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ACCOUNTABILITY AND ORGANIZATIONAL SURVIVAL:
A STUDY OF THE SPANISH NEWSPAPER INDUSTRY (1966-1993) *

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Abstract

The prediction that external accountability has a positive effect on organizational survival has been suggested by several organizational studies. Empirical testing of this proposition, however, has been overlooked by organizational analysts. The conceptual analysis of the notions of accountability and organizational survival has led to a set of hypotheses that are supported by lifetime data models, estimated using primary archival data. These data describe accountability practices of the entire newspaper industry of Spain during the period 1966-1993. During that period, the country witnessed a rare combination of radical and peaceful changes in its economic, social, and political structures. This setting constitutes a unique social laboratory to investigate organizational responses to environmental pressures. The findings show support for the notion that organizations that render accounts of their activities are invested of legitimacy, and this in turn increases their access to resources and extends their life chances.

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Accountability and Organizational Survival: A Study of the Spanish Newspaper Industry (1966-1993)

Differential life chances have been thoroughly investigated in organization theory (see Baum and Oliver, 1996). First, organizational mortality constitutes a prominent stream of research in population ecology (Hannan and Freeman, 1977, 1989). Empirical work in this area of research has provided statistical evidence of the effects on the failure rates of firms of variables such as organizational age (e.g., Freeman, Carroll, and Hannan, 1983; Brüderl and Schüssler, 1990), population density (e.g., Carroll and Hannan, 1989; Hannan and Carroll, 1992), and changes in organizational core characteristics (e.g., Carroll, 1984; Haveman, 1992). This stream of research, however, has not delved into the survival chances of organizations that render accounts of their activities relative to those firms that do not. Second, institutional theory has emphasized the survival implications of those firms that conform to their institutional environment and its concomitant rules and norms (Meyer and Rowan, 1977; DiMaggio and Powell, 1983). Nevertheless, a review of empirical studies in this area reveals that little is known about how organizations conform to pressures for accountability, and if this in turn may affect their life prospects. The absence of empirical evidence from both the population ecology and the institutional theory perspectives is especially significant because accountability is depicted as a salient feature of modern organizations (Hannan and Freeman, 1984). Modern organizations, Hannan and Freeman (1984: 153) argue, experience strong demands to account rationally for their actions as an outcome of both "the spread of general norms of rationality in the modern world (Weber, 1968) and [of] a variety of external and internal contingencies."

Accountability, according to Gibbins and Newton (1994: 166), comprises a relationship, driven by social, contractual, or other factors between the source (e.g., corporate constituents) and the accountable organization (e.g., the organization that renders accounts to its constituents) in which the latter has incentives to behave as the former wishes. The accountability notion spilled over its original field of politics into the economic arena as a consequence of the increasingly complex and varied relationship between an organization and the parties to whom it must respond; the separation of ownership from corporate control illustrates the rationale for the increasing importance of accountability practices in organizations. The relation of

accountability is exemplified by the organizational process of rendering accounts of its activities to external constituents (e.g., accountable organizations' reporting to sources on their environmental protection activities).

The practical significance of accountability has been examined by several studies that have analyzed the underlying reasons why organizations report on their activities, ranging from the stakeholder (Meznar, Nigh, and Kwok, 1994) to the critical accounting (Roberts and Scapens, 1985) theories. The emphasis of these studies on the accountability relationship, however, has been at the expense of their explicit empirical focus on the effects of not satisfying external demands for information on firms' chances for survival. In this paper we suggest that accountability will significantly affect an organization's life chances. Empirical evidence to test this central proposition has been gathered for the entire newspaper industry in Spain, covering all the daily newspapers published in this country during the period 1966-1993. This period witnessed radical political, economic, and social changes that brought about the peaceful replacement of a military dictatorship by a full-fledged democracy. This setting constitutes a unique social laboratory to investigate organizational reactions to environmental pressures (Guillén, 1994).

Studies investigating the effects of legitimation on a population's chances for survival (e.g., Singh, House, and Tucker, 1986; Rao, 1994) bear some resemblance to this paper. Singh et al. (1986) examined the impact of registration by a state agency and listings in a public directory on the life chances of voluntary social service organizations of Toronto. The results showed that organizations receiving this public endorsement enhanced their survival prospects during their early years of operation. Rao (1994) studied the American auto industry during the years 1895 to 1912 to test how certification contests legitimate organizations, generate status orderings, and create favorable reputations. The results supported the idea that cumulative victories in contests extend the life chances of winning organizations. Our paper, in contrast, places less emphasis on the legitimizing effect of external certifications on firms' survival prospects. Instead, it focuses on the organizational practice of rendering regular accounts of its activities to external constituencies, and if this in turn may enhance the organization's life chances.

Investigation of the relationship between accountability and organizational

chances of survival may be of interest within the realm of organization theory. First, population ecologists embrace accountability as a prominent assumption of the model of structural inertia (Hannan and Freeman, 1984). Despite the importance of the notion of accountability for this stream of research, however, the effects of accountability practices on survival prospects of organizations have not been empirically examined. Second, institutional theory suggests that organizations are influenced by wider societal and cultural expectations (Dacin, 1997; Oliver, 1997), whose accomplishment would in turn extend life prospects of firms (DiMaggio and Powell, 1983; Oliver, 1991). Accountability is particularly depicted as a salient societal expectation; Hannan and Freeman (1984) highlight it as a constituent feature of modern society. Nevertheless, in spite of the distinctive significance of accountability as a societal demand, investigation of its effects on organizational survival has been neglected by institutional theorists.

Our paper contends that the notions of accountability and organizational survival are causally linked without claiming that such a relationship is unidimensional in nature. Different organizational studies contend that environmental selection is not driven solely by the effects of low performance (Hannan and Freeman, 1977; Scott, 1987; Gimeno et al., forthcoming). In line with these arguments, we assert that accountability is one of the factors that influence life chances of organizations. Therefore, firms that render accounts of their activities enhance their likelihood of survival versus those that do not, everything else remaining equal.

Our investigation attempts to fill several research gaps concerning organizational accountability as a predictor of firm survival. First, little is known about the extent to which accountable organizations show different long-term survival prospects compared with those of nonaccountable organizations. Second, we still have much to learn about the different intensities of institutional and interest groups' pressures for accountability and to what extent these varying pressures elicit agreement and compliance from organizations. Third, there is no available evidence on whether the imposition of legal accountability requirements may diminish the extent to which organizations report on their activities (i.e., the level of accountability), and if this in turn could have some impact on the probability of survival.

THEORY AND HYPOTHESES

Accountability and Survival Chances

Increased rationalization is a notable force of modern society (Weber, 1968; Meyer, 1994). Even though the concept of rationalization and its practical implications are contentious issues in organization theory, there exists some consensus in defining the concept as the deployment of instrumental behavior to reach desired ends (Scott, 1995: 138). Rationalized practices and procedures pervade the terrain of organizations, spreading out a diversity of activities and beliefs buttressed by “institutionalized myths” (Meyer and Rowan, 1977). Institutional theorists (see Scott, 1992: 117) contend that external constituents such as interest groups, nation-states, and professional associations enforce institutionalized myths. Organizations complying with institutionalized myths and their accompanying rules and norms receive social legitimacy and avoid claims of “negligent or irrational behavior” (Meyer and Rowan, 1977).

The aforementioned relationship of accountability between the source and the accountable organization illustrates the process of external pressures for organizations to behave rationally. Due to the increasing distance among all actors involved in the relationship of accountability (e.g., between managers and firms’ stockholders), the accountable organization is required by its external constituencies to expose its stewardship of resources for all to see. Interestingly, Hannan and Freeman note that accountability

does not necessarily mean that organizations must tell the truth both to their members and to the public about how resources were used and how some debacle came about. What matters is that organizations can make internally consistent arguments to the effect that appropriate rules and procedures existed to produce rational allocation of resources and appropriate organizational actions. (1984: 153)

Organizations providing repetitive accounts of their activities, hence, are regarded as stable and reliable and invested with legitimacy. Accountable organizations, then, enjoy the concomitant effects of legitimacy, which in turn increase their access to resources and extend their life chances (Meyer and Rowan, 1977; DiMaggio and Powell, 1983; Oliver, 1991). Selection within organizational populations would tend to eliminate nonaccountable organizations (Hannan and Freeman, 1984). Thus, we hypothesize that:

Hypothesis 1: Accountable organizations should show higher survival chances than comparable nonaccountable organizations.

Pressures for Accountability and Probability of Survival

If Hypothesis 1 is supported, we could conceive of an overt relationship between accountability and survival prospects; the failure of organizations that do not render accounts of their activities would be the ultimate outcome of a process of environmental selection. Accountability demands, however, as many other normative prescriptions arising from the broader sociocultural environment (see Dacin, 1997), can vary over time and across organizations. First, institutional theorists contend that some norms affect organizations with a constant degree of intensity, whereas others increase or decrease their influence on firms over time (see Mezas and Scarselletta, 1994: 654; Scott and Meyer, 1994). Institutions, thus, are not monolithic and do not always elicit compliance and agreement from organizations. Conformity with institutional norms constitutes one organizational choice among the several strategic alternatives to tackle the firm environment relationship (Oliver, 1991). In line with these arguments, we propose that the organizational response to external pressures for accountability, and its collateral effects on life chances, will depend on the expected social worthiness and access to resources attached to such response.

Organizational response to external demands depends on the resources supplied to the firm by constituents (Pfeffer and Salancik, 1978; DiMaggio and Powell, 1983), and this in turn will be subject to the degree of such pressures. Resources not only comprise tangible assets or market share but also political power and social legitimacy (Carroll and Delacroix, 1982; DiMaggio and Powell, 1983). Organizations garner social worthiness by aligning their goals and practices with prevailing values and beliefs in the institutional environment (Baum and Oliver, 1996: 1389). Organizations that obtain social support increase their survival chances by avoiding questions about their actions (Meyer and Rowan, 1977; Meyer and Scott, 1983) and heightening their legitimacy (Oliver, 1991). As Carruthers (1995: 317) puts it, "Being technically efficient is not the only path to organizational survival. Achieving legitimacy in the eyes of the world, state, powerful professions, or society at large is another effective survival strategy."

Second, demands for accountability also vary across organizations. Hannan and Freeman (1984: 153) predict that such pressures are "especially intense during organization building due to the requirements of initial resource mobilization." In particular, accountability pressures, in Hannan and Freeman's opinion, will be more

intense when (1) organizations produce symbolic or information-loaded product; (2) substantial risks exist (e.g., providing medical care); (3) long-term relationships between the organization and its employees or clients are typical; and (4) the organization's purposes are highly political. Although Hannan and Freeman assert that their argument will presumably apply more strongly to organizations in these categories, they also state that all organizations seem to be subject to at least moderate levels of accountability pressures.

Institutional arguments, however, cannot provide a thorough explanation of a firms' behavior and structure. On the contrary, institutional pressures intertwine with other forces (e.g., market) rather than replacing them. Unlike institutional theory, which links external pressures to shared values and institutionalized myths, resource dependence theory underlines that demand compliance will be a function of the organizational expectations of mobilizing resources. Pfeffer and Salancik (1978: 45-50) assert that the dependence of one organization on another constituent will be affected by three factors: (i) the importance of the resource provided by that external party, (ii) the extent to which the external constituent has discretion over the resource allocation and use, and (iii) the extent to which there are few alternatives. It follows that organizational constituents supplying the firm with important resources become its distinctive stakeholders and, in turn, expect their demands to be met.

Stakeholder theory analyzes pressures from different stakeholders. It argues that a stakeholder's power to influence organizational behavior is a function of the stakeholder's degree of control over resources required by the organization (Ullmann, 1985). Freeman (1983) defines a stakeholder as any group or individual who can affect or is affected by the achievement of the firm's objectives. According to Hill and Jones (1992: 140-143), the accomplishment of the stakeholder function requires the existence of (a) monitoring devices that have the effect of reducing information asymmetry (e.g., public reporting demands) and (b) enforcement mechanisms (including the law) and "exit" (the possibility, or credible threat of withdrawal from the stakeholder relationship).

We suggested in Hypothesis 1 that organizational compliance with pressures for accountability from external constituents entails long-term selective consequences. In concrete, shorter periods, however, organizational responses to accountability demands

will depend on the expected social worthiness attached to such practices and/or on the degree of organizational dependence on resources controlled by the external constituent(s) that makes those claims. Thus, we hypothesize that:

Hypothesis 2: The organization's level of accountability will be higher if there are social rewards attached to such practices and/or if there are pressures for information from powerful organizational constituents, and this in turn will enhance the firm's probability of survival.

Voluntary Accountability, Accounting Regulation, and Survival Chances

At a conceptual level, we find inconsistent theoretical predictions of the eventual impact of accounting regulation on accountability, which in turn could affect the probability of organizational failure. Both the institutional theory and the resource-dependence perspectives admit that organizations tackle conflicting environmental pressures. Institutional theorists argue that rules may conflict with one another because ceremonial rules are transmitted by myths that may arise from different parts of the environment (Meyer and Rowan, 1977). The resource-dependence model places more emphasis on the impact that meeting adversarial demands has on access to resources; Pfeffer and Salancik (1978: 27, 43) contend that demands often conflict and that response to the demands of one group constrains the organization in its future actions.

Stakeholder theory provides some perceptive suggestions to operationalize the organizational functioning of competing environmental demands. This theory establishes that stakeholders such as customers, owners, suppliers, and public groups are not adversarial in nature (Freeman, 1983) but may have adversarial positions. Sturdivant (1979) tested conflicts of interest concerning the social responsibility attitudes of stakeholders such as corporate managers and activist group leaders. As expected, the study showed stronger social attitudes in activist group leaders. Meznar et al. (1994) found that corporate announcements of withdrawal from South Africa were accompanied by a significant drop in the value of the withdrawing firms' stock. Results of that study, thus, supported a basic premise of stakeholder theory: Stockholders' interests do not always have preeminent status in firms' management. As far as the management of the disclosure process is concerned, Carnaghan, Gibbins, and Ikaheimo (1996: 176) state that "the larger the set (of stakeholders), the more room for conflict among stakeholders, diffuse disclosure roles and responsibilities, and frequent attention

to disclosure. All of these are likely to lead to ambiguous accountability relationships and an unclear role for the firm's disclosures in meeting stakeholders' information needs." Accounting regulation, it follows, may increase the importance of a stakeholder group, provoking changes in the overall process of accountability. Although management should respond to these changes through the adoption of new routines, the implementation of these routines may be hindered by strong forces such as the resources already expended to set up current practices and existing accountability relationships. If corporate managers face a conflict between the demands for accountability of two different categories of stakeholders, with only one of these demands endorsed by new accounting regulation, it may be expected that managers will stress compliance with the compulsory accountability requirement at the expense of the existing voluntary disclosure. Consequently, this change in priorities may bring about a reduction or elimination in the level of voluntary accountability previously relegated to a different category of stakeholders.

An alternative prediction to the predictions of these studies draws on the contributions of population ecologists (Hannan and Freeman, 1984: 153), who argue that demands for accountability are not only "widespread and intense in the modern world" but are also "strong and getting stronger." This perspective, thus, predicts that organizations would rather satisfy competing demands for information from different stakeholders than diminish the existing levels of voluntary accountability as a consequence of new compulsory accountability requirements. According to this perspective, we conclude that the enactment of new accounting regulation would merely represent a step forward in the ongoing social process that relegates demands for more intense accountability from organizations to external parties.

Given these inconsistent theoretical predictions between the stakeholder and the population ecology perspectives, we reexamine the effects of new accounting regulation on existing voluntary disclosures and the related probability of organizational survival. This leads us to explore the following alternative possibilities:

Hypothesis 3a: New compulsory accounting regulation will affect the existing practices of accountability (stakeholder prediction), or

Hypothesis 3b (ALT): New compulsory accounting regulation will not affect the existing practices of accountability (population ecology prediction).

METHODS

Research Setting

The entire newspaper industry of Spain was used as the population of organizations, comprising all newspapers published in this country during the period 1966-1993. Newspapers are defined as periodicals published at least four times a week. Both generalist and specialist (e.g., sports, medicine) dailies covering either national or local markets fall within the domain of this study.

Newspapers were chosen for bearing potential exposure to the pressures of accountability for a number of reasons. First, Scott (1995: 19) contends that organizations with diffuse goals are more subject to processes of institutionalization. In this respect, newspapers are perceived as entities that may combine financial and political goals (Carroll, 1995). Second, as we noted above, population ecologists predicted that industries producing information-loaded products, as well as those with a highly political component, could experience strong accountability pressures (Hannan and Freeman, 1984: 153). The newspaper industry, we argue, has a strong political component and produces information-loaded products.

The population under study consists of 276 newspapers. Population density peaked during the period 1978-1989, leading to an increase in the number of newspapers from 147 newspapers in the 1966-1977 period to 232 dailies. The density of population then slumped in the 1990-1993 period, resulting in a decrease in daily operation to 167 newspapers. A trait of the population is the low-medium level of its circulation in comparative terms. This central attribute, along with the idiosyncratic characteristics of newspapers' goals, makes this population particularly vulnerable to changes in a turbulent economic, social, and political environment that, as we will see below, characterized the Spanish society during the period 1966-1993. As Carroll (1995: 184) contends, "Both economic and political processes have played roles in shaping the organizational populations of newspapers."

Sources of data

The database was created from three separate primary sources. The sources were set up as a consequence of the promulgation of the Law of Press and Printing of 1966, when Spain was ruled under the dictatorship of General Franco. The law reduced the extent of censorship and instilled in the industry some elements of liberalization. Within

this context, certain sources of data were set up as venues for providing external parties with reliable information on newspaper organizations. The first source of data is the *Registry of the Spanish Public Administration (Registro General de la Administración Pública)*, which contains a census of all the daily newspapers published in Spain since 1966. Firms were obliged to deliver the following general information to the *Registry*: newspaper's name, list of founders, ownership structure, number of pages and price of one paper's issue at the moment of registering, newspaper contents (e.g., general, sports), and address. The second source is the *Media Guide of Spain (Guía General de Medios de Comunicación Social)*, a quarterly publication that reports detailed demographic data on each firm, including when it was founded; when it ceased operations (if applicable); the printing technology it uses; the names of the director of the newspaper, CEO of the company, and advertising manager; the exact date of succession of these senior executives (if applicable); the features of the design of newspaper issues and advertisement rates; and membership in the State political party (until 1977, if applicable). The *Media Guide* provides a directory of all existing newspapers. Certain specific items of the comprehensive demographic list contained in the *Guide* are voluntarily supplied by newspaper organizations. The third source of data is an ongoing report produced by an independent association of newspapers (*Oficina para la Justificación de la Difusión*, OJD hereafter), which audits the circulation of newspapers and publishes monthly reports. The foundation of the OJD mimicked foreign associations, such as those operating in the United States (Audit Bureau of Circulations, since 1914) and France (Office de Justification des Tirages, since 1923), to provide the advertising industry with reliable information on the circulation of dailies. Newspapers are voluntarily audited and, thus, give the OJD auditors access to information concerning their production, distribution, and accounting processes.

We have also collected data on the evolution of the advertising sector during the period 1975-1993 (e.g., the number of advertisements published in newspapers). These data could not be used in the testing of hypotheses as they were not available for the complete period of study. Nevertheless, we used them in the Discussion section of this article as they were instrumental in illuminating the evolution of the Spanish advertising sector, a critical stakeholder for the newspaper industry.

Period of study

The period from 1966 to 1993 witnessed the dramatic social, political, and economic changes that brought about the peaceful replacement in Spain of a military dictatorship with a full-fledged democracy. The starting year of the study, 1966, coincides both with the enactment of the Law of Press and Printing and with the setup of the three sources of data that enable one to track developments in the newspaper industry. The final year of analysis, 1993, corresponds with the deployment of the single European market. To account for the changes undergone by the newspaper industry, the period of study has been divided into the following subperiods:

- (a) The Franco era (1966-1977). Spain had been ruled since 1936 by a military dictatorship headed by General Francisco Franco. The dictatorship, whose origins were characterized by harsh repression and economic autarchy, undertook some timid reforms in the late 1950s and early 1960s to instill the regime with some liberal elements (Guillén, 1994). By implementing the reforms, the dictatorship sought international political recognition and foreign investment. Within this context, the Law of Press and Printing of 1966 played an instrumental role as it diluted the existing censorship and created organizations (e.g., the *Media Guide of Spain* and the OJD) that rationalized the advertising sector. These reforms, though, were outweighed by the regime's deficits in the areas of human rights (e.g., freedom of speech, right of political dissent) and civil rights (e.g., subordination of women to men). The newspaper industry reflected this complex situation; during this subperiod, 42 dailies out of the existing 147 newspapers were owned by the single political party, of Fascist ideology. Moreover, the entire industry was a regular recipient of across-the-board, massive subsidies from the State (e.g., newsprint) to foster political consent with the dictatorship. General Franco died in November 1975. The first free general elections to a democratic Parliament were held in the country in June 1977, right after the suppression of the single-party rule.
- (b) Pre-Corporate Disclosure Regulation (1978-1989). The fundamentals of a full-fledged democracy were enshrined in the liberal Constitution of 1978, whose development required extensive legislative reforms during the 1980s. Spain gained widespread international recognition for its peaceful transition from dictatorship to democracy. The recognition rendered tangible results: The international community

endorsed the entry of Spain into exclusive organizations such as the North Atlantic Treaty Organization (NATO), in 1982, and the European Economic Community (EEC), in 1986. Spain's entry into the EEC involved a hectic period of legislative reforms to harmonize the Spanish political and economic systems with the requirements of the EEC. In the area of company regulation, Spain issued laws and decrees to reform its stock market (1988), auditing sector (1989), and, as we will see below, company's disclosure policy (1990). The newspaper industry was affected by the liberal reforms put in place since the promulgation of the Constitution of 1978. First, newspapers formerly affiliated with the single party were either privatized or closed down, and second, the State dispensed with its policy of providing across-the-board subsidies to the industry.

- (c) Post-Corporate Disclosure Regulation (1990-1993). The 1990s witnessed an increasingly active role by Spain in the international arena, especially reflected in the Spain's hosting of events such as the Middle-East Peace Summit (1991) and the 1992 Olympic Games. Reforms of corporate regulation concluded with the promulgation of the Decree on Corporate Disclosure (DCD) of 1990, alluded to above, which harmonized domestic regulation with European standards. In particular, the DCD particularly forced Spanish firms to prepare their financial statements according to a strict interpretation of the 4th EEC Directive on corporate law. Since 1990, Spanish public corporations are obliged to deliver their financial statements to a mercantile register (*Registro Mercantil*). Until 1990, the rule requiring public notice of companies' financial statements only applied to firms operating in regulated industries and/or listed on the stock market.

Operationalization of the variables

Organizational duration. The duration of each newspaper was calculated as the difference between its founding and failure dates. Failure was defined as bankruptcy or a permanent cessation of operations. Duration was measured through an indicator that divided the number of days a newspaper was in operation by 365. If the firm continued to exist as of 1993, it was treated as right-censored data (see Lawless, 1982: 31, for a discussion of this topic). This duration index is considered dependent, that is, as the variable to be explained in the models.

Accountability. In spite of our understanding of the notion of accountability as a single phenomenon, we created two variables (the *Media Guide Accountability* and *Circulation Audits*) to measure its effects on the likelihood of survival. The two variables serve to capture different dimensions of the notion of accountability, as shown by their low Cronbach alpha coefficient (0.4847) (see Cronbach, 1951). The variables were created for the complete period of study as well as for each subperiod. The first construct draws on the data collected from the *Media Guide of Spain (Media Guide Accountability)*, which contains information about five internal attributes of newspapers. To elaborate a measure of this variable, the following procedure was used: Organizations received a score on the *Media Guide Accountability* variable equivalent to the division of reported items by five, which is the maximum number of items to be reported through this source of data. The second construct is supported by information published in the OJD reports (*Circulation Audits*). This variable was measured as the proportion between the time that one newspaper was actually audited by the OJD and the time that the newspaper was in operation.

Both constructs reflect accountability practices of Spanish newspaper organizations. First, accountable organizations supplied information to the *Media Guide* on such critical attributes as their printing technology, the features of newspaper design, advertising rates, and names of the director of the newspaper, CEO of the company, and advertising manager. Moreover, accountable newspapers allowed their circulation to be audited by the OJD. Second, newspaper organizations were never obliged to render information to the *Media Guide* or to be audited by the OJD. Third, both the *Media Guide* and the OJD were legally compelled to provide their services to any newspaper asking for them. Fourth, no other source of data gathered information about the internal attributes of newspapers, with the aforementioned exception of the mercantile register since 1990, or audited their circulation.

Pressures for accountability. Social rewards and pressures from powerful constituents influence organizational levels of accountability, according to the suggestion of Hypothesis 2. Accountability demands, we argue, do not arise from the wider sociocultural environment with an invariable magnitude but vary across time. In particular, we expect that accountability practices will garner lower social support during periods of dictatorship than during periods of democracy, and this in turn will

imply a lower influence on firms' likelihood of survival. Democracies are characterized by the practice of rendering accounts to constituents, and such a norm, we contend, pervades the domain of organizations existing at this time. Dictatorships, in contrast, provide less information on their activities and criteria of resource allocation to external parties, and we argue that such habits permeate the realm of firms during this era.

To test Hypothesis 2, which indicates that social support and constituents' demands influence the degree of organizational accountability, we have further aggregated the Pre-Corporate Disclosure Regulation and Post-Corporate Disclosure Regulation subperiods into a more comprehensive one, the Democratic epoch (1978-1993). Organizational levels of accountability exhibited during this epoch will be compared with those existing during the Franco era (1966-1977) to ascertain the eventual differences in pressures for accountability during two remarkably different political regimes: dictatorship and democracy.

Control variables

Survival rates may also be influenced by independent factors other than accountability. Drawing on the vast empirical work of population ecologists on newspaper organizations, we have controlled for both organizational and environmental variables to test the robustness of the models shown in this investigation. Three organizational attributes were considered as control variables. Newspapers' *contents* were controlled through a dummy variable (Carroll, 1985; Miner et al., 1990). We accounted for this with one (1) where the newspaper was characterized by general contents and zero (0) if the daily was dominated by one subject matter (e.g., sports, business, medicine, or ship transportation), that is, if it was specialized. Market focus was measured using two dummy control variables of coverage. Papers distributed to at least 15 Spanish provinces were classified as of *national coverage*. The dummy variable was coded one (1) if the daily had a national coverage and zero (0) if otherwise. Moreover, newspapers distributed to 14 or fewer Spanish provinces but to more than one province were classified as of *regional coverage*. The regional coverage variable was coded one (1) if a daily met with the abovementioned criterion; it was coded zero (0) otherwise. We measured, hence, the effects of papers with a local focus, that is, dailies distributed to just one province, through a linear combination of the two dummy variables of coverage. Coverage may also be considered as a proxy variable of size.

Following the Box-Jenkins methodology, we have fitted the best stationary time-series model to the circulation data of national, regional, and local OJD-affiliated newspapers. We have then used these estimations to test which averages are larger, for independent samples and different variances. The results showed support for the notion that the mean of national newspapers is larger than that of regional ones ($p < 0.0000001$), and the latter being also larger than that of local ones ($p < 0.0000001$). Lastly, we entered a dummy control variable to reflect the impact of newspapers belonging to the single political party (Miner et al., 1990), which we designated as *party press*. We accounted for this with one (1) if the newspaper was owned by the single party and zero (0) if otherwise.

In this study, we used five variables to control for environmental effects. Competition was measured through population density (Carroll and Hannan, 1989; Hannan and Freeman, 1989; Miner et al., 1990). The nonmonotonic effects of population density on mortality rates have been tested in the empirical contributions of population ecologists (e.g., Baum and Mezias, 1992; Baum and Korn, 1996). Population density was defined as the number of operating newspapers at the point of one daily's exit. We created the *density* and the square of density divided by 100 ($density^2/100$) variables as indicators of this effect. Niche width approaches the *market prospects* of a population of organizations. The present study comprises the market prospects of the newspaper industry of Spain as the population (in millions) of literate people who are older than 16 years. Data to support this variable were gathered from the *Labor Force Survey (Encuesta de Población Activa)*, a quarterly report published by the Spanish National Bureau of Statistics (*Instituto Nacional de Estadística, INE*). We used the *gross national product* (GNP, in milliard pesetas) as an indicator of the economic situation of the country (Carroll and Delacroix, 1982). Information about the GNP was collected from the reports of the Organization for Economic Cooperation and Development (OECD). To measure trends in GNP during the period, GNP data are shown in constant currency in comparison with the GNP value of 1986, as provided in the OECD reports. We entered two variables to measure control for the activity of the newspaper industry. Information on the *consumption of newsprint* (in 100 million tons) was gathered from the OECD reports; data on the *consumption of books and magazines* was collected from the *Spanish National Accounts*. Both variables are also shown in

constant currency, with 1986 designated as the base year. Lastly, we accounted for the fact that our observation periods started when some newspapers were already in operation. To control for these left-truncated data (see Guo, 1993), we entered the variable *Log (Age)*. It was created for the years 1966, 1978, and 1990, according to the models.

Model

We have used lifetime data models (Lawless, 1982; Cox and Oakes, 1984), due both to the dynamics of the phenomenon of organizational survival and to the existence of censored values (Morita, Lee, and Mowday, 1993). First, following Levinthal (1991), a parametric analysis was conducted to test the distribution fit by applying both Akaike's (1974) criterion on model comparisons, such that the chosen model maximizes $A = \log(\text{maximum likelihood}) - (\text{number of estimated parameters})$, and Schwarz's (1978) criterion, which establishes that the chosen model maximizes $B = \log(\text{maximum likelihood}) - \frac{1}{2} \log(n) \times (\text{number of estimated parameters})$ (see Rust and Schmittlein, 1985, for a comparison of the two criteria). We have used the SAS package (SAS Institute, 1990) to calculate the log (maximum likelihood) of the data distribution under consideration (see Table 1). The lognormal distribution provides the best fit of the data as it maximizes both Akaike's and Schwarz's criteria.

----- Insert Table 1 about here -----

The lognormal distribution assumes a linear relationship between the logarithm of the dependent variable and the independent variables. Models contained in this study can be expressed in the following form:

$$\log(t) = \alpha + \beta X + \sigma \varepsilon$$

such that t is the organizational duration, β is a vector of coefficients for the independent variables, X represents the exogenous and control variables, σ is a scale parameter, and ε is a random error. If β is positive, it means that the process of accountability increases life chances of newspapers, or (its converse) it decreases the failure rates; if β is negative, the opposite outcome results. The influence of the independent variables on survival chances ($E(t)$) or (its converse) on mortality rates ($r(t)$) may be analyzed as follows (Lawless, 1982; Cox and Oakes, 1984):

$$r(t) = f(t)/S(t) = \lim_{\Delta t \rightarrow 0} \Pr(\text{failure at } t, t+\Delta t \setminus \text{alive at } t)/\Delta t$$

such that $f(t)$ is the density function of the t lognormal variable and $S(t)$ is the survival function of t .

Second, we estimated the lifetime data models that test the diverse hypotheses by entering into the location parameter the values of the exogenous and control variables. The coefficients were estimated using the LIFEREG method (SAS Institute, 1990: 997-1025).

ANALYSIS AND RESULTS

The population of newspapers consists of 276 entities; 238 dailies were classified as of general contents while the remaining 38 newspapers were dominated by a specialized focus. As far as coverage is concerned, 30 dailies targeted the national audience, 56 papers a regional audience, and 186 newspapers a local audience. The population experienced a dramatic increase in the number of newspapers audited at least once by the OJD, growing from 25% of the population during the Franco era (1966-1977) to 49% in the Pre-Corporate Disclosure Regulation subperiod (1978-1989), and peaking at 60% in the Post-Corporate Disclosure Regulation subperiod (1990-1993). Lastly, 42 dailies were owned by the State political party (until 1977), and 118 newspapers already operated at the starting point of the period of observation, 1966.

----- Insert Table 2 about here -----

We calculated a regression for the complete period under study (1966-1993) to test the influence of the different variables on the long-range performance (survival) of the entire population (Hypothesis 1; see model 1 in Table 2). The hypothesis is supported if the coefficients for the two variables of accountability (the *Media Guide Accountability* and *Circulation Audits*) are positive and statistically significant. Model 1 shows that coefficients of both measures for accountability are positive and statistically significant ($p < 0.0001$). These results provide strong support for H1: The practice of rendering voluntary accounts to external constituencies has a positive effect on organizational survival. Control variables such as national coverage, regional coverage, and Log (Age), as well as those variables related to newspapers' market (e.g., GNP, consumption of newsprint, and consumption of books and journals) also affected the survival chances of organizations in this population. On the other hand, $\text{density}^2/100$ showed a low significant ($p < 0.1$), positive effect on life prospects.

We have used lifetime models in the Franco era (1966-1977) and the Democratic

(1978-1993) epoch to test the reaction of the population to environmental pressures for accountability (Hypothesis 2; see models 2 and 3 in Table 2). The hypothesis is supported if the coefficients of the accountability measures for the Democratic epoch's model are positive and show stronger significance than those obtained for the Franco era's model. Results presented in model 2 provide support for H2: In the model calculated for the Democratic epoch, the two measures for accountability are positive and statistically significant ($p < 0.0001$ for both variables). In contrast, results obtained for the Franco era only show significance for the coefficient of the *Media Guide Accountability* ($p < 0.001$). Therefore, we contend, environmental pressures for accountability during the Democratic epoch provoked the deployment of more accountability practices by newspapers than during the Franco era, and this in turn had a differential impact on survival chances of firms in each epoch. Results obtained for the control variables of the Franco era revealed no significant effect on the likelihood of survival of firms. In contrast, control variables for the Democratic epoch showed effects on survival similar to those noted in model 1.

Finally, we have calculated two regressions (models 4 and 5 shown in Table 2) to test the significance of the coefficients of the accountability measures concerning practices developed before and after 1990, that is, when a change in the accounting regulation required Spanish companies to both prepare more comprehensive accounting information and to deposit their financial statements in a public registry (Hypotheses 3a and 3b). The population ecology prediction (H3b) suggests that the enactment of compulsory accounting regulation does not affect the existing levels of accountability. It is supported if coefficients for both models are positive and statistically significant. In contrast, the stakeholder prediction (H3a) indicates that the promulgation of new compulsory accounting regulation affects the existing degree of accountability. It is supported if coefficients for model 4 are positive and statistically significant while coefficients for model 5 have weaker significance. Results presented in models 4 and 5 support H3a (stakeholder prediction): With regard to the Pre-Corporate Disclosure Regulation subperiod (1978-1989), the *Media Guide Accountability* variable had a positive coefficient (1.3268) and strong significance ($p < 0.001$). Likewise, the *Circulation Audits* measure had a positive coefficient (0.5871) and statistical significance ($p < 0.05$). In contrast, coefficients of both accountability variables during

the Post-Corporate Disclosure Regulation subperiod were positive (0.5795 and 0.8766), but only the *Circulation Audits* construct showed some significance ($p < 0.1$). Control variables such as density and density²/100, which controlled for the effects of competition, displayed significant effects on survival during the Pre-Corporate Disclosure Regulation subperiod (1978-1989), whereas variables controlling for general and industry economic conditions (e.g., GNP, market prospects, consumption of newsprint) showed a significant influence on life prospects of organizations during the Post-Corporate Disclosure Regulation subperiod (1990-1993).

DISCUSSION

The prediction that external accountability has a salutary effect on organizational survival is at least implicitly suggested by several studies (e.g., population ecology, institutional theory, resource dependence theory, and stakeholder theory). As noted at the outset, however, empirical testing of this proposition has been overlooked by organizational analysts. The findings presented here show unequivocal support for the notion that organizations that render accounts of their activities are invested of legitimacy, and this in turn increases their access to resources and extends their life chances. These findings, however, do not imply a unidimensional relationship between the notions of accountability and organizational survival. In contrast, we assert that accountability is among the factors that influence environmental selection.

The results of this study are supported by an empirical investigation of the entire newspaper industry of Spain during the period 1966-1993. This country, we contend, experienced a rare combination of radical and peaceful changes in its economic, social, and political structures amid a relatively short period of time. During the observation period, the country witnessed a steady trend toward economic deregulation and market liberalization from a previous situation of economic concentration and autarky; and toward playing an active role in the international arena after a long tradition of political and economic isolation. Spain, thus, constitutes a quite unique social setting to study how organizations deal with their ever-changing environments, especially in cases of firms characterized by considerable ambiguity in their goals. This ambiguity particularly applies to newspaper organizations, which intermingle the features of both production and institutionalized organizations (Meyer and Rowan, 1977).

Our findings rely on the quality of the databases used in this investigation. First,

we were able to gather information on the external accountability practices of the entire population of newspapers and to measure the independent variables at a point in time before the dependent variable was measured (see Miner et al., 1990: 708). This allowed us to explore the possible causal relationship between accountability and organizational survival. Second, the sources of data were able to capture that aspect of accountability that linked newspaper organizations to the population of advertising companies and the society at large; both the OJD audits and the *Media Guide* reports provided constituents with accurate information on newspapers' circulation as well as on some internal attributes of these firms. Advertising companies, for example, used this information as a central element in deciding in which media to advertise, in turn supplying newspaper organizations with an outstanding proportion of their total income.

Our findings show a clear-cut relationship between practices of accountability and organizational survival, everything else remaining equal. These results, however, posit some doubts about the rationality of organizations that do not publicize their internal attributes; that is, why some firms would not be accountable given the effects on their legitimacy and survival. As Amburgey and Rao (1996: 1274) contend, this question concerns the vicious circle of "poor performance which excites high risk taking and poor performance." In this context, we argue, poor performance organizations would make a short-term decision not to render accounts of their activities. To proceed with accountability practices, the firm would have to expect to achieve higher performance. Poor performance organizations that dispose of accountability practices enmesh themselves in a process of lack of legitimacy and poorer performance, which constitutes a serious threat to the firm's survival.

The results provide support for the prediction that accountability has a positive impact on survival chances. This conclusion has three additional implications. First, albeit with different degrees of intensity, it applies to the complete period of study as well as to its subperiods. The results reveal that organizations that do not respond to accountability demands face higher death rates in the long term than comparable organizations that do. The generalizability of the conclusion applies to the sundry political, social, and economic circumstances experienced in Spanish society during the period 1966-1993. These diverse circumstances did not buffer nonaccountable organizations from failure in the long term. The findings obtained in this study, thus, are

consistent with the notion that organizations that embed accountability practices in their routines enhance their survival chances. Second, the results of this investigation support Hannan and Freeman's (1984) assertion that organizations that deliver information-loaded products, as well as those that are highly political, face strong accountability pressures. As we noted above, the newspaper industry fits into both categories of organizations. Third, several studies highlight accountability as a salient feature of modern organizations. The results of this study demonstrate that the importance of the accountability process pervades the domain of the survival chances of organizations operating in this population.

This paper supports the prediction that organizations' level of accountability will be higher if external pressures for information exist. Although it is tempting to suggest that market and institutional pressures are adversarial in nature, the results of this analysis show the concomitant effect of such pressures in eliciting compliance from newspaper organizations to demands for accountability. First, we demonstrated that institutional pressures for accountability were significantly higher during the Democratic epoch than the Franco era, and this in turn affected the life chances of firms. Thus, organizations of this population had to achieve higher levels of accountability during the Democratic epoch to maintain the same survival chances they enjoyed during the less demanding, Franco era. In short, the higher effects of accountability on organizational survival during the Democratic epoch (1978-1993) compared with the Franco era (1966-1977), we argue, can be at least partially attributed to stronger pressures for accountability arising from the broader sociocultural environment during periods of democracy. In such periods, accountability constitutes an institutional demand that pervades the organizational terrain. Second, advertising companies constitute a substantial segment of the newspaper business process. Sohn, Ogan, and Polich (1986) describe the newspaper business process as the sale of newspaper issues to readers and the subsequent "sale" of the reader to advertisers. According to these authors, while the first part of the process accounts for one third of newspapers' sales turnover, the "sale" of the reader accounts for the remaining two thirds of total revenues. Therefore, we contend that newspaper organizations are largely dependent on the resources supplied by advertisers (Pfeffer and Salancik, 1978). In the particular case of the Spanish newspaper industry, the liberalization of the Spanish economy that

accompanied the transition from dictatorship to democracy accentuated the importance of the advertising industry. For example, according to reports on the market for publicity made by *Nielsen Reprass*, the number of advertisements published in Spanish newspapers increased from 38,630 in 1976 to 100,478 in 1992, which in turn increased the number of equivalent full pages containing advertisements from 33,240 in 1976 to 78,230 in 1992. This increase in both the number of advertisements and pages containing advertisements resulted in significant growth in the volume of total investments made by advertising agencies in newspaper publicity which, according to the *Nielsen Reprass*, increased from USD 200 million in 1975 to USD 1.575 billion in 1993. Overall, these market data depict the advertising sector as an expanding industry in the country. Accountability demands stemming from both institutional and market forces had a significant impact on the behavior of the newspaper industry. The percentage of newspapers audited by the OJD increased from 25% of the population during the 1966-1977 subperiod to 60% of the population in the 1990-1993 subperiod. Likewise, a comparison of the accountability measures for the Franco era (1966-1977) versus the Democratic epoch (1978-1993) yielded support for the prediction that pressures for accountability were stronger in the latter period, and this in turn had a selective effect on organizations of this population.

The results of the study support the prediction of the stakeholder theory that compulsory accountability requirements will affect existing levels of accountability. This finding, hence, endorses the notion that a larger number of stakeholders leads to ambiguous accountability relationships, and that this in turn diminishes the existing levels of accountability. This tidy logic implies that compulsory accountability regulation affects practices of accountability if the new regulation enhances the position of one category of stakeholder at the expense of others, with the concomitant effects on the allocation of organizational resources to meet the new demands for information. It was the case, we argue, with the accountability requirements established in the Decree on Corporate Disclosure, which required Spanish firms to apply the new regulation and to submit their financial statements to a public registry. This information was of critical relevance for stakeholders such as creditors, customers, and potential investors of newspaper organizations. Moreover, some of the items that firms reported to the *Media Guide* (e.g., names of the director of the newspaper and CEO of the company, printing

technology, and advertisement rates) were redundant with the information to be reported in the Notes to financial statements.

Taken together, the results of testing for the three hypotheses support the prediction that institutional processes do not always elicit conformity and compliance from organizations (Oliver, 1991; Scott and Meyer, 1994). The findings of this paper reveal a rich variety of organizational responses to institutional pressures for accountability. For example, Hypothesis 1 showed that organizations that implemented the tactic of compliance with institutional pressures to render accounts of their activities enhanced their life chances in comparison with those that did not. This conclusion stems from the analysis of the complete observation period. Its applicability to the different subperiods, however, is not straightforward and provides two interesting insights. First, organizations are prone to dismiss institutional pressures “when the potential for external enforcement of institutional rules is perceived to be low” (Oliver, 1991: 156). Results of testing Hypothesis 2 suggest that newspaper organizations during the Franco era (1966-1977) showed a low profile in the activity of reporting about their internal attributes. Therefore, we argue, newspaper organizations at that time perceived that institutional pressures for accountability did not entail an environmental threat over organizational survival. Consequently, some organizations dismissed institutional pressures for accountability and still survived. Second, Oliver (1991: 153) asserts that a tactic of balance will be implemented “when external expectations conflict . . . (and) organizations’ interests may be served most effectively by obtaining an acceptable compromise on competing objectives and expectations.” In the case of the Spanish newspaper industry, a tactic of balance was the response of organizations to the increasing accountability requirements enacted in the Decree on Corporate Disclosure of 1990. Newspaper organizations accommodated the demands from different sources of accountability by shifting their reporting on redundant internal attributes from the *Media Guide* to the Notes to financial statements. Dailies, however, continued to report to the OJD.

Control variables provide interesting conclusions on the behavior of organizations of this population. First, the coefficients of the Log (Age) variable were significant and showed that firms in operation at the beginning of each subperiod of analysis had longer survival expectations than the average of the population. Second,

competition was measured through the number of newspapers operating in each subperiod. Coefficients of the Density and Density²/100 control variables for model 4 revealed a nonmonotonic relationship with survival. These results concurred with those found by Baum and Korn (1996: 285) and, thus, departed from the findings of the density-dependence model (Hannan and Freeman, 1989: 131-141). Lastly, the coefficients of the Party Press variable were nonsignificant for all models. This finding deviates from the notion that firms with institutional linkages are buffered from the influence of societal and cultural expectations (Miner et al., 1990; Baum and Oliver, 1991) and thereby are enmeshed in a process of partial selection. The explanation for this seemingly contradictory finding, we contend, rests on the State ownership of party-affiliated dailies. In this respect, several studies argue that public sector agencies satisfy intense pressures to render accounts of their activities (Vickers, 1965; Hannan and Freeman, 1984).

Our paper also bears considerable limitations, which could encourage future work. First, the Spanish society underwent a turbulent period of changes which forged strong institutional and market pressures for accountability on organizations, especially during the Democratic epoch. Ultimately, these intense pressures could be attributed to the social reaction to the authoritarian environment that characterized the Franco era. Therefore, only further research on the relationship between accountability and organizational survival conducted in more stable settings will shed light on the generalizability of our conclusions. Second, the newspaper industry bears potential exposure to accountability pressures. Hence, we contend, future work on populations that do not fit into Hannan and Freeman's categories of organizations that experience strong pressures for accountability will reveal the consistency of our findings. Third, our investigation has used the population of Spanish newspapers as a unit of analysis. Therefore, we could not discern pressures for accountability from sources that seem to predominate at the local level (e.g., market forces; see Hannan, et al., 1995; Dacin, 1997) from those operating at the global level (e.g., institutional prescriptions). Finer-grained data will reveal the extent to which pressures for accountability stem from local and global sources. Fourth, we relied on coverage variables (e.g., national, regional, and local), measured through the circulation of OJD-affiliated newspapers as proxies of size. The development of indicators of size for the entire population provides considerable

potential for future work. Lastly, our results suggested the existence of a causal link between the concepts of accountability and survival, everything else remaining equal. Because of our lack of circulation data on non-OJD-affiliated newspapers, we could not identify to what extent accountability could capture the effects of variables such as size and performance in organizational survival.

This paper has focused on the survival implications of organizational responses to societal and cultural expectations of accountability. Our propositions have been tested in the unique social laboratory provided by the Spanish society during the period 1966-1993. It allowed us to find a rich variety of organizational responses to the ever-increasing sociocultural pressures for accountability. The findings of this study may provide some insights into the prediction of several organizational literatures that accountability plays a distinctive role in the process of firms' selection.

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Table 1

Distribution Fit					
Model	Akaike Criterion	Schwarz Criterion	Log Likelihood	Location Parameter	Scale Parameter
Lognormal	-634.273	-637.714	-632.273	3.5911	2.6780
Loglogistic	-638.866	-642.487	-636.866	0.0950	0.6499
Weibull	-639.538	-643.158	-637.538	0.0125	0.5415
Gomperz	-666.227	-669.848	-664.227	-3.4843	-0.0236
Normal	-792.484	-796.105	-790.484	57.1423	50.5503
Logistic	-798.256	-801.876	-796.256	52.4978	30.1255
Extreme Value	-823.731	-827.351	-821.731	84.8329	49.7286

Table 2

The Impact of Accountability on Survival Chances

	Model				
	1 Total Period 1966-1993	2 Franco Era 1966-1977	3 Democratic Epoch 1978-1993	4 Pre-Corporate Disclosure Regulation 1978-1989	5 Post-Corporate Disclosure Regulation 1990-1993
Newspapers' contents	-0.5032 † (0.305)	-6.0540 (20982.6)	-0.3698 (0.274)	0.3118 (0.299)	-0.5037 (0.338)
National Coverage	-1.1889 *** (0.307)	0.1732 (1.415)	-0.8741 ** (0.268)	-0.2985 (0.303)	-0.2135 (0.290)
Regional Coverage	-0.8425 *** (0.239)	-0.6069 (0.567)	-0.4956 * (0.218)	-0.1867 (0.229)	-0.3461 (0.257)
Party Press	-0.0276 (0.248)	0.6161 (0.835)	-0.2459 (0.261)	-0.0119 (0.231)	0.3726 (0.642)
Log(Age)	0.6764 *** (0.058)	0.1691 † (0.090)	0.7980 *** (0.056)	0.8593 *** (0.055)	0.8025 *** (0.066)
Density	-0.4259 (0.260)	-30.7667 (19.327)	-0.1568 (0.234)	-2.7058 *** (0.655)	-1.9474 (1.439)
Density ² /100	0.1925 † (0.104)	12.6880 (7.868)	0.0907 (0.093)	1.1935 *** (0.280)	0.7304 (0.519)
Gross National Product	-0.2025 ** (0.062)	0.0384 (0.166)	-0.2533 *** (0.076)	0.0801 (0.096)	-3.3165 *** (0.779)
Market Prospects	0.6999 *** (0.206)	-0.8859 (1.408)	0.8029 * (0.330)	-0.6746 (1.030)	1.8455 *** (0.515)
Consumption of Newsprint	-0.5288 (0.334)	3.4860 (4.595)	-0.7123 (0.449)	1.3690 (2.097)	9.2769 ** (2.907)
Consumption of Journals and Books	0.0118 ** (0.003)	0.0133 (0.013)	0.0194 † (0.011)	0.0065 (0.018)	
Media Guide Accountability	2.3899 *** (0.376)	3.1632 *** (0.853)	1.7091 *** (0.361)	1.3268 *** (0.362)	0.5795 (0.375)
Circulation Audits	2.0052 *** (0.341)	1.1446 (1.194)	1.4716 *** (0.295)	0.5871 * (0.292)	0.8766 † (0.519)
Constant	11.3164 (17.860)	1878.5178 (21015.73)	-7.8071 (16.446)	162.3002 *** (46.809)	204.3118 † (104.396)
χ^2	342.7946 ***	116.4441 ***	334.5599 ***	276.6518 ***	201.9165 ***
d.f.	13	13	13	13	12

**** $p < .0001$; *** $p < .001$; ** $p < .01$; * $p < .05$; † $p < .1$
Standard Errors are in Parentheses