) show, however, that the two underlying dimensions of trust are highly correlated. Although they may be conceptually distinct, "credibility" and "benevolence" are linked – above all in inter-organizational relationships - in such a way as to be inseparable in practice. The two authors consider that for this reason trust is a unidimensional construct, even if the final measure of trust includes items that cover both "credibility" and "benevolence".

Finally, in the study of Fletcher and Peters (1997), the indicator "integrity", used to measure the "motivation" component, presents a high correlation with the indicators "equity" and "maintain the promises", used to measure the "ability" component, thus showing a low discriminant validity of the two dimensions[236].

The results of the studies of Moormann, Deshpandè and Zaltman (1992) and Rich (1997)[237], on the contrary, support the multidimensional nature of trust, but they identify a cognitive dimension (*belief*) and a behavioural dimension (*behavioural intention*). However, in the process of operationalization, they do not take account of the differentiation introduced to the conceptual level, although the items used in the scale seek to cover both aspects. The same approach has been recently followed by Zaheer, McEvily and Perrone (1998), who distinguish "reliability", "predictability" and "fairness", and by Morgan and Hunt (1994), according whom trust should be evaluated on the counterparty's "reliability" and "integrity": in both cases, the authors develop only one *multi-item* scale of measurement, even though the cognitive dimensions identified have been conceptually separated.

The following works also need to be mentioned. Smith and Barclay (1997) conceptualise trust in terms of *mutual perceived trustworthiness* and *mutual trusting behaviour* (operationalized respectively by four and five *multi-item* indicators). As said before, however, they would not concern two dimensions of the same construct (trust), but they would be two distinct concepts: as speficied by the same authors, the first is an antecedent of the second in a given point in the time. Also McAllister (1995)[238] defines the cognitive dimension (*cognition-based trust*) and the affective dimension (*affective-based trust*) of trust and hyphotesizes a causal link from the former to the latter.

In line with the approach that has generally been used in marketing studies (Churchill, 1979), the operazionalization variables of trust have been measured through *multi-item* scale (metric scale). The only studies in which trust has been evaluated through a *single-item* are those of

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[236]As the elimination of this indicator from measurement scale causes a strong fall of the Cronbach alpha – for a short description of this coefficient see note n.12 of this work – it is retained in the causal analysis to preserve face validity and reliability.

[237] The study of Rich (1997) is important in the conceptualization/operazionalization of trust; nevertheless, it has been done in a intra-organizational context, so it is not shown in the final tables.

[238] For the same reason stated in the previuos note towards Rich (1997), the work of McAllister (1995) is mentioned, but not reported in the final synoptics.

Mitchell, Reast and Lynch (1998) and Selnes (1998). The latter in particular emphasizes that, although marketing research into perceived construct seems to be directed towards *multi-item* scales, trust can be measured by a single item as it is a unidimensional construct that is directly accessible to respondents. More specifically, its criticisme is directed towards the *multi-item* scale used by Morgan and Hunt (1994). These authors use "reliability", "integrity" and "confidence" as a measure of trust, while Selnes (1998) argues that these are antecedents of trust, and as such cannot be part of the construct.

Apart from these two works (Mitchell, Reast and Lynch, 1998; Selnes, 1998), a central feature of the trust operazionalization process is thus the generation of items aimed to measure one or more components of the construct. In most studies, these items come from a review of the literature, from the results of previous research (adapted to the specific field of study), and from other exploratory surveys (expert opinion, *focus group* etc). The list of items that have been defined must satisfy face validity and is further purified using the results of pre-test arranged before the administration of the measurement tool (for the most part a questionnaire).

The measurement techniques
The statistical procedures used in order to purify the multi-item scale (battery of items) are usually exploratory factor analysis, item-to-total correlation and Cronbach alpha coefficient[239] (Moorman, Zaltman and Despandè 1992; Moorman, Deshpandè and Zaltman 1993; Ganesan 1994; Mohr and Spekman 1994; Dahlstrom and Nygaard 1995; Doney and Cannon 1997; Nielson 1998). These procedures are carried out through an iterative process aimed to obtain solutions more and more satisfactory, leading to the elimination of those items that do not belong to the domain of the construct and providing an assessment of the unidimensionality of the measurement scale. The concept of unidimensionality is one of the most important assumptions of measurement and it can be defined as the existence of only one construct underlying a set of items[240].

These statistical analyses are often used, only or additionally, to evaluate the convergent and discriminant validity of the measures in the next stage of data collection. In this case, after validating the measures, the test of the hypothesized causal relationships among variables is carried out through multiple regression analysis (Moorman, Deshpandè and Zaltman 1993; Mohr and Spekman 1994; Dahlstrom and Nygaard 1995; Geyskens et al. 1996). The results obtained are sometimes used as inputs for a path analysis, an analytic method involving the decomposition of linear relationships (direct and indirect) among a set of variables (Moorman, Zaltman and Despandè 1992; Fletcher and Peters 1997).

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[239] Exploratory factor analysis is used when the researcher does not have hypotheses about either the number of factors or the links between factors and observed variables. It thus allows for a first examine of the factor structure underlying the construct. Items with high factor loadings (>0.40) and those that are not correlated with more than one factor (cross-loadings <0.25) are retained in the scale.
Item-to-total correlation consists of calculating the correlation coefficient between the assigned score for each individual item and the total score of the test, obtained as the sum of scores assigned to each item. The items with correlation close to zero (<0.35) are deleted from the scale.
The Cronbach alpha coefficient is an indicator of the reliability of a measure based on its internal consistency, and it varies between 0 and 1: increasing its value, the reliability of the measurement scale also increases. Alpha values >0.60 are often held to be acceptable above all for the early stage of research, although values >0.70 are to be considered preferable. If the construct is multidimensional, the alpha coefficient has to be calculated for each dimension.
[240] If the construct is multidimensional, the unidimensionality is refered to each component.

With reference to the measurement process adopted, Anderson and Weitz (1987) and Zaheer and Venkatraman (1995) have not used factorial/multivariate methods, but they have only proposed the correlation matrix between trust and the other constructs which interrelate with it. Then, these authors have tested the hypothesized theoretical model applying, respectively, a system of equations estimated via three-stage least squares (3SLS), which combines consistency of estimates and efficiency, and a hierarchical regression analysis, which allows to assess the variation in the statistical significance of the model after the introduction of a new variable.

The analytical process followed by other authors (Anderson and Narus 1990; Crosby, Evans and Cowles 1990; Ganesan 1994; Morgan and Hunt 1994; McAllister 1995; Rich 1997; Nielson 1998; Zaheer, McEvily and Perrone 1998) is, however, based on the two-step procedure indicated by Anderson and Gerbing (1988). This provides for the use of structural equations models according to *Lisrel* approach[241]. In this procedure the validity of the construct is evaluated by estimating, and redifining, the measurement model, this being designed to specify how each of the latent variables is operazionalized through the observed variables. This is done before testing the structural model, which is designed to specify the causal relationships among the latent variables (Long 1983; Corbetta 1992; Bagozzi 1994b). Therefore, Confirmatory Factor Analysis (from now on *CFA*) is first used to validate the factor structure that emerged in the previous exploratory stage, or that was simply hypothesized to the conceptual level: in this way the adequacy of the measurement model is examined, and then the reliability and convergent and discriminant validity of the measurement is determined. After this, the structural model is estimated in order to test the causal relationships among theoretical constructs, at the same time providing an evaluation of the nomological validity[242].

In the last ten years, the use of *Lisrel* models in the marketing studies, particularly in the consumer behaviour research, has grown significantly, also for the development and diffusion of specialized and user-friendly computer software.

The structural equations models using *Lisrel* approach brings together the methodological contributions from two disciplines: psychometrics and econometrics. The notion of the latent variable and confirmatory factor analysis comes from the former; and the concept of a network of causal relationships among variables comes from the latter. This makes for a full response to the two most significant problems that the researcher has to face: that of measurement, or rather the determination of the existing connections between the empirical indicators and the underlying theoretical concepts, and that of causality, or rather empirical verification of the causal links among variables that have been hypothetically formulated at conceptual level.

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[241] The term *Lisrel* is the acronym of *Li*near *S*tructural *Rel*ationship. This came into existence as the name of software designed by Jöreskog and Sörbom, and is now used to indicate a statistical model and approach to SEMs (*Structural Equation Models*) analysis.

[242] *Lisre*l analysis is mainly a confimatory analysis, that is aimed to determine how the hyphotesized structure between latent variables and between each latent variable and its indicators is actually consistent – and so confirmed – with empirical data. This is done through compute of covariance matrix implied by specified model and its comparison with actual covariance matrix based on empirical data (Diamantipolous, 1994).

As an exception, Doney and Cannon (1997) and Smith and Barclay (1997) have used *Lisrel* in a preliminary analysis to examine the reliability and validity of the measures. Then, Doney and Cannon (1997) have estimated a system of equations using three-stage least squares; Smith and Barclay (1997) have evaluated structural model using PLS (Partial Least Squares) as they argue that this algorithm is more appropriate when the sample size is limited and the measures are not well established yet.

Combining the psychometric and structural analysis, the *Lisrel* approach allows to study the structure of causal relationships (direct and indirect) among a set of latent variables, each of which is measured by means of one or more empirical indicators that are typically assumed to be affected by measurement error. Assuming that a latent variable causes the observed variable or variables that represents its indicators, the measurement error includes all the other factors (random and systematic), different from the underlying theoretical construct, which act on the observed variables and invalidate measurement reliability and validity. As in the factor model, the *Lisrel* approach takes account of this error. Further, it also takes into consideration, as in the structural equations borrowed by econometrics, the error in the equation, which indicates that the latent variables hypothesized to be dependent are not perfectly explained by the latent variables hypothesized to be indipendent (Long 1983; Diamantopoulos 1994). This potentiality of the *Lisrel* approach is its main advantage compared to traditional statistical procedures, such as multiple regression analysis, and it is also the feature of greatest interest for typical social science problems[243].

Summing up, data analysis techniques used to measure trust has been very different. As seen up to now, some researchers have applied traditional methods, said "first-generation" methods, as alpha coefficient, exploratory factor analysis and bivariate correlation; others researchers, instead, have used structural equations models with *Lisrel* approach, often called "second-generation" methods of multivariate analysis.

Both of these classes of techniques can offer considerable contributions to the validation process of the marketing constructs, but they present also some limits. The traditional methods are simple to understand and to apply and do not require sophisticated computer programs. In substance, they allow a preliminary exploration of data at hand. Nevertheless, for more complex problems and models, the usefulness of these simple procedures appears strongly limited and, therefore, they require to be integrate with more powerful and versatile techniques as the analysis of covariance structures.

Basically, the main benefits offered by *Lisrel* models compared with traditional methods consist of the opportunity (Steenkamp and van Trijp 1991; Hulland, Chow and Lam 1996):
a) of specifying the relationships between a theoretical construct (latent variable) and its measures;

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[243] As evidence of its double nature, the *Lisrel* model is made up of two parts, as said previously: the measurement model and the structural model. The formulation and testing of hypotheses associated with both models follow a multi-step procedure: the conceptual specification of the hypotheses of the model, the construction of a path diagram that illustrates these hyphoteses grafically; the formal specification of the model that describes the nature and number of parameters to be estimated; the identification of the model, designed to ascertain that it is mathematically soluble; the estimation of parameters; the assessment of model fit, aimed at evaluating the quality of the measurement model and the solidity of the structural model; the modification of the model, in the light of the results obtained in previous step; the cross-validation of the model with a new set of data (Diamantopoulos 1994). The estimate, the assessment and modification of the measurement model can be carried out before (*two-step approach*) or at the same time (*one-step approach*) as the structural model. As already shown, scholars working in the field of trust mesurement have generally opted for the former solution, on the basis of the consideration that a good measurement of the latent variables is the prerequisite for analysing the causal relationships among the latent variables themselves (Anderson and Gerbing 1988). On this point, however, there are also some different opinions, according whom the two-step approach assumes that theory and data are indipendent; in practice, instead, it is not possible to separate the measurement from theory as the constructs draw their meaning both from others constructs in the same theoretical model and their correspondent indicators.

b) of analysing the relationships (direct and indirect) among the theoretical constructs without the bias caused by measuremetn error;

c) of constructing and testing both theory and data[244].

In general, in comparison with a classical approach that provides for the separate use of models and techniques that have an autonomous and non-communicating existence, the *Lisrel* approach is innovative, its caracteristic being its generality and completeness. It makes a notable contribution to the development of theory and its use in explaining, predicting and controling a given phenomenon (Bagozzi 1994b).

Although the potential benefits of *Lisrel* approach for understanding of both theoretical and methodological issues of research have been widely acknowledged (Anderson and Gerbing 1988; Steenkamp and van Trijp 1991; Bagozzi 1994b), the validity of the results could be compromised if the statistical assumptions required by this methodology and evaluative standards proposed by the experts, higher than those used in classical analysis, are not respected. In fact, in order to obtain an actual benefit from the application of Lisrel, the researcher should use it correctly with reference to initial specification of theoretical model before data collection; to data screening before to model estimation and testing; and finally to the model estimation and testing on empirical data (Baumgartner and Homburg 1996).

The results of the measurement
The results of trust measurement in the marketing studies reviewed can be analyzed on the basis of the two properties defining the quality of a measurement process: reliability and validity.

With reference to the reliability, the authors that have operazionalized trust with a *multi-item* scale have evaluated its internal consistency through coefficient alpha: in all cases, the values obtained have been above the commonly used thresold of 0.70. The studies reviewed have not assessed the stability of the measures through the comparison of the results over time.

With reference to the convergent and discriminant validity, it is possible to note that the measures used by the authors experiencing the measurement of trust have not met these requirements in all cases.

In particular, Anderson and Weitz (1989) prove that the distinction between trust, on one hand, and perceived competence and goal congruence, on the other hand, is not clear: indeed, the correlation coefficients between these concepts are, respectively, 0.51 and 0.69. Mohr and Spekman (1994), instead, notice that an item comprised in the measurement scale of the "coordination" construct is highly correlated with trust; this item is retained, but this result invalidates the discriminat validity of trust[245].

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[244] Traditional approaches, such as ANOVA, regression analysis and factor analysis, can also be used to combine theory and data; in this case, however, theoretical model and data are examined sequentially rather simultaneously. Besides, the use of multiple indicators in *Lisrel*'s causal analysis allows for more direct information to be obtained about reliability and validity of the measures. To come to the point, the structural equations models allow a full and simulataneous examination of a given nomological network, while traditional techniques allow a partial and sequential examination of it (Hulland, Chow and Lam 1996).

[245] In the study performed by Dahlstrom and Nygaard (1995) in Germany, an item aimed to measure trust loads more highly on "centralization"construct than on "trust" construct; however, this item is retained to maintain face validity and to use an equivalent set of measures in all the countries where the research has been conducted.

Finally, Zaheer and Venkatraman (1995) show that the correlation coefficient between trust and the other constructs of the model are low and statistically significant, thus supporting discriminant validity of trust. Also Moorman, Zaltman and Deshpandè (1992) and Moorman, Deshpandè and Zaltman (1993) have obtained good perfomance: through the iteration of item-to-total correlation and factor analysis, they have eliminated the items which do not belong to the domain of the construct and have shown the convergent and discriminant validity of their measurement scale of trust.

The quality of trust's measurement model has been generally high in the studies supported by structural equations models with *Lisrel* approach; in particular, in those studies that have used the *CFA* procedure.

The assessment of the trust's measurement model comes at first from the goodness of fit of the model itself. This involves mostly the use of the "chi-square value", along with the corresponding "p-value",[246]. Model fit has been also assessed, however, with other fit measures, such as GFI (*Goodness-of-fit*), AGFI (*Adjusted-goodness-of-fit*), CFI (*Comparative-fit-index*) and TLI (*Tucker and Lewis index*): these indices range from 1 (when the estimated model reproduces exactly the empirical data) to 0 (when there is no fit). Besides, the measure RMS (*Root mean square residual*), for which the value of 0 indicates the perfect fit, has been used.

Many measurements models of trust have reached good values (Anderson and Narus, 1990; Crosby, Evans and Cowles 1990; Ganesan 1994; McAllister 1995; Doney and Cannon 1997, Rich 1997; Nielson 1998) and, thus, have been considered a good reproduction of the data, and so of the empirical reality at hand.

As well as on the basis of goodness of fit, the adequacy of measurement of trust construct has been assessed in these studies by some additional indicators (composite reliability, percentage variance extracted, parameters estimates, residuals etc.), that provide more direct information about reliability and convergent and discriminant validity of the measures developed.

Besides the coefficient alpha (cfr. note 12), reliability has been proved through both item-level and composite-level (that is for the set of items used jointly to measure a construct) analyses. In fact, the values of the indices used have been generally high, achieving or exceeding the recommended level of 0.70 (Crosby, Evans and Cowles 1990; Morgan and Hunt 1994; Smith and Barclay 1997; Rich 1997; Nielson 1998).

Convergent and discriminant validity has been differently proved by the authors using *Lisrel* approach. In particular, convergent validity has been supported by demonstrating that:
1. all items aimed to measure trust load highly on their hyphotesized factor, with no high cross-loadings (Crosby, Evans and Cowles 1990; Rich 1997; Doney and Cannon 1997);
2. the factor loadings are all statistically significant (p<.01) (Crosby, Evans and Cowles 1990; Rich 1997; Doney and Cannon 1997);

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[246] This is the most popular index for assessing the overall goodness of fit of a model. The model is deemed satisfactory if the chi-square value is not too large, since in this case the null hypothesis of a good fit cannot be rejected. Except for the study of Crosby, Evans and Cowles (1990), the chi-square values have not been acceptable for measurement models assessed in many studies on trust (Anderson and Narus 1990; Ganesan 1994; Morgan and Hunt 1994; McAllister 1995; Doney and Cannon 1997; Rich 1997; Nielson 1998). Such result, however, has not been considered an indicator of poor fit, because this index is heavily influenced by the violations of assumption of data multivariate normality and by sample size.

3. the average variance extracted from the items by trust construct is above 0.50, thus showing that the variance captured by the underlying trust construct is greater than variance due to the measurement error (Rich 1997; Smith and Barclay 1997).

Discriminant validity has been supported by demonstrating that:
1. all items aimed to measure trust load higher on intended factor than on others (Doney and Cannon 1997; Smith and Barclay 1997);
2. constraining the correlation coefficient between each pair of constructs, one at a time, to be equal to 1, the correlations among the latent construct are significantly less than 1 (McAllister 1995; Rich 1997; Doney and Cannon 1997; Zaheer, McEvily and Perrone 1998);
3. the average variance extracted by trust construct's items is greater than the trust construct's shared variance with every other construct (equal to the square of correlation coefficient) (Rich 1997; Smith and Barclay 1997; Nielson 1998).

Some works particularly interesting assess convergent and discriminant validity following a multi-methods approach. In particular, Smith and Barclay (1997) have developed some indicators defining trust using both relationship-level and aggregate individual-level items; so, for these measures, construct validity has been also demonstrated through multi-methods convergence, as the different types of measures have shown consistent loadings.

Anderson and Narus (1990), for example, have used a multi-informants research design. In fact, in their study, the unity of analysis is the firm, represented by two informants. Before estimating both measurement and structural models, the authors have verified a model which specifies the functional relationships between measurements taken from two informants and their corresponding constructs; so, after many respecifications, they have provided a positive assessment of perceptual agreement between multiple informants. At the same way, Zaheer, McEvily and Perrone (1998) have supported convergent validity using multiple informants as multiple methods.

Although the results obtained using *Lisrel* are on the whole positive, and offer a greater informative value than other approaches when the conceptualization of trust is multidimensional, in some cases the measurement model of trust initially specified has not been adequate and, then, has been modified to obtain acceptable goodness of fit statistics (Anderson and Narus 1990; Smith and Barclay 1997). In particular, Smith and Barclay (1997) have performed a detailed preliminary analyisis with *Lisrel* before obtaining good results from measurement model estimated with PLS. In such preliminary analysis, the authors have initially found a poor model fit. This has been subsequently (and considerably) improved through detection of items with high cross-loadings, which invalidated the convergent and discriminant validity of the constructs. Many of these items were refered to questions relationship-level that implicitly ask respondents to reflect on own and partners' belief, and therefore lead to the cross-loadings; others cross-loadings came from conceptual overlap of the constructs.

The methodological approaches for the measurement of trust: a comparison
After describing the process of operazionalization, the techniques of data analysis and the results of the trust measurement, it is possible to compare the studies reviewed. Consistently to the objective of this paper, indeed, this would allow to draw some critical issues in trust measurement. Figure 4 shows the main results of this comparison.

The disagreement about the number and nature of trust dimensions implies the use of different measurement scales and items aimed to measure these dimensions.

In this regard, firstly it is possible to note that a single item should not be used in measuring trust; in fact, this does not allow to cover adequately the domain of trust, even though the meaning of the construct is recognized to be homogeneous (unidimensionality of latent variable), that is convergent on "reliability" dimension or "motivation" dimension. In all cases, the use of multi-item scale should be prefered. The multi-item scales, indeed, allow to capture the meaning of the construct on the whole, to take account the subjects' variability and to reduce random errors, thus increasing the scale reliability (Churchill, 1979).

Secondly, if the conceptualization of trust is multidimensional, the measurement scale should be formed by as many sub-scales (each multi-item) as the components are. This has not always been the case in the studies reviewed: in fact, in some studies, trust has been conceptualized as multidimensional, but it has been measured using one scale.

Finally, the content of each item in the scale (or sub-scales) should reflect the construct of interest. In the studies reviewed, sometimes, the items included in the measurement scale of trust do not reflect fully the facet emphasized in the definition. In particular, the items "keeps the promise" and "is trustworhty" are present (and found valid) in almost all scales.

As regards to the techniques of data analysis, the results obtained using Lisrel seem to be better than the others. This does not mean that the traditional methods (not structural) are not useful to examine the various aspects of construct validity, but it does mean that these methods should be used correcly and integrated in an apprpriate way with more critical and detailed analysis by Lisrel[247].

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[247] It is important to note, however, that Lisrel and traditional approaches can lead to results which are not very different.

Figure 4 The approaches for the measurement of trust: a comparison
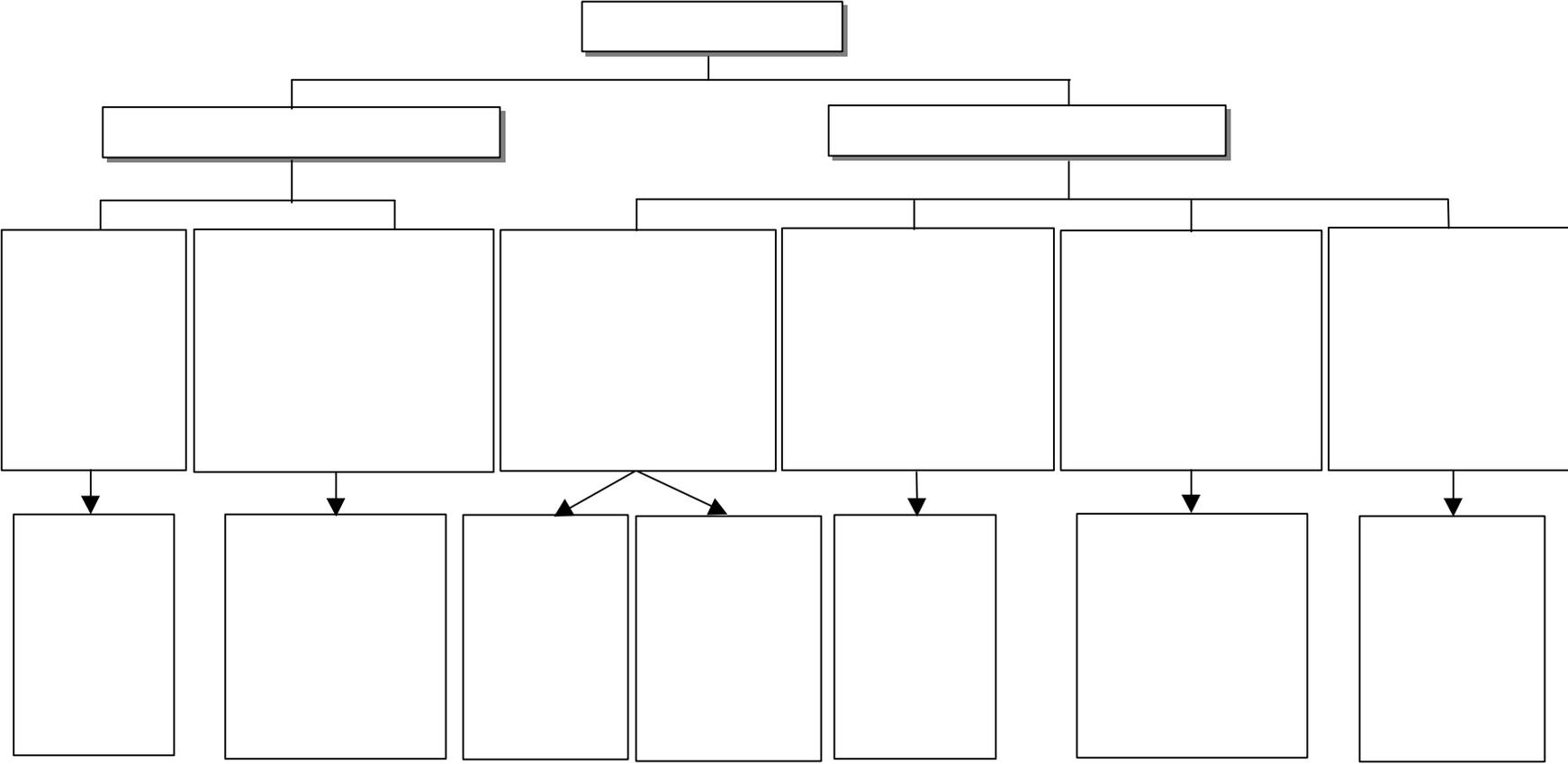
In this regard, the results on trust measurement seem to suggest a methodological path, which allows to integrate different methods in order to compensate their respective advantages and disadvantages (table1). Preliminary item screening, aimed to verify the unidimensionality of measurement scale, can be adequately realized through explorative factor analysis and item-to-total correlation. Lisrel models are not adequate in the preliminary stage of measurement process, where factorial structure underlying a given construct is not clear and there is a lack about knowledge of the relationships among a set of constructs.

In the stage of choice – purification - of measurement scale, the use of traditional techiniques is preferable. Nervertheless, these techniques do not test the factorial structure of the construct. When data set is already purified, Lisrel allows to integrate the results obtained using traditional techniques; in fact, Lisrel can test the unidimensionality of the scale and, if necessary, refine the factorial structure previously emerged. Goodness of model fit provides information for assessing the unidimensionality of a set of items. If the model fit is not good, the respecification of the model is necessary; in this case, the examination of the standardized residual can support the identification of the items which determine an initial model fit not acceptable.

The assessment of reliability of a measurement scale can be performed through coefficient alpha; however, this index weights all the items in the same way, so if the number of items increases, the construct reliability will increase too, even though the items have factor loadings low and not statistical significant. For this reason, it is more adequate the use of alternative indices reliability based on the factor loadings of a single item. This type of indices can be provided by Lisrel.

The assessment of convergent and discriminant validity with classical (not structural) approach consists of verifying that both factor loadings between single item and underlying construct are statistically significant and high (> 0.70). Besides this information, *CFA* performed through Lisrel allows to check a third requirement, that is the goodness of fit.

Correlation matrix analysis can support all the stages of the validition process, but the correlation coefficient could be reduced because of measurement error and therefore it could overstimate the discriminant validity.

Finally, nomological validity can be assessed by testing the relationships among constructs in a nomological net, in which correlation or regression analysis can be used. Nevertheless, these analyses do not eliminate the bias stemming from measurement error. Through Lisrel, the sign and significance of the path coefficients can be used to assess nomological validity, but goodness of fit of the structural model is the best way to assess nomological validity. In particular, different models, which hypothesize different causal paths, can be specified and the variation in the goodness of fit and its significance can be analysed.

Table 1 – Structural and non structural approaches for the measurement of trust

Criteria	"Not structural" approach	Structural approach
Unidimensionality	The explorative factor analysis and item-to-total correlation allow to determine factor structure of the construct and to eliminate items that do not belong to its domain	CFA can integrate the results obtained using traditional methods by testing the unidimensionality of the scale and, if necessary, refining factor structure through elimination of other items
Reliability	Coefficient alpha provides an estimate of the reliability in which all items are weighted in the same way	Lisrel provides additional measures of reliability based on factor loading of each item
Convergent and discriminant validity	The analysis is mainly explorative, useful to explore the dimensionality of the construct, but not to test it	CFA is useful to test factor structure hypothesized. Besides the factor loadings, it provides measures of model fit
Nomological validity	Regression and correlation analyses provide an initial test of the hypotheses, but do not eliminate the bias due to the measuremet error	Relationships among construct can be tested without the bias due to the measurement errror, examing the sign and size of the path coefficients and the indices of model fit

In the light of these considerations, the methodological path based on the combinate use of traditional methods and structural equation models satisfies the needs of trust measurement, when the hypothesis is done that it is an abstract, multidimensional concept that can only be measured indirecly, observing what is thought to be linked to it. All this can clearly not leave out of account the exact and precise study "logical-deductive" of the meaning of the phenomenon and the explanation of the links with the constructs that, from a logical point of view, constitute its determinants and consequences, or, according to some authors, its constituive dimensions.

Implications for the development of research

This review of studies on measurement of trust has been intended to reconstruct the state of marketing research on the subject, showing the main conceptual models that have been suggested in the literature, and describing the most frequently used approaches to measurement.

The results clearly indicate the difficulty of finding methodologies that can guarantee high qualitative standards of measurement. Although the different measurements used have often shown good performance, there has yet been no completely satisfying and generally agreed methods of operazionalization.

This is mainly due to the disagreement about the definition of the construct, and in particular to the frequent confusion between antecedents, construct components and consequences. This confusion seems to be nourished by the circular nature of many causal relationships linked to trust. These have been systematically featured in cross-sectional research designs. Such designs, performed at a given point in time, inhibit knowledge of the process of trust development and the sequence of causal relationships that characterise it.

Such considerations seem to suggest that future research into the measurement of trust should move in two directions, from the marketing management viewpoint.

Firstly, an effort to systematise multidisciplinary research work is necessary. This would allow for a more rigorous definition of the concept, its determinants and its consequences. The development of theory and of conceptual models requires continuous explanation, replication, extension, application and critical evalutation. Similarly, the validity of a construct is established through the accumulation of empirical results on the characteristics of a measurement that up to now has not been achieved.

Secondly, the performance of longitudinal research and single source studies focused on key concepts is auspicious. They may contribute to the acquisition of greater knowledge of the dynamics of the phenomenon, and of the role played by different determinants, in a context of experimental design (or quasi-experimental) and of manipulation of single variables.

Other opportunities for increasing the research into trust can be identified by beginning with the main limits of the studies conducted up to now. The results of every piece of research are contingent, or rather they refer to a particular sector or specific exchange context, and this reduces their power of generalisation. The generalisation of the results could be executed by exending a specific study to other relational contexts. Specifically, in parallel to the expansion of firm's territorial boundaries, studies should also be made of how the meaning, determinants and consequences of trust vary as a function of variations in the market contexts, organizational contexts, and cultural variables.

Further, most of the studies only look at the viewpoint of one member of the dyad, leaving out the other. Future research should involve all the subjects involved in the relationship, in order to test whether there is perceived convergence or divergence on a construct like trust, which is intrinsically relationship-oriented and characterized by reciprocity.

Finally, tha data gathered for evaluation of inter-organizational trust often come from a single component of each firm. Although this makes the process of data collection more manageable, it is clear that each respondent refers his perception to a phenomenon that concerns the whole organization. For this reason, in all the studies concerning trust in business to business markets the use of multiple information sources would be auspicious.

The experience of the several marketing scholars that up to now have studied on the topic of trust is an excellent basis of knowledge: for both the academicians, which intend to perform other researches about measurement of trust – by replying some studies previously carried out or exploring new market contexts and new methodologies – and practitioners which, on the basis of academic work, can decide and act in order to develop trust, and so to improve the relationships with their clients.

Table 2 – The measurement of trust in distribution channels

Author/s	Definition of trust	Research context	Variables of operazionalizatio n (dimensionality of the construct)	Number of items (indicators of variables)	Items: words or phrases of the dimension/s of the construct	Measurement scales	Data analysis methods and pricipal results
Anderson and Weitz (1989)	One party's belief that its needs will be fulfilled in the future by actions undertaken by the other party	Data collection from 95 sales agencies with reference to their relationships with 690 manufactures in the electronic components sector (from the perspective of the sales agencies)	Trust	2 items	*trust*: how much you trust the principal to be fair (...)	7-point scale: 1=*very little trust*; 7=*great deal of trust*	System of equations estimated via 3SLS (*three-stage least squares*). Cronbach alpha=0.84. The correlation coefficients between trust, on one hand, and perceived competency and goal congruence, on the other, are 0.51 and 0.69 respectively.
Anderson and Narus (1990)	The firm's belief that another company will perform actions that will result in positive outcomes for the firm, as well as not take unexpected actions that would result in negative outcomes for the firm	Data collection from 249 distributors and 213 manufacturers (from the perspective of both firms)	Trust	(on the distributors side) 3 multi-item indicators (on the manufacture rs side) 4 multi-item indicators	*trust*: based upon your past and present experience, how would you characterize the level of trust your firm has in its working relationship with manufacturer X (with distributor X)? (...)	7-point scale: 1=*don't trust X*; 7= *trust X completely*)	Structural equations models – *Lisrel*. In both samples, both measurement and structural model have required several respecifications
Ganesan	Willingness to rely on	Data collection	Credibility;	(on the	(buyers) *credibility*:	7-point Likert	Structural

(1994)	an exchange partner in whom one has confidence (Moorman, Zaltman e Deshpandè, 1992)	from 124 buyers of six retail department store chains and 52 of their vendors (from the perspective of both firms)	Benevolence	buyers side) credibility: 7 items benevolence: 5 items (on the vendors side) credibility: 4 items benevolence: 3 items	frank, reliable, knowledgeable regarding products, does not make false claims, not open*, honest about the problems, has problems answering our questions; *benevolence*: has made sacrificies for us; cares for us; has gone out on a limb for us; like a friend; has been on our side (sellers) *credibility*: **frank, reliable, knowledgeable about products; has problems understanding our position*;** *benevolence*: has made sacrificies for us; cares for my welfare; very understanding **reverse scale*	scale: 1=*strongly disagree*; 7=*strongly agree*)	equations models – *Lisrel* (buyers); multiple regression OLS (*Ordinary Least Squares*) (vendors). Cronbach alpha (buyers) *credibility*: 0.90 *benevolence*:0.88; (vendors) *credibility*: 0.80 *benevolence*: 0.76 In both samples, *CFA* has suggested to accept the two dimensional model of trust
Morgan and Hunt (1994)	Trust exists when one party has confidence in an exchange partner's reliability and integrity	Study of 204 relationships between automobile tire retailers and their suppliers (from the perspective of the buyers)	reliability integrity	7 items	*trust*: in our relationship, the supplier cannot be trusted at times, can be counted on to do what is right, has high integrity (...)	7-point scale: 1=*strongly disagree*; 7=*strongly agree*	Structural equations models – *Lisrel*. Cronbach alpha=0.95 The correlation coefficient between trust and opportunistic

							behaviour is -0.759
Mohr and Spekman (1994)	The belief that a party's word is reliable and that a party will fulfill its obligation in an exchange	Study of 102 vertical relationships between personal computer retailers and their suppliers (from the perspective of the retailers)	trust		3 items	*trust*: we trust that the manufacture's decisions will be beneficial to our business, we feel that we do not get a fair deal, this relationship is marked by a high degree of harmony	5-point scale: 1= =*strongly disagree*; 5=*strongly agree*	Multiple regression. Cronbach alpha=0.75. When subjected to factor analysis, all the items load highly on their hypothesized factors; only one item - "coordination" construct - is highly correlated with "trust" construct (invalidating the convergent validity)
Zaheer and Venkatraman (1995)	Trust reflects the extent to which negotiations are fair and commitments are upheld (Anderson and Narus, 1990) and one party's belief that its requirements will be fulfilled through future actions undertaken by the other party (Anderson and Weitz, 1989)	Study of 329 relationships between indipendent insurance agencies and their carriers (from the perspective of the agencies)	trust		3 items	*trust*: the focal carrier and our agency have a high level of mutual trust, the focal carrier is well known for fair dealing, the focal carrier stands by its word	7-point scale: 1=*strongly disagree*; 7=*strongly agree*	Hierarchical regression analysis. Cronbach aplha=0.81 The correlation coefficients between trust and the other constructs are low and statistically significant (discriminant validty)

Dahlstrom and Nygaard (1995)	Willingness to rely on an exchange partner in whom one has confidence (Moorman, Zaltman and Deshpandè, 1992)	Study of the relationships between franchisors and franchisees in retail petroleum channels in Poland (40), (former East)Germany (29) and Norway (216) (from the perspective of the franchisees)	trust	5 items	*trust*: I am willing to let my sales manager make the decision without me, I fully trust and think that my sales manager is doing the best for me and the other, I fully trust that the area sales manager is important to the distribution system, I trust the sales manager to do things I can't do myself, I generally do not trust the sales manager* *reverse scored*	7-point Likert scale: 1=*strongly disagree*; 7=*strongly agree*	Analysis of variance (ANOVA) and regression (OLS). Cronbach alpha= 0.80 (in Poland) 0.62 (in Germany) 0.87 (in Norway) In Germany, the first item of trust has a higher saturation on the "centralisation" construct – retained to the benefit of face validity and comparability *cross-national*
Geyskens et al. (1996)	Trust exists to the extent that the channel member believes its partner to be honest and benevolent	Study of the relationships between car dealers and manufactures in USA (417) and Holland (289) (from the perspective of the dealers)	honesty; benevolence	honesty: 5 items benevolence: 5 items	*honesty*: honest, truthful, keeps its promise (...); *benevolence*: is concerned about our welfare (...)	7-point Likert scale: 1=*strongly disagree*; 7=*strongly agree*	Regression analysis. Cronbach alpha Holland: honesty=0.81; benevolence=0.90; USA: Honesty=0.85; benevolence=0.93 The two-factor model of trust shows convergent and discriminant

						validity
Nielson (1998)	Trust refers to the supplier's perception that the customer will perform as promised in the relationship with honesty and integrity	Study of 163 relationships between manufacturers and distributors of intermediate products such as components parts, raw materials etc (from the perspective of the seller)	trust	3 item	*trust*: this customer can be relied on to keep his/her promises, this customer is trustworthy, this customer can be relied on for his/her technical ability	5-point Likert scale: 1=*strongly disagree*; 5=*strongly agree*	Structural equations models – *Lisrel*. Cronbach alpha=0.87 The measurement scale of trust is judged acceptable for testing the causal model
Selnes (1998)	A generalized expectancy of how the other party will behave in the future	Study of 177 relationships between restaurants and their supplier (from the perspective of the buyer)	trust	1 item	*trust*: degree of trust in the supplier	Scale: *1-10*	Structural equations models – *Lisrel*. Correlation between competence and trust is 0.464. Competence does not have any effect on trust (it acts through communication, highly correlated)
Zaheer, McEvily and Perrone (1998)	The expectation that an actor: 1) can be relied on to fulfill obligations; 2) will behave in a predictable manner; 3) will act and negotiate fairly when the possibility for	Study of 107 relationships between electrical equipement manufacturers and their component suppliers, both at interpersonal and interorganizational	interorganizational trust and interpersonal trust: reliability predictability fairness	*inter-organizational trust*: 5 items; *interpersonal trust*: 5 items	*interorganizational trust* (on the buyer side): supplier has always been evenhanded with us; may use opportunities to profit at our expense*, based on past experience, we cannot rely on supplier to keep	7-point scale: 1=*strongly disagree*; 4=*neither agree nor disagree*; 7=*strongly agree*	Structural equations models – *Lisrel*. Items of predictability dimension have been eliminated from scale of the interorganizationa

	opportunism is present	level, and from the perspective of both the members of the dyad			its promises*, we are hesitant to transact when the specifications are vague*, is trust worthy; *interpersonal trust* (on the buyer side): my contact person has always been evenhanded with me, s/he can always be counted on to act as I expect, is trustworthy, I have faith he look out my interests, I would feel a sense of betrayal if his performance was below my expectations **reverese coded*		l trust; item of the reliability dimension have been eliminated from scale of interpersonal trust. Interorganization al and interpersonal trust show discriminant validity. Cronbach alpha Interorganization al trust= 0.76 Interpersonal trust=0.89

Table 3 – The measurement of trust in **sales management**

Author/s	Definition of trust	Research context	Variables of operazionalization (dimensionality of the construct)	Number of items (indicators of variables)	Items: words or phrases of the dimension/s of the construct	Measurement scales	Data analysis methods and pricipal results
Crosby, Evans and Cowles (1990)	A confident belief that the salesperson can be relied upon to behave in such a manner that the long-term interest of the customer will be served	Study of 151 relationships between insurance policies buyers and sales agents (from the perspective of the buyer)	trust	9 items	*trust*: my agent keeps promise, insincere*, it is necessary to be cautious*, trustworhty, we are in competition*, puts the customer's interest before owns, is not above bending the facts*, dishonest*, has sometimes withheld pieces of critical information* **reverse coded*	7-point scale: 1=*strongly disagree*; 7=*strongly agree*	Structural equations models – *Lisrel*. Cronbach alpha=0.89 *CFA* has validate the hypothesized structure factor
Moorman, Zaltman and Deshpandè (1992) Moorman, Deshpandè and Zaltman (1993)	Willingness to rely on an exchange partner in whom one has confidence	Study of 779 relationships between providers and users of market research (from the perspective of the users)	belief behavioral intention	5 items	*trust*: if someone could not be reached, I would be willing to let my researchers make decisions without me, if someone were unable to monitor, I would be willing to trust researcher to get the job done right, I trust the researcher to do things I can't do myself, I trust the researcher to do things my department can't do itself, I	7-point scale: 1=*strongly disagree*; 4=*neither agree nor disagree*; 5=*strongly agree*	Regression analysis, whose results have been used as inputs for a path analysis. When subjected to factor analysis, all items of trust load higly on a single factor, supporting the unidimensionality of the construct. Cronbach alpha=0.84

				generally do not trust my researcher		
Doney and Cannon (1997)	The perceived credibility and benevolence of a target of trust	Study of the relationships between a sample of 210 industrial firms with supplier firms and their salespeople (from the perspective of the buyer)	credibility benevolence	trust towards the firm: 8 items; trust towards the salespeople: 7 items	(towards the supplier firm) *trust*: keeps promises, not always honest*, we believe the information provided us, concerned that our business succeds, considers our belfare as well as its own, keeps our interests in mind, is trustworthy,it is necessary to be cautious* (towards the salespeople) *trust*: frank, does not make false claims, not completely open*, is only concerned about himself*, not concerned with our neds*, people at firm do not trust him*, not trustworthy* *reverse scored*	7-point scale: 1=*strongly disagree*; 7=*strongly agree*	*CFA* with *Lisrel* and system of equations estimated with *three-stage least squares*. Cronbach alpha (towards supplier firm) =0.94 (towards the salepeople =0.90 The measures used show good psychometric properties Trust towards the firm and trust toward salespeople are distinct constructs
Smith and Barclay (1997)	Trust requires: *mutual perceived trustworthiness*, defined as the extent to which partners jointly expect fiduciary responsability in the	Analysis of 103 dyadic relationships between partners in horizontal sales alliances in the computer sector (from the	*mutual perceived trustworthiness:* character, role competence, motives, judgment; *mutual trusting behaviors*: relationship	*mutual perceived trustworthin ess* character: 4 items; role competence: 9 items;	*mutual perceived trustworthiness* *character*: we can count on each other; *role competence*: neither of us has to be concerned about the other's technical skills	7-point scale: 1=*strongly disagree*; 7=*strongly agree*	Structural equations models – *Lisrel* and *PLS* (*Partial Least Squares*). The item "acts with good intentions" of the

	performance of their individual roles and believe that each will act in the best interest of the parnership; *mutual trusting behaviors*, defined as actions that reflect a willingness to accept vulnerability in the face of uncertainty	perspective of both firms)	investiments, influence accetpance, communication openness, control reduction, forbearance from opportunism	motives: 6 items; judgment: 4 items *mutual trusting behaviors*: relationship investiments : 6 influence accetpance: 4 items communication openness: 7 items; control reduction: 5 items forbearance from opportunism : 7 items	and knowledge; *motives*: there are few hidden agendas in our work; *judgment*: we respect each other's judgement *mutual trusting behaviors relationship investment*: this rep and I have devoted a lot of time and energy to making our relationship work; *influence accetpance*: we are not very receptive to each other's influence attemps*; *communication openness*: we frequently discuss accounts and opportunities; *control reduction*: we try not to influence each other's behaviour; *forbearance from opportunism*: there is some cheating and deceit in our relationship*		motivation sub-construct has been eliminated – low variance. The two subconstruct "influence accetpance" and "control reduction", have been removed – low reliability . CFA shows that a three-factor model of the mutual perceived trustwothiness, that combines character and motivation, fits better than a originally proposed four-factor model

Table 4 – The measurement of trust in exchange relationships between firm and final consumer

Author/s	Definition of trust	Research context	Variables of operazionalization (dimensionality of the construct)	Number of items (indicators of variables)	Items: words or phrases of the dimension/s of the construct	Measurement scales	Data analysis methods and pricipal results
Fletcher and Peters (1997)	not specified	Study of 113 relationships between consumers and firms using direct marketing (from the perspective of the consumer)	*ability* **perceived competence, ability to treat customers with equity and fariness, promise fulfilment** *motivation* discreteness, integrity, receptivity, loyalty In addition, a four item measure of overall trust has been included for comparison	*ability* **perceived competence: 4 items; ability to treat customers with equity and fariness: 4 items; promise fulfilment: 4 items** *motivation* discreteness: 4 items; integrity: 4 items; receptivity: 4 items; loyalty: 4 items	not specified	5-point Likert scale: 1=*strongly agree*; 5=*strongly disagree*	Multiple regression analysis and path analysis. Cronbach alpha ability=0.83 motivation=0.81 The indicator "integrity" has a high correlation with the indicators "fairness" and "promise fulfilment", that reflects its closeness to the construct of overall trust
Mitchell, Reast and Lynch (1998)	not specified	Study of 106 relationships between consumers and firms operating in	trust	1 item	*trust*: high/low trust	7-point Likert scale: 1=*low*; 7=*high*	**Multiple regression stepwise.** Trust has four antecedents:

		the banking sector, in distribution and in electrical goods (from the perspective of the consumers)					probity and equity, comportamental, and reliability and satisfaction, cognitive $R^2=0.793$

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