

**"INFORMATION ASYMMETRY AND CORPORATE
COMMUNICATION: RESULTS OF A PILOT
STUDY"**

by

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Comments welcome

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Abstract

In the last years, a very large number of theoretical studies have been analyzing signaling policies in numerous situations of asymmetric information. However, no empirical analysis along these lines has yet been done of the overall policy of corporate communication of the firm. The research aims at constructing a database on corporate communication and at testing several theories concerning information asymmetry. Specifically, we plan to study the link between the quantity of information provided by the firm and good and bad shocks hitting the firm. Also we want to test whether the policy of corporate communication has any measurable effects on stock prices.

At this point, we have conducted a pilot study with promising results and are launching the construction and analysis of the full sample. The paper describes the procedure followed for the data collection, gives some first results and ends with the projected steps for future research.

1 Introduction

The research plans to construct and analyze data on the efforts made by the firm to transmit precise messages to its environment. We plan to quantify the information transmitted by messages through the investments in corporate communication (CC). The investments in corporate communication correspond to the purest aspect of signaling, yet they have been overlooked empirically by the academic literature, and this study intends to remedy this.

The paper is structured in the following fashion:

- Section 2 details our objectives in pursuing this study, especially the motivation with respect to the existing literature on corporate communication,
- Section 3 justifies the procedure followed for the acquisition of the database
- Section 4 describes the first results,
- Section 5 outlines the next steps of the research.

2 Objectives of this study with respect to the existing literature

The objective of our research is to understand better the policy of communications followed by firms. We approach this general issue through a series of more specific questions triggered by the existing debates in the information economics and financial economics literature. For example, we want to know in which circumstances it pays to be precise, i.e. to provide messages with a high quantity of information, when there are potential costs in sending and in analyzing precise messages. When do firms give the most information? Which events and/or states of the market trigger special efforts of communication? We also would like to see if a signaling policy is effective. Can this be seen? How? Is it reflected in stock prices? What evidence exists that investment in corporate communication pays?

2.1 The literature

Although an increasing number of **theoretical** studies concentrate on signaling policies, no systematic analysis has yet been done of investments in corporate communications. At the same time, there exists a huge concern about the communication policy of the firm in the press. The press talks about the increasing importance of corporate communication in different circumstances. More and more articles talk about the benefits of being honest when things look bad but the studies either remain anecdotal or focus on general objectives of the corporate communication (or public relation) function in a very qualitative fashion with no quantifiable data (see for example Euromoney (1989), Galant (1989, 1990) or articles in journals like Public Relations Journal). Alternatively, they present quantified data related to **product** marketing only (see articles in marketing journals, such as Keown, Synodinos and Jacobs (1989)). Our research, however, is interested in investment in long term relations between the firm and the market, in its reputation. Our research aims at constructing a database on CC and related signaling devices. Its objective is to quantify the quality (precision) of corporate communications and to relate it to several potential theories

of optimal signaling policies.

This research can be related to the literature in several field of economics and mangement. Several existing studies provide indirect support to our concern, showing that information asymmetry and the related investment in communications by firms are important. However, no research has taken the approach we are suggesting. This section places our study and the questions we raise with respect to the existing literature in several fields in management.

The *Economic and Finance* literature is growingly concerned about the importance of the informational environment of the firm and about the signaling policies of the firm. An increasing number of specific decisions of the firm such as dividend policy, share repurchases (Vermaelen (1981), and more generally levels and changes in the capital structure of the firm are explained by signaling models. Empirical studies provide results generally consistent with the signaling models. However, the theoretical models and the empirical studies tend to focus on one type of signal at a time, whith a precified amount of information for each signal. All models based on information asymmetry are based on a specific structure for the informational environment of the firm, i.e. they start by defining what the managers of the firm and the market know, with given precisions, at each point in time. Empirical studies testing these models recognize that the informational environment can vary across firms, and influence the results of the tests. Even simple corrections are shown to matter. (See for example Dierkens (1987), where the number of announcements reported in the press is shown to be an important variable). There exist many studies of number of firms announcements in the financial press without any check for content and without any differentiation between firm-launched announcements and other announcements, see for example Boyd and Schonfeld (1977) and Thompson, Olsen and Deitrich (1987). Unfortunately, these measures are very crude and do not differentiate between information triggered (and paid for) by the firm and efforts made by the market or any outsider to the firm. The literature in financial economics is also fairly extensive on accounting releases following legal requirements. However, little study is done on the **overall** efforts to communicate, additional to the minimum legal require-

ment although there exist people inside the firm, concerned not only about announcing specific information but also about the reputation, image and credibility of the firm, namely the CC department. We consider that a large CC department with a high CC expenditure can be considered to have a costly signaling policy, whereas a relatively small CC department with low CC expenditure can be considered to have a low cost signaling strategy. Considering the growing importance in financial economics given to information asymmetry, it is surprising that no one has tried to relate the CC activities of the firm, i.e. the effort level of the firm to decrease this information asymmetry, to any of its signaling decisions. It is especially surprising since many models imply that reducing the level of information asymmetry would be positive influence on the value of the firm (e.g. Myers and Majluf (1984)). Having information about the CC policy of the firm would serve the double purpose of capturing the core signaling activity of the firm and of allowing correct tests of specific signals, given this general signaling activity.

In the *marketing* literature, there seems to exist a dichotomy at the present time between very general comments made about CC, its function, its use, the link to the firm's image, which is done at a very general level, with at most anecdotal evidence, and fairly sophisticated studies of parts of the policy of corporate communication of the firm. For example, there exists a series of fairly detailed studies of product advertising in the marketing department, based on sophisticated quantified databases.

More generally, there exists a lot of studies focusing on the firm's actions as a function of the actions of its competitors. A large literature in *Industrial Economics* studies the impact of product advertising on market shares, profits,... in different market environments. The focus tend then to be on marketing expenses as deterrants, and little analysis is devoted to the importance of the content of the messages.

2.2 The questions we raise

2.2.1 Analysis of the optimal precision, or the optimal quantity of information

These questions are mostly based on our model described in the paper "The Strategic Supply of Precision" (1990). It predicts that a firm in an a priori good situation will not provide further precisions, while a firm in an a priori bad situation, although sometimes only the firms that are actually good, will do so. Casual evidence in favor of the model is easy to find: for example, the increasing budget of Tobacco Industries with the anti-smoking environment (see Cosco (1988)). The data will be used to check these propositions more systematically with quantified variables. The model predicts that: more investments in CC are made in pessimistic than in optimistic circumstances, or for example

- When the market (industry) is in bad situation
- When the firm has been in a bad position

2.2.2 Impact of the policy of corporate communication on stock prices

The quantification of CC can also be used for a series of empirical studies of topics traditionnally raised in financial economics. Any type of signal, like stock repurchases or equity issues, should have a different impact, all other things equal, when a firm has an active policy of corporate communication. This can be captured in crosssectional tests of the abnormal reactions at the announcement of the event.

The data could also be applied to general valuation theories. Several papers affirm that the well-documented size effect (small size firms earn extra returns) is in fact an information effect. (see for example Barry (1984) or Ho and Michaely (1988)). The data would provide additional tests of the following statements: all other things equal, do high CC firms earn lower excess returns? Does the effect replace or add to the size effect? Is the CC activity highly correlated to size, residual variance?

3 Description of the data collection

3.1 The procedure

1

Data on corporate communication unlike advertising expenditures, are not given in accounting reports and, unlike marketing expenditures related to specific products, cannot be acquired through specialised associations (panels) or consulting firms. They cannot be collected independently from the firm either, as the number of press coverage that can be counted from the Wall Street Journal or other publications. Important data on corporate communication can at this point only be collected by sending questionnaires. We are aware of the potential problems we might encounter using questionnaires, i.e. getting biased information and/or not getting a sufficiently large sample, so we start by conducting a pilot study to check our questions and the answer rate.

The two main assumptions we make in measuring the quantity of information provided by the firm about itself are: first the relation between investment in CC and the quantity of information provided by the firm and then the homogeneity of the CC function across firms.

The idea of the study is to characterize the precision of the messages sent by firms, i.e. the **outputs** of the policy of corporate communication of the firm by the resources available in the firm for corporate communication, i.e. the **inputs** of the policy of corporate communications. Inputs are much easier to quantify, however, they may not always capture what we try to measure, for example they may cover messages with little or no content. Investments in CC may also cover different functions across firms. For this reason, the questionnaire includes a extensive number of questions aiming at understanding better the definition and structure of corporate communication inside each firm we analyze, so the empirical studies can correct and homogenize the variables as much as possible. For example, the questionnaire asks for activities - outside CC in our definition- such as

¹See for example Cohen (1988) or Floyd (1988) for the potential problems related to the use of questionnaires

product marketing expenditures, and for specific activities -inside CC in our definition- such as the use of outside communication consultants.

3.2 The initial sample

The questionnaire has been sent to approximately 60 firms in Europe, North America and Asia. The sample of the pilot study is not especially chosen to be representative of the market in terms of industry classification and nationalities. It is mostly chosen to include firms not adverse to helping us. For example, we have an overrepresentation (20 out of 60) of french firms in this first sample.²

3.3 The questionnaire

The questionnaire has three different sections described below. It is heavily influenced by two major characteristics of our research, namely first the search for alternative quantitative measure of CC, then the focus on the fluctuations in CC. We are also anxious to know to what extent our measures may suffer from biases.

Three broad sections can be distinguished in the questionnaire: a general section, a specialized section and a control section. The general section, questions 1 to 5, tries to capture the general approach to corporate communication in the firm. This section is fairly close to the type of questions analyzed by the common press. The specialized section, questions 6 to 13, constitutes the core of the questionnaire and of the data base. It asks for measures of CC through specific investments, as total budget, number of employees, salaries, media expenses as well as extraordinary expenditure related to special circumstances. (Its coverage is described in further details in the next section of the paper). The control section of the

²The French firms received a French version of the questionnaire; both the English and French versions are given in appendix, with the accompanying cover letters.

questionnaire, questions 14 to 17, aims at letting the person who answers the questionnaire comment on **all the previous points**. The questions are presented in an open-ended format. The answers to these questions should indicate what needs to be added, changed, explained, detailed or deleted in our questionnaire. They should also point out whether some important factors cannot be captured by our approach and will limit the interpretation of any analysis done from the information collected in the previous sections.

The structure of the questionnaire is determined by the special feature of our research. First, we ask as much as possible for **quantified answers** to the questions. (see questions 6, 7, 9, 10, 12 and 13) instead of the more standard repartition in subjective groups such as high/medium/low³. Questions 8 and 9 are an exception to the request for quantitative information: they require a judgement of the situation. We will compare the information collected from the answers to these questions to more standard and objective -but potentially less comprehensive- sources of information like observed changes in share prices, earnings, sales.

The study focuses on the **relative** importance of the resources allocated to CC and it insists on the **fluctuations in response to circumstances** of the expenses, as well as the elements triggering the change. For this reason, we try to cover a long period of time. (Questions 5, 6, 7, 8, 9, 10, 12, and 13 ask for information from 1985 to 1989). Similarly, we are interested in relative magnitude of the expenses with respect to total assets or market value. Still, we ask for absolute values of the data because we think these data are easier to provide. The standardizing data can easily be obtained from outside sources such as annual reports and do not need to be asked in the questionnaires.

We are very concerned of the problem of differences across firms in the structure of their corporate communications. In order to correct for this as well as possible, we ask many questions allowing us to avoid or correct the biases referred to earlier. (Questions 10 B, C, E, F , 11, 12, B and C, 13,

³Of course, we still have the possibility of using the information in ordinal format for statistical tests.

B, C, E, F as well as, to a smaller extent, questions 6, 7, 8 and 9 will be used for this purpose.)

4 Results

This section of the paper presents the important results of the first step of the data collection, namely the pilot study. We comment on the answering ratio, in total and per type of questions, mention some qualitative characteristics of the answers, give some average data for the sample of the pilot study, and discuss the implications of these results for the second step of the data collection and for the statistical tests. For reasons of confidentiality linked with the relatively small size of the sample at this point, we chose to limit the description of the sample of answering firms in terms, for example, of average size and industry represented. Similarly, at this point, we want to restrict the comments related to subgroups also for reason of confidentiality⁴. The same reason also stops us from running valid statistical tests between the CC expenses and the resulting situation of the firm; again the comments are limited to qualitative statements.

4.1 Answer rate

We got an overall answer rate higher than 25%, which is high and encouraging. No special bias has appeared in the answering subgroup. For example, 1/3 of the answers come from French questionnaires, 2/3 from English questionnaires, replicating the repartition of our initial mailing list. Most managers answered very fast. Most of the answers were received in the month following our mail, even when the questionnaires had to be redirected to the new person in charge, so there seems to be no need to give an extended deadline for the answers.

The questions have been answered with different degrees of precision. The general section has been answered by all.

⁴This problem would not exist for the full sample.

For the specialized section, we have had both good and bad surprises.

Good surprises:

The quantitative questions (# 6 to # 10) were answered by most firms. We have information on total budget, number of employees of different levels and total salaries. This is especially helpful, since they provide quantified measures of corporate communication that are impossible to get from existing published information. We were afraid not to be able to get this information. Only one firm answered that the data were available but not to be disclosed for reasons of confidentiality. Some others answered that the resources were combined with product marketing, or that the results were only partly consolidated, so did not give any.

The open-ended questions at the end do not indicate systematic mistakes, misunderstandings or missed points. The only critiques (encountered more than one time) referred to the lack of detailed focus on internal communication, which is not our concern in this study.

Bad surprises:

Often we only received quantified answers for 1, 2 or 3 years instead of 5. The high frequency of changes in department of corporate communication is given as explanation.

The approach to corporate communication, and the top management seems to have changed very often. We often got information on:

- changes in top corporate communication management
- changes in the structure of departments of corporate communications
- changes in the structure of the firm, especially for multinational firms becoming more or less integrated, with the resulting consequences for departments of corporate communication⁵.

The inquiry about extraordinary expenses (question # 13) brought extremely few answers (20% of the firms answering the questionnaire), and

⁵This reason for changes in the structure of CC department can always be checked by extensive descriptive comments on the restructurations in the annual reports.

from our point of view represent the disappointing point in the questionnaire.

The lack of answers can potentially be created by several factors

- the position of the question towards the end of the questionnaire (but further questions were answered)
- the question is misunderstood and/or not differentiated from question # 10 (but it is not mentioned when we ask about lack of clarity)
- the answers are considered confidential, or there exists an unwillingness to admit changes in plan
- the budget is registered somewhere else.
- there exists a lack of special budget and special actions taken by firms. (However some qualitative comments mentioned later go against this last assumption)

The question about newscoverage, i.e. question #12, had the second lowest answering rate (60%, with 40% giving no answer at all) but fortunately we can find some substitutes by direct measures of news coverage (described later).

4.2 Implied changes for next round of questionnaires

Overall, the answers of our pilot study do not warrant important changes. We could suggest a faster deadline for the answers. Questions 12 and 13 could be changed (shortened) or deleted⁶. Surprisingly, in a couple of cases we had problems obtaining information on the total # of employees (In these cases, the annual reports focus more on special subgroup of employees, e.g. total employees, women and ethnic minorities), so we would like to also ask information on this. The points unclear or missing do not justify changes: they either refer to the discount of quantitative answers (from people having answered some questions only qualitatively), or the lack of emphasis, e.g. on employees. Still, the open-ended questions at the end

⁶One possibility is to refer explicitly to the written press.

of the questionnaire can be maintained, as their answer often give useful information of event specific to the firms (often confirming events or circumstances from the letter to shareholders, available in the annual reports of the relevant years). Questions 1, 2 and 3, could be deleted or shortened for the next round.

4.3 Summary of some of the information collected from the questionnaires

Only the most important results are reported here. We provide both the mean and the median of the sample when a high dispersion of the answers can be found⁷.

The results from the general section are consistent with previous work and the arguments found in the common press. All firms have a department of corporate communication, although the names of the department greatly vary. Many (88%) of the firms occasionally use outside communication agency. 6% never use them. Top management is increasingly involved in corporate communication (average "4" for question 5, with 47% constant interest, 13% varying interest and 40% increase in interest).

All targets are considered to be important. The importance of the financial community may seem small however: the importance of the targets, in 1989, for the financial community: average 20% (median 25%), with 15% of the firms showing an increase in time and also 15% showing a decrease in time. Two firms have assigned a zero weight to this category.

The perception by the market of the firm, as seen by the firm, varies in time and across groups, and are given as 3, 4 and 5 (One 2 was given, no ones). 1987 (year of the crash) does not appear worse than the other years. These numbers are subjective numbers in most cases. However, we have had some firms mentioning their continuous use of outside consultants to determine this.

⁷Later, tests will analyze statistically the correlation of of all data series.

For the resources allocated to CC, we summarize here only the results for 1989, with indications of the trends over time.
 In 1989,⁸

1989

	Average	median
Total	50	20
Managers	10	10
support staff	16	10

Overall, an increase in time was observed across the board; one firm had fluctuations up and down, another had an overall decrease of personnel.

In 1989, average # employees in department of CC/ total employees: .002, median:.001

In 1989,Average Total budget CC/Assets: 15%, median 10%⁹.

In 1989, The average number of press releases triggered by the firm is: 25 when only related to the press, 500 when it includes all types of media.

4.4 Alternative sources of data

We plan to use the data collected from the questionnaires jointly with data collected from independent sources. The definitions and acquisitions of many of these data, for example earnings or sales data, are fairly traditional. Still we would like to give some information about two sources of information that have been used in the literature on information releases:

⁸The numbers do not add up because one outlier , i.e. a firm with a relatively very large number of employees, did not provide the decomposition. This also explain the big discrepancy between the mean and the median for the total number of employees.

⁹Total budgets are given in different currencies, the relative numbers avoid any translation biases.

1) the number of press coverage and 2) the content of the messages given by the firm.

The number of press coverage is up to now the variable used in the literature (see Boyd and Schonfeld (1977), Thompson, Olsen and Deitrich (1987)) to measure investments in corporate communication, so we think it is important to know these data for our sample. Traditionnally, the number of publications may be biased against European firms or in favor of North American ones especially for the exclusive use of the Wall Street Journal Index (WSJI)¹⁰, so we use three different sources, chosen for the quality of their coverage and the existence of an index. We report the intensity of coverage from three sources: the WSJI, the Table Analytique de la Cote Desfosses (TACD) and the Financial Times Index (FTI). The French firms can be expected to have a broader coverage in the TACD, the english firms in the FTI. The following table summarizes the yearly coverage from the three sources.¹¹

Table 1 (1988)

	WSJI	TACD	FTI
% firms mentionned	78%	78%	64%
average coverage	1 column	10 dates	7 articles
median coverage	1,5 column	15 dates	6 articles

78% for the WSJI means that 22% of the firms were not recorded in the WSJI for that year. As expected, here is no perfect overlap among these sources of information. Three firms have only announcements in one of the three newspapers. One firm (french) is mentioned in none of the three

¹⁰e.g. descriptive statistics for a study related n a different topic, restructuration policies, in Franks and Mayer (1990)

¹¹The average and median coverages are given in different forms because the indices are presented in different forms.

journals.

The annual reports is also a source of information we plan to use. The letter to shareholders can indicate how the managers perceive the environment of the firm and its situation. For example (this corresponds to a subjective rating of the letter and to subjective comparisons among the letters by the authors of this note)

Table 2 (1987, 1988)

	1987 (crash)	1988
neutral ("normal" praise of the firm)	62%	92%
bad environment	23%	8%
bad environment but good for firm	15%	0
good environment but bad for firm	0	0
good environment	0	0

4.5 Relations to firm's performance

Once more, the small sample size at this point does not allow us to perform statistical analysis of specific events whose payoffs are (or could be) related to CC.

However, some interesting points already appear. A general market crash (1987) is not considered sufficient cause to change CC. However, more specific events will trigger reactions and fluctuations in CC. It appear that the strongest impact of increased CC concern is to shorten the period of crisis, more than eliminating it.

4.6 Implications for statistical analyses of the data

The small number of changes planned for the second step means that the total sample can include the answers from the pilot study. All data and sample description will have statistical (parametric plus non-parametric) analyses of correlation among series. Pure times series analyses will be difficult unless the study is performed again in a few years time. Cross-sectional and times-series cross-sectional will be used.

5 Conclusion

This paper presents our objective in studying investments in corporate communications, in relation to theoretical work based on information asymmetry. It describes the contribution of the research with respect to the existing literature and the advantages and disadvantages of the approach taken. The pilot study already gives some results. Although their statistical validity is weak, they are encouraging, both at the level of the data collection and at the level of feasibility of future tests.

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