Journal of Research in Economics and International Finance (JREIF) (ISSN: 2315-5671) Vol. 1(3) pp. 70-102, September 2012
Available online http://www.interesjournals.org/JREIF

Full Length Research Paper

What determines the citation rates of family Business research articles?

***SHI Ben-ren, **YANG Zhi-qiang, *SHI Shui-ping**

*Accounting Department of Management School, Jinan University, Guangzhou 510632, China.
**Accounting School of Guangdong University of Business Studies, Guangzhou 510320, China.
*Accounting Department of Management School, Jinan University, Guangzhou 510632, China.

Abstract

Citation analysis has been widely adopted to empirically investigate the structure of and scholarly activities in various disciplines, including the field of family business research. However, the factors affecting citation rates have not been extensively studied. Here, we examine the association between the citation rate and various characteristics of journals, articles and authors using a sample data of 832 family business research articles from 98 journals over the period from 1989 to 2010. Our analysis shows that there are asymmetric impacts of characteristics of journals, authors and articles on citation rate, social factors play a significant role in citation decisions in family business research, while the characteristics of individual article exhibit a relatively moderate influence on citation rate. These results cast doubt on the validity of using citation rates as an objective and unbiased tool for academic evaluation in family business research.

Keywords: Citation rates, Family business, Journal impact factors, Authorship characteristics, GMM estimate.

INTRODUCTION

Citation analysis has been widely employed to empirically investigate the structure of and scholarly activities in many social and natural sciences (Garfield 1979). In the context of family business research, Jose Casillas and Francisco Acedo (2007) use author co-citation analysis (ACA) to identify different research trends within the field, studying all the articles published in the Family Business Review from its foundation in 1988 through to the December 2005 issue. As the development of family business research as an area worthy of independent study (Wortman, 1994), it seems appropriate to extend Jose Casillas and Francisco Acedo's (2007) study by performing a more comprehensive citation analysis of the determinants of the citation rates of family business research articles.

How do articles get cited, and why are some cited more than others? Citations are traditionally regarded as the formal acknowledgement of the previously published sources of information that relate to the citing author's research (Merton, R. K., 1942) Weinstock (1971) reviewed citation indexes, in general, and summarized the reasons why an author may cite a paper as follows: to give credit to related work; to pay homage to pioneers; to identify methodology, equipment, etc. To provide background reading; to correct one's own work or the work of others; to criticize previous work; to substantiate claims; to alert readers to forthcoming work; to provide leads to poorly disseminated, poorly indexed, or uncited work; to authenticate data and classes of facts; to identify the original publication in which an idea or concept was discussed; to identify the original publication describing an concept or term; to disclaim work or ideas of others; or to dispute priority claims of others. Thus, the number of times that a publication has been cited by other authors might indicate its overall scientific utility (Garfield, E, 1979) and the quality of their productivity. Given this consideration, citation rates are commonly used by

Corresponding Author E-mail: tyangzq@gdcc.edu.cn: Telephone: (+86)13763370249

decision makers to assess the academic performance of individual researchers (Garfield, 1970, e.g., Coleand Cole, 1973), departments and research institutions when making decisions about funding, hiring, promotion and tenure (e.g., Narin, 1976; Bayer and Folger, 1966; Garfield, E, 1992; Adam, D, 2002), books and journals (e.g., Garfield, 1972, Nicolaisen, 2002), as well as to compare the development of different disciplines (Lewison, 1998, Tijssen et al., 2002) and national scientific outputs(King,D.A,2004). Not surprisingly, citation rate have been advertised as objective quantitative indicators of scientific performance and a valuable addition to conventional methods of research evaluation, such as peer review (Garfield, E, 1979).

A problem arise here is whether highly cited articles necessarily mean a better academics' research output than relatively lower cited articles in the field of family business when we are confronted with the abundance of available articles ? If not, what determinations should we concern? As stated above, the use of citation rates for academic evaluation is based on the assumption that authors select references based on their relevance and contribution to the author's own work, so evaluative bibliometric analyses are suitable for the assessment of scientific results, as a substantial body of literature has shown that the number of citations to scientists' publications are correlated with other assessments of scientists' impact or influence, such as awards, honors (e.g., Myers, 1970 Cole, 1971, Inhaber and Przednowek, 1976), departmental prestige (e.g., Anderson et al., 1978, Hagstrom, 1971),research grants (e.g., Hagstrom, 1971), academic rank (e.g.Cole, 1972), and peer judgments (Simonton, 1992; Smith and Eysenck, 2002; Daniel, 2004; Aksnes and Taxt, 2004; Bornmann and Daniel, 2005). However, in practice, the motives of citation decisions are far from peer academic aspect, citation rate might be affected by a variety of subjective and social factors, such as flattery (citations of editors and influential colleagues who are likely to be used as referees) (Seglen, P.O, 1998); interpersonal connections to cited authors (preferential citing of colleagues within an institution) (Case, D.O. and Higgins, G.M); journal prestige (e.g. Henkens, 2005); nationality (Wardle, D.A, 1995; Paris, Get al., 1998); gender (Davenport, E. and Snyder, H., 1995), and so on. Garfield (1972), the founder of the Institute of Scientific Information, pointed out that the probability of being cited depends on many factors that do not have to do with the accepted conventions of scholarly publishing, citation rates are a function of many variables besides scientific impact, such as time dependent factors, Field dependent factors, Journal dependent factors, Author/reader dependent factors, Availability of publications, technical problems et cetera. These considerations make others doubt that citation rate can reflect the impact of scientific activity (e.g., Woolgar, 1991; Adam, D, 2002).

To what extent are these concerns about the objectivity of citation rate justified in family business research? Do the special aspects of family business research, say, the succession topic (comparing to the relatively mainstream topic, such as corporation governance), and the family embeddedness perspective (comparing with agency theory) for example, significant relatively with citation rate. If not, what determine the family business research articles' citation rate? Here, we examine systematically the association between the citation rate of family business research articles and various characteristics of journals, authors and articles; we reason that, if citations reflect the scientific utility of a study, citation rates should be associated primarily with the characteristics of that study per se. However, if social factors play a significant role in reference selection, we might expect citation rates to correlate with author characteristics or journal prestige. Here, we examine the association between the citation rate and various characteristics of journals, articles and authors using a sample data of 832 family business research articles from 98 journals Included FBR, ETP, JBV, JBR, SBE, and JSBM (Specialized journals); and AMJ, ASQ, AMR, SMJ, OS, JF, JAE, JFE, AOS, AR, CAR, JAR, AF (Mainstream journals). over the period from 1989 to 2010. Our analysis shows that there are asymmetric impacts of characteristics of journals, authors and articles on citation rate, social factors play a significant role in citation decisions in family business research, while the characteristics of individual article exhibit a relatively moderate influence on citation rate. These results cast doubt on the validity of using citation rates as an objective and unbiased tool for academic evaluation in family business research.

The first major contribution of this paper is that it complements prior studies on bibliometrics literature by empirically examining the determinates of citation rates. Compare to the Univariate analysis of prior bibliometrics studies; we adopt Multivariate Statistical Analysis in this paper. Specially, we derive our main results using ordinary least squares (OLS) regression. To deal with endogeneity problem, we also use GMM estimate.

The second major contribution of this paper is that it is the first step in the exploration of the association between the citation rates and various characteristics of journals, articles and authors, in the family business research field. It has deepen the understanding of family business research structure, especially in the last ten year with the growing attention being devoted to family business and the growth of scholarship on this area. Specially, it extends the existing literature on the topics, theoretical groundings, research methods, funding supported, authors distribution characteristics et cetera of family business research field.

Thirdly, the results of this paper cast doubt on the validity of using citation rates as an objective and unbiased tool for academic evaluation in family business

research. Since It is unlikely that the most well known mechanism for addressing research quality will be abandoned, it is clear that all scientists should become familiar with the method of citation analysis and the various applications to which it is being put, whether or not they consider the basis for such applications well-founded; while librarians, editors, publishers, and other stakeholders need a clearer understanding of citation rates data if they are to use it in a more sophisticated and critical way.

Literature Review and Hypothesis Development

Citation Rates and Journal Impact Factors

Both citation rates and journal impact factors are regarded as objective, quantitative indicators in the evaluation of research quality process, comparing with relatively subjective method of evaluation, such as peer review. Lawrence, P.A (2003) found that Annual citation rates of individual articles correlated positively with journal impact factor. Similarly, Callaham, M.et al. (2002) have found that the impact factor of the original publishing journal is the strongest predictor of annual citation rates. Thus, can journal impact factor be used as a proxy measure of article citedness or just one of the predictors of article citedness? We can not answer this question just by intuition. As we know, the basic premise for the use of journal impact factors in evaluation is that the journal is representative of its articles, in which case one can simply add up the journal impact factors of an author's articles to obtain an apparently objective and quantitative treasure of the author's scientific achievetnent. If this premise were valid, the article citation rates would distribute in a Gaussian fashion around the journal impact factor for the latter calculates the mean number of citations to an article in the journal. However, DW Aksnes (2004) have found that citation distributions are extremely skewed, others found a log-normal distribution (Shockley, 1957) or a stretched exponential form (Sornette, 1998) from different discipline. Seglen (1997) for instance found the most cited 15% of papers to account for 50% of citations and the most cited 50% for 90% of the citations. Hence on average the most cited half of papers are cited nine times as much as the least cited half. Especially for journals publishing a relatively small number of papers, individual highly cited papers have a very strong influence on the mean journal impact factor. A recent study which compared highly cited and less cited scientists who published in similar journals also found that the twofold citedness ratio between the two groups was maintained throughout all journal impact categories, indicating that the high-impact journals did not contribute any "free citations" to the articles they contaitied(Seglen PO. ,1994). Highly cited articles get published in journals that are not considered top journals in the field, and a substantial proportion of the articles published in top journals fail to generate a high level of citations (cf. Oswald, 2007; Singh, Haddad, and Chow, 2007; Starbuck, 2005). Just as Seglen pointed out, "the impact factor is not representative of the individual article and, therefore, cannot be used as a proxy measure of article citedness".Scientific publications thus appear to receive their citations largely indepetidently of the journals in which they appear, i.e., the journal impact is determined by the articles, not vice versa (Opthof T, 1997). It seems that there are some factors that influence the citation rate would also influence the journal impact factor too, but not vice versa. Of course, it is sensible to assume that the average paper in a prestigious journal will, in general, be of a higher quality than one in a less reputable journal.

There are also other Characteristics of journal that found to correlate with citation rate of individual articles, such as the order in which an article is listed in a journal issue matters considerably for the influence that the article gathers (Laband and Piette, 1994; Smart and Waldfogel, 1996; Ayres and Vars, 2000), journal accessibility, visibility, and internationality (Vinkler, 1987, Yue and Wilson, 2004), prestige of the journal (Boyack and Klavans, 2005), and so on. In this paper, we mainly consider the relation between journal impact factors and citation rate, besides, we also take the journal size (Average annual number of articles published in each journal) and journal's subject as the instrument invariants of journal impact factors. All in all, we present our first hypothesis as follows:

HYPOTHESIS 1: *The citation rate of individual family business article is positively associated with the impact factor of the journal that it published on.*

Citation Rates and Authorship Characteristics

Authorship characteristics are also found to have influence on the probability of citations, such as multi-authored or multi-national articles seem to have a slightly greater citation rate (Annette Flanagin, 2010; Metcalfe NB, 1995; Duncan Lindsey, 1980; See M. Oromaner, 1974).The higher citation rates received by multi-authored or multi-national articles might reflect the cooperative nature, multidisciplinary teamwork, and complexity of such investigations (Lewison, G. and Dawson, G, 1998) or whose members interact and stimulate each other in a dynamic creative process and produces more important work than would be achieved in solo investigation, still just as Herbertz (1995) pointed out that the higher the number of authors, the larger the network of scientists that might know of one of them and, thus, cite them. Multiple authorship has increased considerably during the last 20 years in the family business research (W. Gibb Dyer Jr. and Marcelino Sánchez), this means that collaboration on research in

the field is increasing as potential authors in different professions and disciplines collaborate to help expand the horizons of the field. Aside from Multiple authorship, The language an article is written in (Jesus et al., 2001; Kellsey and Knievel, 2004) and culture barriers (Carpenter and Narin, 1981, Menou, 1983) Influence the citation rate. H. F. Moed (1987) found that articles written by authors from countries where English is a national language attract significantly more citations than do papers written by authors from non-native English speaking countries. The incomplete database coverage is one reason accounting for this, for example, as H.F.Moed pointed out, the ISI database has a clear preference for English-language, in particular North American, journals which will cause a corresponding reduction in the citation rate of journals from other regions, such as German and Russian. Other reasons (e.g. tendency of authors to cite selectively articles in their own national language) (Cronin, 2005) also make language and culture barriers important to the problem. Also, authors' affiliations, say, university, professional society affiliations, advisory institutes or enterprise groups found to be relatively with citation rate. Nikolaos A Patsopoulos (2006) finds this hardly surprising, as it is to be expected that articles wrote by authors from university or professional society affiliations would get more citation rate than which wrote by authors from enterprise groups, not only because the former articles have more academic value on average, but also because most articles in the academic journals are wrote by authors from university or professional society affiliations, that increase the likelihood of co-citation between them. In addition, numbers of citations and publications were the most highly correlated with the "prestige" "as reflected by rank in national ratings (Hagstrom, 1971), say, articles produced by researchers from the top US universities tended to receive more citations than those from US universities positioned lower in the ranking list. Other authorship Characteristics, such as whether the authors got funding supported also found to be significant relative with citation rate (Nikolaos A Patsopoulos, 2006). Thus, we have the second hypothesis stated in alternative form:

HYPOTHESIS 2: *The citation rate of individual family business article is positively associated with the flowing factors: (1) the number of authors;(2) if authors of the article are from different regions and from English speaking countries;(3) if authors of the article are from university and other research institutes, comparing to other types of affiliations; (4) if authors' affiliations are Prestige Colleges and Universities; and (5) if the article reports the funding sources.*

Citation Rates and Individual Study Characteristics

As for individual study characteristics, previous bibliometrics literature mainly focus on research topic, methodology, the location of sample firm/ people, sample size, the time length from original published , article length et cetera and their correlation with citation rate. Luis (2002) found that journals that specialize in review articles (articles that publish summaries of past research) have much higher impact factors, because they function as surrogates for previously published research, others move forward and confirmed that Citation characteristics of methodology articles, review articles, research articles, letters, and notes (Bott and Hargens, 1991; Cano and Lind, 1991; MacRoberts and MacRoberts, 1996) differ considerably. S. M. Lawani (1977) believed that a paper on methodology is likely to attract more citations than other kinds of work. However, B D.Cameron (2005) account that many topics attract lower citation rate may just because there are poor knowledge of the primary literature on the area, he focused on the theoretical grounding and concluded that, in sociology, challenges to existing theoretical orientations are likely to be ignored and, therefore, not cited. In other disciplines, substantive contributions that challenge scholarly communication may suffer the same fate. Similarly, it has been argued that Bibliometric evaluation of published articles tends to ignore the usage they receive in advancing general knowledge and professional application（Brian D. Cameron，2005）. For example, some articles are written for practice explanation or improve in business field; some of these articles may never be cited or will receive a small fraction of the number of citations an article in higher-impact methodology (e.g. investigative Research, empirical Study or mathematical analysis) might receive. Still some pay more attention to bibliometrics study of empirical articles and argued that the sample size which determines the power of statistical tests and, thus, can be considered as one of the indictors of the methodological quality of a study as well as the location of the sample firms/people can influence the citation rate of articles. Several studies in other disciplines have found that the outcome of studies with respect to the hypothesis being tested influence citation rates, with either supportive or unsupportive results receiving more citations depending on the research area (Christensen-Szalanski, J. J. J. and Beach, L.R, 1984; Kjaergard, LL and Gluud, C, 2002; Callaham, M.et al., 2002) and absolute magnitude (absolute effect size) or their statistical significance also influenced citation rates (Koricheva, J, 2003). Aside from these, the number (Peters and van Raan, 1994) and the impact (Boyack and Klavans, 2005) of the references within the work.and,as longer articles have higher visibility in a journal and have more content that can be cited than shorter articles do, the sheer length of article influences whether it is cited(Stewart, 1990; Abt, 1993). Baldi (1998) justified the latter that the length of an article might also imply a quality element because, given the high competition for journal space, a longer article will be accepted only if its length is judged by the peer

reviewers and editors to be appropriate relative to its information content. Besides, the number of years since publicized of an article expects to impact the citation rate too. Due to the exponential increase in scientific output, citations become more probable from year to year. More citations to recent than to older publications can be expected (Cawkell, 1976). Beyond that, Burrell (2003) and Rabow (2005) found the phenomenon that the expected number of future citations is a linear function of the current number which be called as "success-breeds-success" effect (Cozzens, 1985).

With the development of family business discipline, there are many special characteristic within the domain, for example, there are some special topics (e.g. family and business dynamics, succession and family business continuity, resources and heterogeneity, family trust mechanism, etc.), special theoretical grounding (e.g. family embeddedness perspective, resource based view, etc.) and so on. Do these special aspects will influence the citation rate significantly, comparing to the mainstream characteristic of enterprise study? Thus, we have the third hypothesis stated in alternative form:

HYPOTHESIS 3: *The citation rate of individual family business article is positively associated with the flowing factors: (1) the length of the article; (2) the sample size; (3)the number of years since publication; and (4)the special topics concern; (5)the special theoretical grounding applied; (6)the special research methods adopted, comparing to the mainstream characteristic of enterprise study.*

Research Design

Sample Selection and Data

The few Bibliometrics studies published in the field of family business (cf. W.Gibb Dyer Jr. and Marceline Sánchez, 1998; Barbara Bird, Harold Welsch, Joseph H.Astrachan and David Pistrui,2002; Pramodita Sharma,2004; Jose Casillas and Francisco Acedo, 2007) focused on a very limited group of journals (e.g. Family Business Review; Entrepreneurship Theory and Practice; Journal of Business Venturing; Journal of Small Business Management)and a very small sample size (most papers reviewed less than 200 articles) in a relatively short period(less than 10 years). Although family business is a relatively new field of study (In fact, although Wortman (1994) dates the start of the discipline to the late 1970s, the research carried out before 1975 was rather limited (Handler, 1989).In this regard, Neubauer and Lank (1998) point to the second half of the 1980s and, especially, the 1990s as the period when family business consolidated as a field of study), research into family business has flourished during the past twenty years, which not only appearing with a high degree of regularity in specialized journals(e.g. FBR, ET and P, JBV, JSBM), but also beginning to emerge in mainstream journals such as Academy of Management Journal (Anita D. Bhappu, 2000; Gomez-Mejia, Larraza-Kintana et al., 2003; Gomez-Mejia, Nunez-Nickel, et al., 2002; Schulze et al., 2003), Academy of Management Review (Lee, Lim, and Lim, 2003), Journal of Finance (Andersen et al., 2003; Burkart, Panunzi, and Shleifer, 2003), Administrative Science Quarterly (Ronald C. Anderson and David M. Reeb, 2004; Luis R.Gomez-Mejfa et al., 2007), Journal of Financial Economics (Andersen et al.,2003a; Belen Villalonga and Raphael Amit, 2006; Marianne Bertrand et al., 2008), and Organizational Science (Schulze et al., 2001; Noam Wasserman, 2003), Journal of Accounting and Economics (Ronald C. Anderson et al., 2004; Ray Ball and Lakshmanan Shivakumar, 2005; Ashiq Ali et al., 2007), and so on. A more comprehensive Bibliometrics study in the field of family business is Not only necessary but also possible.

Since our aim was to cover a broader range of articles than in most previous studies we collected sample articles following several steps: (1) searched for "TOPIC" variations ("family firm "or "family business" or "family enterprise" or "family-owned" or "family-controlled") from the SSCI, A and HCI and CPCI-SSH database in ISI-SCIE (Science Citation Index Expanded) between 1989 and 2010, we got 1,887 records. These records are from 131 different subdisciplines. There are six subdisciplines that have a substantial number (more than 100) of the total records: business; management; economics; business, finance; sociology and history. Taken together these six subdisciplines covers more than 85%of the total records, the articles from these subdisciplines are mainly comprise of our sample data. While still some subdisciplines are out of the research scope, (e.g. geography; women's studies; anthropology; engineering, industrial; hospitality, leisure, sport and tourism; agriculture, multidisciplinary; linguistics), we excluded the articles from these subdisciplines. ISI database presents quantifiable statistical data that provide a systematic objective way to study and evaluate certain research field, but there are many problems with the ISI Web of Knowledge as a data source. Seglen (1997) and Cameron (2005) provide good overviews of these problems, they are mainly revolve around ISI's limited coverage, especially in the social sciences and humanities; books, conference papers, and working papers are not included as source items in the database; the lack of inclusion of journals in languages other than English in the ISI database; and the U.S. bias in the journals included in the database (Harzing and van der Wal, 2008; Kousha and Thelwall, 2007, 2008; Sanderson, 2008). Aside from these problems, the "TOPIC" search in ISI database can not include the some important family business research articles that our Search Terms do not appear in the title, abstract and key words (e.g. Paolo F. Volpin, 2002; Shmuel Hauser and

Table 1. Distribution of Sample Articles

Year	Sample		Statistics-based research subsample	
	N	**Percentage**	**N**	**Percentage**
1989	23	2.76%	3	0.68%
1990	12	1.44%	2	0.46%
1991	21	2.52%	6	1.37%
1992	21	2.52%	2	0.46%
1993	23	2.76%	5	1.14%
1994	24	2.88%	4	0.91%
1995	21	2.52%	5	1.14%
1996	22	2.64%	14	3.19%
1997	26	3.13%	14	3.19%
1998	39	4.69%	18	4.1%
1999	32	3.85%	20	4.56%
2000	38	4.57%	27	6.15%
2001	40	4.81%	24	5.47%
2002	30	3.61%	18	4.1%
2003	53	6.37%	25	5.69%
2004	46	5.53%	27	6.15%
2005	53	6.37%	29	6.61%
2006	78	9.38%	46	10.48%
2007	67	8.05%	44	10.02%
2008	89	10.7%	59	13.44%
2009	49	5.89%	35	7.97%
2010	25	3%	12	2.73%
Total	832	100%	439	100%

Notes:
This table reports our sample articles for each year from 1989 to 2010. We take several steps to finalize our sample size: (1) Searched for “TOPIC” variations from the SSCI, AandHCI and CPCI-SSH database in ISI-SCIE; (2) Search for the journals that are not ISI-indexed and the articles that cannot download the full text in ISI database by Specialized databases; (3) Search for working paper by Google Scholar and SSRN database; (4) We exclude interviews with family business owners and/or consultants, leading articles and book reviews from our sample because these types of papers do not provide bibliographic references and some Necessary research information. The subsample mainly included the empirical articles, still some articles of investigative research, mathematical analysis and multi-methods subsamples are included, because these articles also used sample data. The Stop time of our search is December 31, 2010; some articles of 2010 did not available in the database then.

Beni Lauterbach, 2004; Yan-Leung Cheung et al., 2006) and we can not download the full text of some articles in the ISI database. For all the reasons above, we turn to other Data collection channels. (2) We search for the journals that are not ISI-indexed (especially in finance and accounting, marketing, and general management and strategy) and the articles that can not download the full text in ISI database by specialized databases (e.g. Wiley-Blackwell, Elsevier-SDOL, EBSCO-Business Source Premier, ProQuest-Academic, Research Library, JSTOR, Springer, Kluwer online Journals) , most of these journals and articles are published in Europe and generally have a European editor and a large proportion of non-U.S. academics on the editorial board. Specifically, we browsed each article in each issue during 1989-2010 of the following journals: FBR, ETP, JBV, JBR, SBE, and JSBM (Specialized journals);AMJ, ASQ, AMR, SMJ, OS, JF, JAE, JFE, AOS, AR, CAR, JAR, AF (Mainstream journals), and found out the articles that concerning family business topics. For other journals our inspection might have overlooked occasional missing articles, but this is unlikely to influence robust measures unless the articles are highly cited. We have no reason to believe that this was the case. (3) We search for working paper by Google Scholar and SSRN database. Finally, we should say that neither interviews with family business owners and/ or consultants nor leading articles or book reviews have been included in our study because, among other

reasons, these types of papers do not provide bibliographic references and some Necessary research information. Although we have tried our best to include all the Influential family business research articles in the sample, we still can not get the full text of some early literature such as the articles of "Family Business Review"(FBR) before 1994, for these articles, we generally searched by Google Scholar, linked to the authors' home page or directly contacted with the authors by e-mail.

Finally, we got a total of 832 family business research articles in which 439 articles have sample data from 1989 to 2010 as our sample, whose distribution is described in Table 1. As we can see from the table, More than half of these articles are Sample-based research, they mainly include the empirical articles, still some articles of investigative research, mathematical analysis and multi-methods articles are included, because these articles also used sample data. It can be noted that the number of published articles per year has increased considerably during the past two decades. Thus, the cumulative percentage of published articles in the period from 1989 and 1999 was 36.29%, while for the period from 2000-2010 it rose to 63.71%, such Increase gap is More pronounced in the Sample-based research sub-sample, with 21.19% in the earlier era (1989-1999) versus 78.81% in the later era (2000-2010). We can also see that the fluctuations of the earlier era are relatively Moderate than that of the later era. Overall, during the past two decades, the family business research field attracted more and more scholars, rigorous data analysis began to emerge and flourish, especially after 2000, experienced a rapid growth trend. These conclusions are consistent with other bibliometrics studies (Dyer and Sanchez, 1998; Chrisman et al., 2003; Shaker A.Zahra, et al., 2004).

We read each articles and extracted data on the journal and it's Impact Factor, year of publication, volume and pages, topic, method used, theoretical grounding, country (or countries) of origin of authors and sample, authors' affiliations, funding, the number of Author, Subject, Sample size, and so on.

Measurement of key variables

Citation rate

The development of citation analysis has been marked by the invention of new techniques and measures, the exploitation of new tools, and the study of different units of analysis (Linda C.Smith, 1981). The easiest technique to use is a citation count, determining how many citations have been received by a given document or set of documents over a period of time from a particular set of citing documents. These early citation studies frequently were based on lists of references found in articles appearing in a small number of journals. Citations had to be transcribed and manipulated by hand. Because of the tediousness of this process, most studies were necessarily quite limited in scope. Use of new techniques by computer in citation analysis has been made possible by the availability of new tools. Peter Jacso (2005) did a Comparison of major features of three citation-based and citation-enhanced databases: Web of Science, Scopus, and Google Scholar (G-S), they represent different approaches to citation search services. WoS and Scopus are commercial databases, while Google Scholar is currently an open access database, still in beta version after its launch in November 2004. The family of ISI citation indexes which makes up the core of WoS was created from the get-go by the inclusion of all references cited by papers in the primary(source) documents, Creating entries for cited references is an error-prone process. Elsevier created Scopus by extracting records from its traditional indexing/abstracting databases, such as GEOBASE, BIOBASE, EMBASE, and enhanced them by cited references. Elsevier had to struggle with the same problems as ISI at an even larger scale given its wider source base of journals and conference proceedings with a wider variety of inconsistencies. G-S is a joint product by some publishers and/or their digital facilitators (the content part), and Google (the software and the service operation part). In this paper, we collected the Citation rate data thought G-S, although we had access to the data from WoS and Scopus. Aside from other reasons, G-S provides a comparable, unified standard for our research and most of our sample articles can find its citation rate from G-S at the end of 2010. As for robust, we tested the relative importance of each article by comparing the citation frequency from ISI and G-S in a small subsample, we expected that the citation rate of each article from G-S would greater than that from ISI but the relative importance between articles should not be significant difference. The result confirmed our expectations, the citation rate from G-S is greater than that from ISI significant ($p=0.000$); while the standardization of the ratio Series (defined as the ratio of the citation rate from G-S minus the citation rate from ISI) is white Noise ($p = 0.982$) We use two methods to standardize the ratio: (1) Maximum linear model: new data = (original data - minimum) / (maximum - minimum); (2) standard deviation of mean model: new data = (original data - mean) / standard deviation. Both the two methods confirmed that it is a white noise series. The brief definitions and Summary Statistics of the variable are as presented in Table 2 and Table 3, respectively.

Journal impact factor (JIF)

When the citation rate is applied to articles appearing in a

Table 2. Definition of Variables

Dependent Variable	
CITATION	Citation rate per article from Google scholar index at the end of 2010.
Independent Variable	
Characteristics of Journals	
JIF	Journal Impact Factor per journal from MedSci impact index Intelligent Inquiry System (2009)
JSIZE	Average annual number of articles published in each journal.
JSUBJECT	A dummy about Journal's Subject classification (using the ISI-defined subject Categories) that includes five categories.
Characteristics of Authors	
ANUM	the number of authors per article
CREGION	A dummy variable that equals one if authors of the article are from different region and zero otherwise.
ALOC	A dummy about Authors' Location that includes six categories.
CUNIT	A dummy variable that equals one if authors of the article have different unit affiliations and zero otherwise.
AAFFI	A dummy about Authors' affiliations that includes four categories.
WBCandU_Top100	A dummy variable that equals one if Authors' affiliations are World's Best Colleges and Universities: Top 100 (2010), and zero otherwise.
FUND	A dummy about funding supported that includes three categories: 1. vertical projects: the funding is from government or public sources, university, foundation, professional society; 2. horizontal projects: the funding is from private organization or company (for profit); 3. The article does not report the funding sources.
Characteristics of Articles	
TOPIC	A dummy about research topic in family business field that includes twenty-five categories.
THEORY	A dummy about theoretical grounding the article Applied that includes five categories.
ALENGTH	Page of each article
METHODS	A dummy about research methods the article adopted that includes ten categories.
SLOC	A dummy about the Location of the Sample (e.g. companies or managers) that includes seven categories.
SSIZE	Sample Size
TIME	The number of years since publication, for the longest is 22 year, and the shortest is 1year.

Notes:
U.S.News：World's Best Colleges and Universities: Top 100 (2010)
The specific categories of each dummy are as presented in Table 2.

particular journal, it can be refined by calculating the impact factor, the average number of citations received by articles published in a journal(Garfield,1972) and is calculated by dividing the number of citations received in the current year (e.g.2010) for articles published in the journal in the previous two years (i.e.2008 and 2009) by the total number of articles published in the journal in those previous two years (ISI Journal Citation Reports w;http://isi10.isiknowledge.com/portal.cgi/wos).This measure allows one to compare the "impact" of journals which publish different numbers of articles. In 1973, IS1 introduced the Journal Citation Reports (JCR), a companion volume to the citation index which includes rankings of journals by citations and by impact factor, as well as two ranked lists for each journal covered: those journals which cite a given journal most heavily, and those journals which a given journal most frequently cites. At present, JCR volumes are available for both SCI and SSCI. Google Scholar also provided a similar h-Index for journals (Anne-Wil Harzing and Ron van derWal, 2009). As we can not access to JCR and G-S h-Index directly, we turned to a specialized agency -MedSci impact index Intelligent Inquiry System (2009) which was set up in china and collected the Journal Impact Factor of each journal. The brief definitions and Summary Statistics of the variable are as presented in Table 2 and Table 3, respectively.

Research topic (TOPIC)

The past two decades have brought changes in our understanding of family businesses. Family business research topics then became the focus between some

Table 3. First-Stage Regression on Journal Impact Factor

	J_ImpactFactor				
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**
JSIZE	.0027279***	.0031005***	.0029629***	.0030984***	.0028189***
	(2.77)	(3.19)	(3.01)	(3.23)	(2.88)
dum_s1(Management)	.1712061	.2214784	.1826734	.1835011	.2355617
	(1.07)	(1.42)	(1.27)	(1.25)	(1.60)
dum_s2(Finance)	.7900943***	.9842203***	.883219***	.9249282***	.8896765***
	(6.15)	(8.50)	(8.38)	(9.09)	(8.46)
dum_s3(Economics)	.4116635***	.4936263***	.4134853***	.4400853***	.4994277***
	(2.60)	(3.25)	(2.79)	(2.99)	(3.14)
dum_s4(Other)	-.2906288	-.3675693	-.3333732	-.2823811	-.3982187
	(-0.94)	(-1.38)	(-1.32)	(-1.12)	(-1.27)
N	825	825	825	825	825
Adj R-squared	0.3320	0.3136	0.3183	0.3228	0.3189
Partial R-squared	0.1120	0.1926	0.1629	0.1823	0.1566
F	15.3436	34.6359	29.5365	34.352	26.5334

Notes:
This table reports the first-stage regression of Instrumental variables (2SLS) regression on journal impact factor (no endogenous regressors). The definitions of the variables are as presented in Table 2. The other independent variables (ANUM, CREGION, CUNIT, WBCU_Top100, TIME and the dummies of Author location, Authors affiliations, FUND, ALENGTH, THEORY, METHODS, and TOPIC) and constant term are included in the regression but not reported. F-statistics are calculated from robust standard errors. *, ** and *** indicate significance at the 10%, 5%and 1%respectively.

scholars. Such as Craig E.Aronoff (1998) identifies 10“megatrends,”which are evolving changes fundamental to understanding and working with family businesses. These trends include focusing on generational transitions rather than business succession; team management and ownership as a developing norm; the increasing importance of strategic planning in family business; increasing financial sophistication; increasing managerial professionalism; refining retirement; expanding roles for women; increasing sensitivity of professional service providers to family business; and increasing availability and quality of family business education and consulting. W.Gibb Dyer Jr. and Marcelino Sánchez (1998) move forward to categorize the family research topic into Nineteenth species: Interpersonal family dynamics, Succession, Interpersonal business dynamics, Business performance and growth, Consulting family firms, Gender and ethnicity issues, Legal and fiscal issues, Estate issues(planning, taxes), Organizational change and development, Governance (boards, directors), Family work life, Environment (macro systems), Entrepreneurship(the entrepreneur), Management of the firm, Family firms in international context, Wealth management, Approaches to studying family firms, Philanthropy and other topics. At more recently, Pramodita Sharma (2004) organized the family business literature according to its focus on the four levels of analyses: individual, interpersonal/group, organizational, and societal. At each level, a review of the prevailing literature is presented so as to highlight the topics that have received prevailing attention: (1) Individual Level: founders, next-generation members, women, and nonfamily employees; (2) Interpersonal/Group Level: nature and types of contractual agreements, sources of conflict and management strategies, and intergenerational transitions; (3) Organizational Level: identification and management of the unique resources in family firms, the mechanisms family firms use to develop, communicate, and reinforce desired vision and organizational culture over extended tenures of leaders and across generations; strategies used to maintain long-term relationships with external stakeholders and other organizations; ethical dilemmas faced and resolution strategies used; and human resource strategies used et cetera. (4) Societal/Environmental Level: the economic importance of family firms; why family firms endure; the impact of fiscal systems on the formations that persist in different environments; the role of these firms in their communities. While Alex Stewart (2008) evenly divided the family research topic into two poles with eight each: terms that are relatively more oriented toward the familial or the commercial. The familial eight are affines (relatives by marriage),conflict, distrust(because trust is an ambiguous search term that often refers to the financial instrument), emotion, kinship, posterity, secrecy, and succession; the commercial eight

are alertness, brokerage, entrepreneurial opportunity, innovation, planning, private equity, profit, and venturing. Aside from these, other authors also gave their topic categories in family business research domain, such as Barbara Bird et al. (2002), Shaker A. Zahra and Pramodita Sharma (2004), and so on.

The fact is that family business research topics have changed as time past, some new topic (e.g. altruism, agency and contractual problem; analyst following, Corporate Governance) have emerged in the field and the family business research domain is fast becoming an integral part of what is being published on entrepreneurship in the leading academic journals; while some widespread concerned topics (e.g. interpersonal family dynamics, interpersonal business dynamics) in the early era are slowly becoming less important. Following prior studies and our sample data, we developed a dummy about research topic in family business field that includes twenty-five categories, these categories included: (1) Political connection, Tax management (PCTM, A brief code for the variable which will displace in the table of empirical result. Others dummy variables have their codes too.); (2) IPO, mergers, acquisitions, restructuring and Bankruptcy (IMARB); (3) Capital Structure (CS); (4) Family and business dynamics(FBD); (5) Dividend Policy and Investor Protection (DPIP); (6) Entrepreneurship; (Entre) (7) Internal behavior and conflict (IBC); (8) Law and finance (LF); (9) Investment, financing , capital management(IFCM); (10) Analyst Following(AF); (11) Corporate Governance (CG); (12) Risk Management(RM); (13) Corporate Social Responsibility (CSR); (14) Wealth Management(WM); (15) Definition and Research Methods studies (DRM); (16) review (Rev); (17) Other topic (OT); (18) Succession and family business continuity (SC); (19) Performance , Stock price and Developmental (PPD); (20) Altruism, Agency and Contractual problem (AAC); (21) Strategic Management (SM); (22) International, cross-cultural themes (ICC); (23) Resources and Heterogeneity(RH); (24) Family Trust mechanism (FTM); (25) Information Disclosure (ID). However, it should be pointed out that unlike article types, these categories are not exclusive because articles often contained more than one topic. For each article in the sample, we read and assigned to one of twenty-five categories. The brief definitions and Summary Statistics of the dummy variable are as presented in Table 2 and Table 3, respectively.

Theoretical grounding (THEORY)

The emergence of agency theory and the resource based view (RBV) of the firm have been regarded as the leading theoretical perspectives within the family business research field (James J.Chrisman et al., 2005). Agency costs arise because of conflicts of interest and asymmetric information between two parties to a contract (Jensenand Meckling, 1976; Myers, 1977; Morck, Shleifer, and Vishny, 1988). Although agency problems can arise in transactions between any two groups of stakeholders, researchers applying agency theory to family firms have concentrated primarily on relationships between owners and managers and secondarily between majority and minority shareholders. Within these streams, researchers have proposed altruism and the tendency for entrenchment as the fundamental forces distinguishing family and nonfamily firms in terms of agency costs. A key consideration in the development of a theory of the family firm is whether family involvement leads to a competitive advantage because answering this question will provide some insights regarding why family firms exist and why they are of a particular scale and scope (Pramodita Sharma et al. 2005). RBV approach has the potential to help identify the resources and capabilities that make family firms unique and allow them to develop family-based competitive advantages (Habersham et al., 2003; Habbershon and Williams, 1999; Carney, 2005). Although asymmetric information, which is central to agency theory, is a necessary component of the argument, it must be combined with an understanding of stakeholders' roles (Stakeholders theory) in and contributions to generating economic rent to explain differences in bargaining power, there appears to be an opportunity to combine RBV insights with those of agency theory by building on the rent-appropriation concept. Surprisingly, just as James J.Chrisman et al. (2005) pointed out, not many researchers have adopted this enrichment to RBV to help explain family firm performance. Another important theoretical grounding in family business research field is a family embeddedness perspective which was developed by Howard E. Aldrich and Jennifer E. Cliff (2003), Chrisman, Chua, and Steier (2003); Zahra et al., in press. Families and businesses have traditionally been treated as naturally separate institutions, whereas under the family embeddedness perspective, they are inextricably intertwined. Thus, the family embeddedness perspective extend the scope of the existing social embeddedness approach to entrepreneurship, paving the way for a more holistic(and thus more realistic)approach to our understanding of entrepreneurial phenomena. Aside from these theory, as the family business discipline enters a new period of normal science, some new theoretical approaches specific to family business arise, such as stewardship theory (Corbetta and Salvato, 2004), the application of other theories from other disciplines, such as behavioral finance theory, organizational culture theory, and so on.

Following prior studies and our sample data, we developed a dummy about theoretical grounding in family business field that includes five categories, these categories included :(1) Agency Theory (AT) ;(2) Family Embeddedness Perspective (FEP); (3) Resource Based View (RBV); (4) Stakeholders Theory (ST) and (5) Other

Theories (OT). For each article in the sample, we read and assigned to one of five categories. The brief definitions and Summary Statistics of the dummy variable are as presented in Table 2 and Table 3, respectively.

Research methods (METHODS)

W. Gibb Dyer Jr. and Marcelino Sánchez (1999) studied the types of articles being published in FBR and discovered that there were nine final categories of types: Quantitative research; Qualitative research; Case study; Essay(personal accounts, such as testimonies or points of view);Commentary(e.g., responses to other articles and research notes);Theory focused; Practice focused; Method focused(innovative or unique approaches to the study of family businesses);A combination of theory and practice or theory and method. While other scholars moved forward and studied in depth the Statistics-based methods, just as Handler (1989) pointed out, many of the first family business researchers came from a consulting background and had never been schooled in sound research practices. As a younger group of better trained investigators began to study family business topics, the quality of research design and use of statistical tools greatly improved. Wortman (1994) noted a prevalence of descriptive studies based on small sample sizes and made suggestions to broaden the range of research methods used. Barbara Bird et al. (2002) noted a rise in empirical studies characterized by more rigor and larger samples. And they reviewed the methods of studies in the family business research from five aspects: Size of Samples, Sampling Method, Data Source, Data-Gathering Method and Data-Reduction Method Used/Statistics. Methods of gathering data include qualitative methods such as clinical or in-depth interviews and content analysis of documents. Mailed or delivered surveys and structured interviews done in person or over the telephone constitute the other major ways that data were gathered. Other methods included field surveys and public information. While Methods of data reduction include qualitative methods, Descriptive (frequencies and means), binomial (T-tests and other paired comparisons), and multivariate (analysis of variance, regression, factor analysis, and their variates), still some other scholars revisited the Statistics-based methods of family business research (Mary Winter et al., 1998; Ann Jorissen et al., 2005). Similarly, the previous dominance of descriptive studies is also giving way to theory building (Bird et al., 2002; Chrisman et al., 2003; Sharma, 2004).

Following prior studies and our sample data, we firstly developed a dummy about research methods in family business field that includes ten categories, these categories included: (1) case study (Case); (2) method Only (Method); (3) theory only (Theory); (4) investigative research (Investi.); (5) multi-methods (Multi.); (6) review (Review); (7) commentary (comm.); (8) practice only (Practice); (9) empirical study (Empiri.) and (10) mathematical analysis (Math.). For each article in the sample, we read and assigned to one of ten categories. The brief definitions and Summary Statistics of the dummy variable are as presented in Table 2 and Table 3, respectively. More over, in this paper, we will study the impact of the characteristics of journals, authors and articles on citation rate for statistics-based research subsample alone.

Regression model and other variables

We extend the analysis of Jose Casillas and Francisco Acedo (2007) to the evolution of the intellectual structure by co-citation analysis and use the following regression model to find out what determines the citation frequency of family business research articles:

$$CITATION = \alpha + \beta_1 JIF + \beta_2 JSIZE + \beta_3 JSUBJECT + \beta_4 ANUM + \beta_5 CREGION + \sum_{i=1}^{6} \beta_{6i} ALOC_i + \beta_7 CUNIT + \sum_{i=1}^{4} \beta_{8i} AAFFI_i + \beta_9 WBC\&U100 + \sum_{i=1}^{3} \beta_{10i} FUND_i + \beta_{10} ALENGTH + \sum_{i=1}^{5} \beta_{11i} THEORY_i + \sum_{i=1}^{10} \beta_{12i} METHOD_i + \sum_{i=1}^{25} \beta_{13i} TOPIC_i + \beta_{14} SSIZE + \sum_{i=1}^{7} \beta_{15i} SLOC_i + \beta_{16} TIME + \varepsilon \quad (1)$$

The dependent variable, CITATION, is the citation rate per article. The independent variables include three categories of variables: (1) Characteristics of Journals: we use JIF (Journal Impact Factor) as the mainly Proxy variable; (2) Characteristics of Authors: we include the variables of authors number (ANUM), A dummy variable that equals one if authors of the article are from different region and zero otherwise(CREGION), A dummy about Authors' Location(ALOC), A dummy variable that equals one if authors of the article have different unit affiliations and zero otherwise(CUNIT), A dummy about Authors' affiliations(AAFFI), A dummy variable that equals one if Authors' affiliations are World's Best Colleges and Universities and zero otherwise (WBCandU_Top100), A dummy about funding supported(FUND); (3) Characteristics of Articles: we include the variables of a research topic dummy (TOPIC), A theoretical grounding dummy (THEORY), Page of each article (ALENGTH), a research methods dummy (METHODS), a sample location dummy (SLOC), sample size (SSIZE). In addition to these, we also control the time length from original published (TIME) which can be regarded as a characteristic of Articles too. The brief definitions of these variables aside from key variables which have discussed in the former section are discussed in the following section and are summarized in Table 2.

Journal size (SIZE), defined as the average annual

number of articles published in each journal.

Journal subject (JSUBJECT), defined as a dummy about journal's subject classification (using the ISI-defined subject Categories) that includes five categories: (1) management, (2) finance (3) economics, (4) other subjects, more than one category was allowed; (5) business.

Authors number (ANUM), defined as the number of authors per article.

CREGION is a dummy variable that equals one if authors of the article are from different region and zero otherwise.

Authors' Location (ALOC), defined as a dummy about Authors' Location that includes six categories: (1)USA;(2)Canada;(3)European Union; (4)Australia; (5)East Asia;(6)other countries or regions.

CUNIT is a dummy variable that equals one if authors of the article have different unit affiliations and zero otherwise.

AAFFI is A dummy about authors' affiliations that includes four categories: (1)university, government, nongovernmental research institutes(Univ.); (2)lawyers/ accountants Firms and the Advisory institutes(Insti.); (3)Enterprise Groups(Enter.); (4)other or unknown, more than one category was allowed, such as journal editorial, business associations, tax Foundation, the National Tax Center, and so on.

WBCandU_Top100 is a dummy variable that equals one if Authors' affiliations are World's Best Colleges and Universities and zero otherwise. We collected the data from U.S.News：World's Best Colleges and Universities: Top 100 (2010).

FUND, defined as a dummy about funding supported that includes three categories: (1) vertical projects (VP): the funding is from government or public sources, university, foundation, professional society; (2) horizontal projects (HP): the funding is from private organization or company (for profit); (3) The article does not report the funding sources.

Article length (ALENGTH), defined as the page number of each article.

Sample location (SLOC), defined as a dummy about the Location of the Sample (e.g. companies or managers) that includes seven categories: (1)USA; (2)Canada; (3)European Union; (4)Australia; (5)East Asia;(6)other countries or regions ; (7)cross countries or regions.

SSIZE defined as the sample size of each article.

TIME defined as the number of years since publication, because the sample period of this paper is between 1989 and 2010, the longest is 22 year, and the shortest is 1year.

Regression Method

There are some bibliometrics studies on citation rate using regression analysis, for example, Harhoff et al. (2006) adopted OLS to analyze the relationship between Citation Frequency and the Value of Patented Inventions. L.L.Lange and P.A. Frensch (1999) using regression analysis to explore whether a person's assumption of editorship responsibilities of a psychology journal increases the frequency with which that person is cited in the Social Sciences Citation Index. Ulrich Schmoch and Torben Schubert (2008) also analyzed the correlation between citations and co-publications within a multivariate setting. All in all, although there are quite a few prior bibliometrics studies adopt regression analysis, it is still a more useful and comprehensive method to explore our research questions. We derive our main results using ordinary least squares (OLS) regression. However, there is possible endogeneity between citation rate of individual article and the journal impact factor, as the article's individual characteristics and characteristics of authors may have an impact on the journal impact factor (Seglen, P.O., 1997; Singh, G. ET AL., 2007; Anne-Wil Harzing and Ron van derWal, 2009). To deal with this problem, the most favored approaches to date that give unbiased and consistent results are IV and GMM. However, the GMM estimator is used in the present study for two reasons. First, if heteroskedasticity is present, the GMM estimator is more efficient than the simple IV estimator; whereas if heteroskedasticity is not present, the GMM estimator is no worse asymptotically than the IV estimator (Baum, Schaffer, and Stillman 2003).Second, the use of the IV method leads to consistent, but not necessarily efficient, estimates of the model's parameters because it does not use all available moment conditions (Baltagi 2001).Hence, we conduct a generalized method of moments (GMM) with two-stage instrumental variables regression to correct for this endogeneity problem. The first stage of the procedure involves an OLS analysis in which journal impact factor (JIF) are regressed against the same variables used for the OLS regressions and plus two other variables known to affect JIF. The two instrumental variables are Journal size (SIZE) and Journal subject (JSUBJECT). Despite some early scholars claimed that the number of articles a journal publishes has no influence on impact factors because the impact factor is expressed as a ratio (Garfield, 1972), it has been shown that those journals that publish a large number of articles have a consistently higher impact factor, simply because the journal receives more citations over time. Thus, simply increasing the number of articles published in the journal can positively affect impact factor (Brian D.Cameron, 2005). As for the journal subject, some authors argue that the citation rates of scientists working on different subjects cannot be compared, even within the same field (P.0.Seglen，1997). Attempts have been made to correct for field effects by dividing article citation rates by journal impact factors, or by using complex field citation factors. In addition, it has been reported that the greater the

Table 4. Summary Statistics of Variables

Panel A Continuous variables

Variables	***Obs***	***Mean***	***Std.Dev.***	***Min.***	***25%***	***Median***	***75%***	***Max.***
CITATION	832	98.42428	293.2158	1	9	27.5	77	5717
JSIZE	832	53.79688	49.29189	12	28	28	60	360
JIF	831	2.102804	1.021041	.25	1.881	1.881	2.185	7.867
ANUM	832	2.096154	.9476729	1	1	2	3	1
SSIZE	439	746.6538	1815.749	1	100	266	654	19883
ALENGTH	832	20.69832	10.65357	2	15	17	25.5	75
TIME	832	8.700234	5.876739	1	4	7	13	22

Panel B Dummy variable

Variables	Categories							Total
CREGION	X=1				X=0			832
	143 (17.19%)				689 (82.81%)			(100%)
CUNIT	X=1				X=0			832
	429 (51.56%)				403 (48.44%)			(100%)
WBCU_Top 100	X=1				X=0			832
	406 (48.8%)				426 (51.2%)			(100%)
ALOC	1.American	2.Canada	3.EU		4.Australia	5.East Asia	6.Other	832
	512 (61.54%)	62 (7.45%)	183 (22%)		24 (2.88%)	41(4.93%)	10 (1.2%)	(100%)
AAFFI	University, research institutes	lawyers/ accountants Firms and the Advisory institutes			Enterprise Groups	Other		832
	773 (92.91%)	21 (2.52%)			22 (2.64%)	16 (1.92%)		(100%)
FUND	Vertical projects	Horizontal projects			Not reported			832
	178 (21.39%)	29 (3.49%)			625 (75.12%)			(100%)
THEORY	Agency theory	Family embeddedness perspective	Resource-based theory		Stakeholders theory	Other		832
	339 (40.75%)	170 (20.43%)	233 (28%)		10 (1.2%)	80 (9.62%)		(100%)
METHODS	Practice only	Method only	Theory only		Investigative Research	Case study		832
	32 (3.85%)	7 (0.84%)	156 (18.75%)		40 (4.81%)	60 (7.21%)		(100%)
	Mathematical analysis	Empirical Study	Review		Commentary	Multi-methods		
	22 (2.64%)	348 (41.83%)	26 (3.13%)		30 (3.61%)	111 (13.34%)		
JSUBJECT	Business	Management	Economics		Finance	Other		832
	450 (54.09%)	110 (13.22%)	62 (7.45%)		206 (24.76%)	4 (0.48%)		(100%)
SLOC	American	Canada	EU	Australia	East Asia	Other	Cross-region	580
	210 (36.21%)	23 (3.97%)	152 (26.21%)	18 (3.1%)	64 (11.03%)	30 (5.17%)	83 (14.31%)	(100%)

Table 4. Continued.

TOPIC	Political connection , Tax management	IPO, mergers, acquisitions, restructuring and Bankruptcy	Altruism, Agency and Contractual problem	Succession and family business continuity	Performance , Stock price and Developmental	International, cross-cultural themes	832 (100%)
	38 (4.58%)	38 (4.58%)	49 (5.89%)	85 (10.22%)	56 (6.73%)	48 (5.77%)	
	Entrepreneurship	Law and finance	Investment, financing , capital management	Analyst Following	Corporate Governance	Risk Management	
	20 (2.4%)	4 (0.48%)	21 (2.52%)	5 (0.6%)	115 (13.82%)	7 (0.84%)	
	Corporate Social Responsibility	Wealth Management	Definition and Research Methods	Internal behavior and conflict	Family and business dynamics	Dividend Policy Investor Protection	
	8 (0.96%)	7 (0.84%)	17 (2.04%)	28 (3.37%)	26 (3.13%)	13 (1.56%)	

Capital Structure	Strategic Management	Review	Resources and Heterogeneity	Family Trust Mechanism	Information Disclosure	Other topic	
11 (1.32%)	105(12.62%)	8 (0.96%)	50 (6.01%)	51 (6.13%)	14 (1.68%)	8 (0.96%)	

Notes:
This table presents the summary statistics for the variables. The definitions of the variables are as presented in Table 2. The “Samplesize” and “Samplelocation” Variable mainly included the empirical articles; still some articles of investigative research, mathematical analysis and multi-methods are included, because these articles also used sample data. The “Samplelocation” Variable also included the sample of case study or other methods which concerned about the family business problem of certain region make the sub sample of “Samplelocation” is bigger than the sub sample of “Samplesize”.

number of journals published in a subject area, the greater the overall impact factor for the discipline (Gregor B. E.Jemec, 2001). In short, it is reasonable to assume that journal subject have a greatly correlation with journal impact factor while a weak correlation with citation rate of individual article. The brief definitions and Summary Statistics of the two instrumental variables are as presented in Table 2 and Table 4, respectively. For our instrument to be valid, Journal size (SIZE) and Journal subject (JSUBJECT) should be correlated with journal impact factor (JIF). Table3 shows the first-stage results of the five GMM equations respectively. Journal size (SIZE) is highly correlated with journal impact factor (JIF) in all the equations, significance at the 1% level. Both finance and economics journals have higher JIF comparing to business journals in all the equations, also significance at the 1% level. While management journals are positive correlative with JIF and other journals are negative correlative with JIF with comparing to business journals but both of them are statistically insignificant in all the equations.

F-tests, Adjust R-squared and Partial R-squared show that our instruments have sufficient power in all specifications. The estimate of journal impact factor (JIF) generated in the first stage is then included in the second-stage regression in which the dependent variable is citation rate (CITATION). In the final section, we do additional OLS regression for the Variables that have winsorized in fraction 2% for robust.

EMPIRICAL RESULTS

Descriptive Statistics

Table 4 presents the descriptive statistics of the variables in the full sample of 832 family business research articles In the fellow section, we also perform a robustness OLS regression with winsorizing the continuous variables at 2%and 98%, the results remain qualitatively similar, while

the adjust R square improve. Panel A presents the descriptive statistics of the continuous variables. The mean (median) of CITATION is 98.42428(27.5), which means the citation rates of family business research articles display left-skewness distribution that although many of them have very high citation rates, more than half of sample articles have citation rates lower than 30. Although the discipline of family business has been of interest to management researchers and writers as a topic of scholarly inquiry since the 1980s, Neubauer and Lank (1998) agree that research has "been largely ignored until the last decade". This maybe one of the reasons that accounts for the relatively lower citation rate of family business research articles. It can be sensible expected also that as the family business field is a relatively new discipline, it has a smaller influence in the academic area than the mainstream research fields of management, economics or finance. These results can also be seen from the JIF statistics that the mean (median) of which is 2.102804(1.881), also display left-skewness distribution. The specialized journals (e.g. ETP, JBV, JBR, SBE, JSBM etc.) which are the main sources of family business research articles generally have lower impact factor than mainstream journals (e.g., ASQ, AMR, JF, JAE, JFE, AR etc.) which have taken growing attention on family business articles. The mean of JSIZE indicates that on average there are 54 articles published in each journal annual. ANUM has a mean (median) of 2.096154 (2) which suggest that there are about two authors of family business research articles, on average. This result is consistence with that of W.Gibb Dyer Jr. and Marcelino Sánchez (1998) which also found the collaboration tendency of multiple authors within family business research field. However, as the articles pointed out, most of this collaboration is between like-minded individuals who are in the same discipline and profession. As potential authors in different professions and disciplines collaborate to expand the horizons of the field, it is sensible to expect the mean of ANUM will increase. The mean of SSIZE indicates the average sample size of the sample articles is 747. And the mean (median) of ALENGTH is 21(17).

Panel B presents the descriptive statistics of the dummy variables. CREGION and CUNIT are dummy variables that equal one if authors of the article are from different region/ have different unit affiliations and zero otherwise. As we can see from the table, 17.19% of the total sample articles (n=143) had multi-authors from different regions and more than 82% of the total sample articles were written by either multi-authors or a single author within one of the six authors' location categories. While the gap is very small when we consider authors' unit affiliations, 51.56% of the total sample articles (n=429) had multi-authors with different unit affiliations, and 48.44% (n=403) were written by either multi-authors or a single author within one of the four authors' affiliations categories. This suggests that although a large proportion of multi-authors with different unit affiliations, they are usually in the same area, such as American, Canada, East Asia, and so on. We can expect a language bias or culture bias will exist in the citation rate of their articles. More specifically, of 832 family business research articles, we looked at the location and the affiliations of the first author, as citation rates are often connect to the group name or first author in the group（Annette Flanagin,2010）.We find that more than half of authors, say, (61.54%, n=512) are from American, followed by those from EU(22%, n=183), Canada (7.45%, n=62), East Asia (4.93%, n= 41), .Australia (2.88%, n=24) and others (1.2%, n=10).

As for first author's affiliations, the most prolific were those in university, or other research institutes (92.91%, n=773), followed by lawyers/ accountants firms or advisory institutes and enterprise groups (2.52%, n=21and 2.64%, n=22, respectively), the remainder were accounting for 1.92%, with other types of affiliations, such as journal editorial, business associations, tax Foundation, the National Tax Center, and so on. This distribution of authorship by location and profession clearly demonstrates the dominant role of academics, particularly those in business schools of American, in the development of the field of family business, and very few academic journals attract the interest of and submissions from those other than academics, such as executives, practitioners or consultants. It may present biases toward topics of interest and methodologies employed to study those topics and thereby affect the citation rates Unlike the founding of W.Gibb Dyer Jr. and Marcelino Sánchez (1998) who categorized 184 articles published on FBR during 1988-1997 by topic and found that interpersonal family dynamics and succession were the topics that received the most coverage, followed by managing business relationships and performance of family firms and issues of consulting, gender, ethnicity, estate planing, organizational change and development, and governance were covered only moderately, while topics that received the least attention were philanthropy, unique approaches to studying family firms, wealth management, and the family firm in the international arena, our data indicate that as the time past, the research topics of family business have changed to some extent. Although succession and family business continuity still the hot topic (10.22%, n=85), Family business dynamics and Internal behavior/conflict have received less and less concern (3.13%, n=26 and 3.37%, n=28, respectively). Corporate Governance and Strategic Management have become the topics that received the most coverage (13.82%, n=115 and 12.62%, n=105, respectively), followed by Performance, Stock price and Developmental (6.73%, n=56), Family Trust mechanism (6.13%, n=51), Resources and Heterogeneity (6.01%, n=50), Altruism, Agency and Contractual problem (5.89%,n=49) and

International, cross-cultural themes (5.77%, n=48), all of them account for more than five percent of the total sample articles. Issues of Political connection, Tax mahagement; IPO, mergers, acquisitions, restructuring and Bankruptcy; Investment, financing, capital management; Entrepreneurship; Definition and Research Methods; Information Disclosure; Dividend Policy and Investor Protection; and Capital Structure are covered only moderately with a percent between 1% and 5%. Topics that received the least attention are Corporate Social Responsibility, Law and finance, Analyst Following, Risk Management, Wealth Management, review and others, all of these topics include less than 10 articles, their combination account for 5.64% of the total sample. It is reasonable to such distribution as our sample have included the mainstream journals in management, economics, finance and business, some hot topics in the mainstream academic field (such as Corporate Governance, Performance, Stock price, Altruism, Agency and Contractual problem, Investor Protection, Information Disclosure, and so on) also reflect in the family business research field, especially in the last decade and this trend will undoubtedly continue. These distribution characteristics are reflecting on theoretical grounding and research methods too. We categorized our sample articles by theoretical grounding and found that the majority articles are written based on agency theory (40.75%, n=339) which have become the mainstream theoretical grounding in business research field since Jensen's and Meckling's (1976) agency model; followed by Resource-based theory (28%, n=233) and Family embeddedness perspective (20.43%, n=170) which were relatively more special in the family business research field, although there are special agency problems in family business too, such as altruism and stewardship theory. 1.2% of the total sample articles based on stakeholders' theory. Aside from these, other theoretical grounding accounted for 9.62% (n=80). As for research methods, we can see from the table that of the 832 articles, the single largest category was empirical Study (41.83%, n=348), followed by Theory only and multi-methods (18.75%, n=156 and 13.34%, n=111, respectively). Of all the articles, 7.21% (n=60) featured Case study and 4.81% (n=40) featured Investigative Research, both of them are quantitative research also aside from empirical Studies and some of the multi-methods articles. Combine these four types of articles; we can conclude that, just as other social science disciplines, family business research has relied heavily on quantitative methodologies, This distribution is not surprising since quantitative methods tend to drive research in the social sciences and we expect these article may have high citation rates comparing with other types of articles (such as practice articles) for their larger number. What different from our expectation is the percentage of practice articles (3.85%, n=32) which specifically describe the art of helping family business. As we know, in the early stage of the field, practice articles reflected the needs and concerns of practitioners who sought to help family-owned businesses and it is also very important in the process of build theory. It seems that professionals in the family business research field have ignored the importance of practice research. Articles focus on method only (introduce innovative or unique approaches to the study of family businesses), review and commentary are account for 0.84% (n=7), 3.13% (n=26), and 3.61% (n=30), respectively. All of them are expected to have high citation rates as the argues of previous literature. Aside from these, there are many articles based on mathematical analysis in the family business research field, which account for 2.64% (n=22) of the total sample articles. As these articles featured using rigorous mathematical analysis to construct theory that may have great influence on the development of the discipline, we expect they will get high citation rates.

The Statistics of WBCU_Top100 indicate that about half of the total sample articles (48.8%, n=406) were written by authors who (at least one of them if the article written by multi-authors) are from World's Best Colleges and Universities: Top 100 (2010). According to previous literature, we expect they will get more citation rates than those written by authors with lower prestige affiliations. The Statistics of FUND pointed out that there are 21.39% (n=178) articles are supported by government, university, foundation or professional society, while 3.49% (n=29) articles got the financial supported from private organization or company. However, most of the articles did not report the funding sources (75.12%, n=625). We expect that the articles which report the funding sources will get more citation rates than those did not report. SLOC is a dummy about the Location of the sample which can be regarded as institutional background of the articles. Most of the research focused on the problem of American and EU (36.21%, n=210 and 26.21%, n=152, respectively), followed by cross-region studies, which account for 14.31% (n=83) of the total sample, these research tend to be concluded by comparing the differences and similarities between different countries and regions. There are 64 articles based on the sample from East Asia which, to some extent, indicated the very importance role of East Asia in the world economy during the past two decades. The influence of Canada and Australia institutional background (3.97%, n=23 and 3.1%, n=18, respectively) were relatively moderate. However, it should be pointed out that some journals from Canada and Australia do not include in the ISI database or GOOGLE scholar and we could not access to by other specialized databases, this distribution characteristic may be biased. Still some studies were based on other institutional backgrounds, their combine account for 5.17% (n=30) of the total sample articles. We categorized the journals subject to five classification and found that

Table 5. OLS and GMM Regression of the Impact of Characteristics of Journals, Authors and Articles on Citation Rates

	Citation Rate									
	OLS(1)	**GMM(1)**	**OLS(2)**	**GMM(2)**	**OLS(3)**	**GMM(3)**	**OLS(4)**	**GMM(4)**	**OLS(5)**	**GMM(5)**
ANUM	10.676	11.448	8.973	9.822	7.338	7.558	7.712	11.727	4.037	-17.809
	(0.840)	(0.341)	(0.711)	(0.797)	(0.561)	(0.585)	(0.599)	(0.934)	(0.309)	(-1.033)
CREGION	-22.859	-16.019	-14.696	-7.017	-8.712	-1.323	-10.859	2.728	-10.646	-26.423
	(-0.673)	(-0.418)	(-0.493)	(-0.245)	(-0.299)	(-0.045)	(-0.350)	(0.096)	(-0.351)	(-0.831)
CUNIT	1.589	-12.361	-4.975	-14.966	-1.466	-15.174	1.079	-24.182	4.725	62.878
	(0.053)	(-0.139)	(-0.185)	(-0.557)	(-0.052)	(-0.549)	(0.037)	(-0.947)	(0.162)	(1.134)
WBCU_Top100	37.095***	27.629**	39.338***	25.691**	50.877***	33.645**	50.317***	29.754**	52.403***	3.574
	(2.821)	(2.005)	(3.281)	(2.183)	(3.549)	(2.401)	(3.336)	(2.249)	(3.570)	(0.118)
dum_l2(Canada)	7.065	42.980	19.887	46.925**	4.366	46.369**	8.302	47.851**	8.916	11.611
	(0.351)	(0.798)	(1.026)	(2.361)	(0.206)	(2.099)	(0.388)	(2.263)	(0.449)	(0.385)
dum_l3(EU)	28.601	64.021***	26.310*	57.523***	26.644*	70.781***	30.793*	69.578***	23.669	30.885
	(1.470)	(2.670)	(1.829)	(3.687)	(1.831)	(3.730)	(1.732)	(2.928)	(1.473)	(0.912)
dum_l4(Australia)	-24.469	19.529	-16.798	22.078	-17.266	30.075	-14.193	36.444	-31.812	-13.695
	(-0.957)	(0.573)	(-0.754)	(0.778)	(-0.729)	(0.929)	(-0.584)	(1.099)	(-1.218)	(-0.353)
dum_l5(East Asia)	52.509**	22.449	-37.703*	22.734	-8.579	56.495**	3.437	64.051**	-31.447	-31.739
	(-2.043)	(0.356)	(-1.656)	(0.965)	(-0.522)	(2.172)	(0.165)	(1.974)	(-1.407)	(-0.642)
dum_l6(Other)	39.779	73.302	30.429	60.921**	26.615	69.757*	25.038	62.798	35.976	33.647
	(1.179)	(1.349)	(1.343)	(2.047)	(0.914)	(1.874)	(0.798)	(1.574)	(1.109)	(0.659)
dum_u2 (Insti.)	-30.954	-13.811	-40.304**	-28.847*	-56.034***	-30.501**	-51.009***	-22.346	-46.947**	-90.923*
	(-1.390)	(-0.498)	(-2.316)	(-1.873)	(-3.067)	(-2.007)	(-2.721)	(-1.427)	(-2.191)	(-1.850)
dum_u3(Enter.)	-61.675**	-29.572	-62.673***	-47.456**	-79.741***	-50.891**	-70.979***	-41.405*	-78.310***	-116.384**
	(-2.393)	(-0.228)	(-2.985)	(-2.202)	(-3.233)	(-2.100)	(-3.173)	(-1.888)	(-2.900)	(-2.223)
dum_u4(Other)	-23.097	-14.404	-46.952*	-30.832	-50.023*	-27.567	-38.410	-19.078	-38.976	-70.227*
	(-0.920)	(-0.514)	(-1.923)	(-1.231)	(-1.780)	(-0.954)	(-1.352)	(-0.693)	(-1.349)	(-1.714)
dum_f1(HP)	77.333	70.226	90.248	83.408	101.521	93.617	102.853	86.683	89.176	57.455
	(1.103)	(1.050)	(1.302)	(1.253)	(1.448)	(1.375)	(1.416)	(1.241)	(1.298)	(0.891)
dum_f3(VP)	103.462***	84.648***	95.474***	70.560***	114.289***	78.712**	123.380***	73.687**	116.697***	88.371***
	(2.656)	(2.613)	(3.034)	(2.681)	(3.017)	(2.501)	(2.709)	(2.339)	(3.041)	(2.816)
J_ImpactFactor	71.769***	141.406***	73.486***	130.852***	75.025***	151.764***	83.991***	151.688***	75.072***	106.716***
	(5.569)	(2.973)	(6.898)	(6.709)	(6.367)	(5.861)	(5.418)	(4.950)	(6.444)	(2.639)
TIME	9.669***	7.930***	8.852***	7.561***	8.778***	7.325***	8.499***	6.449***	9.223***	12.493***
	(4.623)	(4.276)	(4.280)	(4.551)	(4.290)	(4.002)	(4.892)	(4.611)	(4.097)	(3.793)
ALENGTH	5.549**	3.848**	5.254***	3.065***						
	(2.478)	(2.040)	(3.083)	(2.720)						

Table 5 continue

dum_b2(FEP)	-3.355	19.091	-62.993***	-12.262				
	(-0.141)	(0.374)	(-2.767)	(-0.510)				
dum_b3(RBT)	-4.053	13.408	-58.343***	-4.558				
	(-0.197)	(0.151)	(-4.227)	(-0.266)				
dum_b4(ST)	82.503	87.600	-21.618	20.578				
	(1.136)	(0.781)	(-1.296)	(0.832)				
dum_b5(Other)	-28.182	-7.297	-73.696***	-22.936				
	(-1.199)	(-0.156)	(-3.921)	(-1.098)				
dum_m1(Case)	44.311*	22.312			42.689**	10.523		
	(1.835)	(0.878)			(2.016)	(0.471)		
dum_m2(Method)	95.288	-45.169			62.869	69.492**		
	(1.624)	(-0.022)			(1.429)	(1.974)		
dum_m3(Theory)	77.939*	65.209			76.207**	36.354		
	(1.903)	(1.470)			(1.971)	(1.385)		
dum_m4(Investi.)	17.894	20.186			8.975	11.948		
	(0.825)	(0.920)			(0.490)	(0.647)		
dum_m5(Multi)	1.681	-5.496			11.741	-2.484		
	(0.074)	(-0.229)			(0.598)	(-0.116)		
dum_m6(Review)	50.546	64.404*			86.301***	72.986**		
	(1.281)	(1.656)			(2.620)	(2.253)		
dum_m7(Comm.)	50.526*	24.932			11.723	-14.634		
	(1.690)	(0.869)			(0.541)	(-0.603)		
dum_m9(Empiri.)	-5.477	-21.184			50.114*	11.902		
	(-0.128)	(-0.505)			(1.751)	(0.372)		
dum_m10(Math.)	73.478	96.168			116.729**	109.152*		
	(1.247)	(1.521)			(2.013)	(1.806)		
dum_t1(PCTM)	-167.869**	-137.108					-148.560**	-240.947**
	(-2.099)	(-0.896)					(-2.310)	(-2.447)
dum_t2(IMARB)	-137.242*	-132.826					-139.866**	-225.898***
	(-1.884)	(-1.185)					(-1.979)	(-2.823)
dum_t3(CS)	-132.953**	-70.064					-115.801*	-188.508*
	(-1.999)	(-0.521)					(-1.954)	(-1.790)
dum_t4(FBD)	-186.882**	-152.883					-193.434***	-279.254***
	(-2.296)	(-0.875)					(-3.045)	(-2.715)

Table 5 continue

dum_t5(DPIP)	16.491	-10.170		35.038	-66.790
	(0.129)	(-0.078)		(0.281)	(-0.517)
dum_t6 (Entre.)	-103.452	-53.230		-124.969**	-183.043*
	(-1.597)	(-0.320)		(-2.227)	(-1.869)
dum_t7(IBC)	-141.019**	-86.370		-170.420***	-231.003**
	(-2.120)	(-0.499)		(-2.720)	(-2.285)
dum_t8(LF)	-84.148	-18.116		-38.949	-73.426
	(-0.889)	(-0.138)		(-0.351)	(-0.669)
dum_t9(IFCM)	-52.554	-32.094		-58.657	-142.471
	(-0.549)	(-0.224)		(-0.600)	(-1.257)
dum_t10(AF)	-124.324	-93.109		-116.370	-197.206**
	(-1.293)	(-0.668)		(-1.304)	(-2.007)
dum_t12(RM)	-88.747	-31.772		-108.816	-159.049*
	(-1.329)	(-0.201)		(-1.532)	(-1.688)
dum_t13(CSR)	-154.661	-107.646		-84.106*	-155.277*
	(-1.404)	(-0.500)		(-1.899)	(-1.691)
dum_t14(WM)	-234.268**	-249.232*		-215.965**	-312.497***
	(-2.440)	(-1.839)		(-2.547)	(-3.376)
dum_t15(DRM)	-127.349	-45.391		-112.313*	-184.061*
	(-1.381)	(-0.059)		(-1.829)	(-1.842)
dum_t16(Review)	-106.659	-74.196		-96.361	-169.037
	(-1.333)	(-0.437)		(-1.524)	(-1.627)
dum_t17(Other)	-180.965	616.029		-136.639*	-9.8e+03
	(-1.610)	(0.056)		(-1.816)	(-0.840)
dum_t18(SC)	-127.024*	-84.857		-127.510**	-209.930**
	(-1.877)	(-0.537)		(-2.267)	(-2.147)
dum_t19(PPD)	-70.694	-14.820		-73.589	-127.184
	(-1.271)	(-0.117)		(-1.299)	(-1.520)
dum_t20(AAC)	-119.831*	-83.437		-122.581**	-191.312**
	(-1.846)	(-0.788)		(-2.058)	(-2.309)
dum_t21(SM)	-95.743	-51.398		-113.158**	-182.724*
	(-1.608)	(-0.299)		(-2.182)	(-1.931)
dum_t22(ICC)	-107.497*	-78.854		-128.754**	-203.907**
	(-1.840)	(-0.504)		(-2.555)	(-2.188)

Table 5 continue

dum_t23(RH)	-124.743*	-87.389							-136.978***	-195.822**
	(-1.922)	(-0.421)							(-2.588)	(-2.225)
dum_t24(FTM)	-111.551	-82.039							-113.989*	-184.752**
	(-1.561)	(-0.514)							(-1.937)	(-1.996)
dum_t25(ID)	-164.755**	-100.084							-141.954*	-199.723**
	(-1.997)	(-0.689)							(-1.963)	(-2.120)
_cons	-236.140***	-370.882*							-101.117***	-73.661
	(-4.521)	(-1.867)							(-2.675)	(-0.464)
N	825	825	825	825	825	825	825	825	825	825
r2_a	0.180	0.126	0.179	0.143	0.156	0.097	0.150	0.097	0.157	0.085
F/ Wald		172.15	4.050	69.20	3.505	65.03	4.028	93.18	.	109.19
J-statistic		0.9698		0.8400		0.5718		0.6729		0.8287
Hausman Test	0.0000		0.0449		0.0002		chi2(25)=-77.23		chi2(37)=-0.35	

Notes:
This table reports the OLS and GMM regression on Citation Rate, The definitions of the variables are as presented in Table 2. t-statistics calculated from robust standard errors are reported in parentheses. *, ** and *** indicate significance at 10%, 5%and 1%respectively. GMM weight matrix: Robust. p-value for Hansen *J*-statistic and Hausman Test in brackets. Durbin–Wu–Hausman test for endogeneity is performed via instrumental variables. The null hypothesis states that an OLS estimator of the same equation would yield consistent estimates. The rejection of the null hypothesis means that the endogenous regressors have meaningful effects on coefficients, and instrumental variables techniques are required. The Hansen test for over identifying restrictions does not reject the null hypothesis that our instruments are appropriate.

the single largest category was business (54.09%, n=450), followed by Finance, Management and Economics (24.76%, n=206; 13.22%, n= 110 and 7.45%, n=62, respectively).It is not surprising about this distribution as most of special journals on family business study (e.g. FBR, ETP, SBE) are featured on business.

Univariate Analysis

The sample articles used in our analysis were published in 98 journals with different impact factors. Figure 1 presents univariate analysis of the relation between the citation rates of individual articles and the impact factor of the journals in which they were published. It is consistent with the traditional view and the conclution of many scholars (Callaham, M.et al., 2002). A positive relationship between citation rates of individual articles and journal impact factors might reflect the fact that citation rates of individual articles contribute to the journal impact factor. However, this relationship could be interpreted as an indication that publication in a high-impact journal might by itself enhance the citation rate of an article by increasing its visibility or persuasiveness of the arguments presented (Opthof. T. 1997).This seems to be a widespread belief, which makes scientists increasingly desperate to publish in the few'top'journals (Lawrence P. A, 2003). Our results, however, do not support this 'journal effect' hypothesis, Although the highest citation rate sample articles appear in the journals with relatively highest JIF value, there was considerable variation in citation rates, especially for papers published in high-impact journals(e.g. the citation rate of the journal with JIF between 3 and 4 are significant more variation than that of the

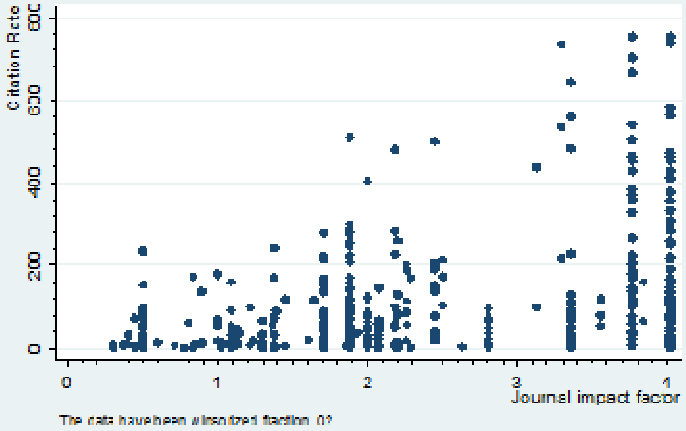

Figure 1. Citation Rates and Journal Impact Factors
——TRENDS in Family Business Research

journal with JIF between 1 and 2).This indicates that although journal impact factor is ,to some extent, a predictor of citation rata, articles in a high-impact journal does not by itself guarantee high citation rates, we should consider other determinations of citation rate. In other words, there is an asymmetric interaction between citation rate and journal impact factor, while citation rate of individual family business research articles have greatly contribute to the journal impact factor of certain journals, the influence of journal impact factor on citation rate is relatively moderate. This conclution is to some extent different with previous studies (Seglen PO, 1994; Opthof T, 1997).As we will regard the journal impact factor as the charactistics of journal, and predicted its influence on citation rate, there is a possible endogeneity problem that must be addressed.

The Asymmetric Impact of Characteristics of Journals, Authors and Articles on Citation Rate

The equations for the full sample from 1989 to 2010 are reported in Table 4, estimated using two different estimation methods: Ordinary Least Squares (OLS) and the Generalized Method of Moments (GMM), We have done a jarqe-bera test, in some cases, the result support null hypothesis that residual is Normal distribution, in other cases it not owing to endogeneity problem.. Despite the biases and inconsistency in the OLS estimations, their results are still useful for verifying the estimation results of GMM. Column (1) of table 5 presents the OLS estimate with a base specification (Model 1). In this model, citation rate is a function of all the variables we introduced to proxy for the characteristics of journals and authors, also for the characteristics of individual articles, except sample size and sample location. Column (2) contains the corresponding GMM estimate. We also run the OLS and GMM regressions for Model 2, Model 3, Model 4 and Model 5 which restrict the characteristics of individual articles to article length, theoretical grounding, research methods and research topics only, respectively. A Durbin–Wu–Hausman test for endogeneity is performed via instrumental variables in all the models. The null hypothesis states that an OLS estimator of the same equation would yield consistent estimates. The rejection of the null hypothesis (Model 1 and Model 3 are at 1% level rejection of the null hypothesis; while Model 2 is at 5% level rejection of the null hypothesis; Model 4 and Model 5 have a negative chi-value respectively, which means the data fails to meet the asymptotic assumptions of the Hausman test also) in all the models means that the endogenous regressors have meaningful effects on coefficients, and instrumental variables techniques are required. We also run a Hansen J-test for over identifying restrictions, J-test statistic (0.9698, 0.8400, 0.5718, 0.6729, and 0.8287 for the models, respectively) does not reject the null hypothesis that our instruments are appropriate.

Both the OLS and GMM estimate in all the five models suggests that journal impact factor positively significant (at 1% level) associated with the citation rate, which confirm our assume that the average article in a prestigious journal will, in general, be of a higher quality than one in a less reputable journal. The results support our prediction in HYPOTHESIS 1 that the higher the citation rate of individual family business article, the higher the impact factor of the journal that it published on.

As for authors' characteristics, it indicates that articles which written by authors who (at least one of them if the article written by multi-authors) are from World's Best

Colleges and Universities: Top 100 (2010) attract significantly (at 1% or 5% level except GMM estimate of Model 5 with statistically insignificant) more citations than those written by authors with lower prestige affiliations. Comparing the OLS estimate and GMM estimate we found that the OLS estimator produces an upward bias in all the models, which is consistent with the arguments of previous literature (Nickell, 1981; Hsiao 1986). The results provide partial support for our prediction in HYPOTHESIS 2 that the citation rate of individual family business article is positively associated with the status of authors' affiliations. The location of the first author also have effect on citation rates as we can see from the table that the articles which written by author (first author if the article written by multi-authors) from Candace(positive significantly at 5% level in GMM estimate of model 2,model 3 and model 4), EU(positive significantly at 1% level in GMM estimate of all the models except model 5 with statistically insignificant) and other regions(positive significantly at 5% level in GMM estimate of model 2 and 10% level in GMM estimate of model 3) tend to have higher citation rate, comparing with those from American in general, articles written by author from Australia are positive relative with citation rate in GMM estimate of all the models except model 5 (negative relative with citation rate), comparing with those from American but none of them are statistically significant. The GMM estimates of East Asia category are not consistence among the models too, although articles written by author from East Asia (positive significantly at 5% level in GMM estimate of model 3 and model 4) tend to have higher citation rate, comparing with those from American, the GMM estimate of model 5 indicate a lower citation rate. These results seem contrary to our expectation, and partially do not support for our prediction in HYPOTHESIS 2 that the citation rate of individual family business article is positively associated with the dummy variable that if authors of the article are from different regions and from English speaking countries. Articles written by author from English speaking countries do not necessarily guarantee a higher citation rate than those from other regions. The reasons we can justify for this are as follow: articles written by author from American (first author if the article written by multi-authors) account for 61.54%of our total sample as we displayed in the previous section, there are great variation of citation rate exist in the sub sample of American that some of the articles may have very lower citation rate. In addition, articles written by authors from non-native English speaking countries (e.g. East Asia) may be relatively good, on average, as these authors are prominent among the peer in these regions generally. It should be pointed out that the OLS estimates of East Asia and Australia, contrary to the GMM estimate in some of the models, are in accordance with our expectation, although most of them are statistically insignificant. It also confirm our expect that articles produced by researchers from lawyers/ accountants firms and advisory institutes (negative significantly at 10% level in GMM estimate of model 2 and model 5, 5% level in GMM estimate of model 3), enterprise groups (negative significantly at 5% level in GMM estimate of model 2 model 3and model 5, 10% level in GMM estimate of model 3) or other affiliations(negative significantly at 10% level in GMM estimate of model 5) tended to receive less citation rates than those from university and other research institutes. The OLS estimate of all the models displace a negative relation too, but there are many difference in the significant levels and the OLS estimate produce a downward bias in all the models. The results support our prediction in HYPOTHESIS 2 that the citation rate of individual family business article is positively associated with the dummy variable that if authors of the article are from university and other research institutes, comparing to other types of affiliations. In addition, we found that articles which report the funding sources receive more citation rates than those did not report which also confirm HYPOTHESIS 2, especially those supported by (vertical projects) government/public sources, university, foundation and professional society, with positive significant at 1% level in GMM estimate of all the models. Aside from these, the result of author number (ANUM), if authors of the article are from different region (CREGION) and if authors of the article have different unit affiliations (CUNIT) appear to be free of our expectation that no statistically significant can be found in both of the GMM estimate and OLS estimate of all the models. Overall, results in Table 5 partially support our prediction in HYPOTHESIS 2 that authors' characteristics are important predictors of the citation rate of individual family business article.

When we consider the characteristics of individual article, we found that longer articles receive more citations than do shorter ones, as indicated by a significant positive correlation (positive significant at 5% level in GMM estimate of model 1 and 1% level in GMM estimate of model 2) between the length of a article in pages and its citation rate which is consistence with our hypothesis. The OLS estimates of the two models displace similar relations and significant levels too, but the OLS estimate produce an upward bias both of the models. The results provide partial support for our prediction in HYPOTHESIS 3 that the citation rate of individual family business article is positively associated with the length of the article. As for the theoretical grounding, we can't find a consistence result between model 1 and model 3. The GMM estimate of model 1 suggest that articles are written based on family embeddedness perspective, resource-based theory and stakeholders' theory tended to receive more citations than those based on agency theory which has become the mainstream theoretical grounding, while in the GMM estimate of model 3 we found a contrary relation about family embeddedness perspective and resource-based theory, which suggest that articles are

written based on agency theory tended to receive more citation rates than those based on family embeddedness perspective and resource-based theory, although there are statistically insignificant in the GMM estimate of the two models. As the OLS estimate of model 3 confirm the result of the GMM estimate of model 3 with negative significant at 1% level, we conclude that articles are written based on family embeddedness perspective and resource-based theory which were relatively more special in the family business research field appears to attract less citation rates than those based on agency theory. Consider the inconsistent results, we conclude that they slightly reject HYPOTHESIS 3 that the citation rate of individual family business article is positively associated with the special theoretical grounding Applied. Another characteristic of individual article we focus on is research methods. Both the GMM estimate of model 1 and model 4 suggest that review articles attract significantly (positive significant at 10% level and 5%level, respectively) more citations than practice articles do which is consistence with our expectation. Articles focus on method only and those based on mathematical analysis also attract significantly (positive significant at 5% level and 10% level In the GMM estimate of model 4, respectively) more citations than practice articles do. Articles used other research methods appears to be free of our expectation that no statistically significant can be found in the GMM estimate of both the model 1 and model 4. The OLS estimate of model 1 and model 4 consistence with the result of GMM with a upward bias, aside from this, The OLS estimate also indicate that articles using Case study, Theory only (positive significant at 10% level in model 1 and 5% level in model 4), commentary (positive significant at 10% level in model 1) and empirical Study (positive significant at 10% level in model 4) tend to received more citation rate than practice articles do. In short, we can't find a strong and consistence relation about the research field, aside from the review articles. The result seems to slightly support the HYPOTHESIS 3 that the citation rate methods and citation rate in the family business research of individual family business article is positively associated with special research methods adopted. The result of research topics show that articles which focus on the topics relatively special in family business area were cited less than were articles focus on corporate governance, which have been widespread concerned in the mainstream academic field also during the last two decades. As we can see from the table that all the estimated coefficients of dummy variables are negative in the GMM estimate of both the model 1 and model 5. Comparing to the statistically insignificant in the model 1(only the wealth management articles with negative significant at 10% level), model 5 exhibits some significant result at difference level, specifically, articles which focus on IPO, mergers, acquisitions, restructuring and bankruptcy (IMARB), family business dynamics(FBD) and wealth management (WM) are negative significant at 1% level; articles which focus on political connection, tax management (PCTM), internal behavior and conflict (IBC), analyst following (AF), succession and family business continuity (SC), altruism, agency and contractual problem (AAC), international, cross-cultural themes (ICC), resources and heterogeneity (RH) , family trust mechanism (FTM) and information disclosure (ID) are negative significant at 5% level; while articles which focus on capital structure (CS), entrepreneurship (Entre.), risk management (RM), corporate social responsibility (CSR), definition and research methods studies (DRM) and strategic management (SM) are negative significant at 10% level. The OLS estimates of the two models displace similar relation and significant levels that confirm the results of GMM estimate although produce a downward bias in model 1 and a upward bias in model 5. The results do not support our prediction in HYPOTHESIS 3 that the citation rate of individual family business article is positively associated with the special topics concern, in contrary, articles which focus on the topics special in family business area were cited less than were articles focus on topics which have been widespread concerned in the mainstream academic field. Besides, the number of years since publicized of an article (positive significantly at 1% level in OLS estimate and GMM estimate of all the models) impact the citation rate too, that is, more citations to recent than to older articles in our sample, generally, which seems to meet our expectation, and support HYPOTHESIS 3. However, it is not clear whether there is a "success-breeds-success" effect accelerates this result as we do not introduce a dynamic citation rates in this paper.

Overall, comparing to the characteristics of journal and author, both of which can find a strong and consistence positive association with citation rate, the characteristics of individual article of family business research exhibit a relatively moderate influence on citation rate, in other words, there are asymmetric impact of characteristics of journals, authors and articles on citation rate. It seems that choose a special aspect (e.g. topic, theory) in family business research can not guarantee a higher citation rate, instead, it may receive lower citation rate. This suggests that social factors play a significant role in citation decisions in family business research. Anyway, it should be pointed out that, the adjust R square

Table 6. OLS and GMM Regression of the Impact of the Characteristics of Journals, Authors and Articles on Citation Rate for Statistics-based research subsample

	Citation Rate					
	OLS(6)	**GMM(6)**	**OLS(7)**	**GMM(7)**	**OLS(8)**	**GMM(8)**
ANUM	7.366	-1.241	4.361	-6.313	4.775	3.997
	(0.396)	(-0.048)	(0.238)	(-0.362)	(0.296)	(0.265)
CREGION	0.203	0.059	26.389	23.679	20.330	3.872
	(0.006)	(0.001)	(0.679)	(0.582)	(0.600)	(0.110)
CUNIT	-23.630	-13.398	-25.900	-10.843	-28.079	-18.610
	(-0.710)	(-0.342)	(-0.801)	(-0.355)	(-0.874)	(-0.599)
WBCU_Top100	24.143	-2.146	44.462**	5.474	40.225**	1.972
	(1.285)	(-0.095)	(2.234)	(0.273)	(2.173)	(0.102)
dum_l2	-21.133	-33.042	6.998	58.787*	-1.792	45.880
(Canada)	(-0.455)	(-0.150)	(0.218)	(1.756)	(-0.039)	(1.095)
dum_l3(EU)	31.088	88.714*	10.397	64.235***	47.601	99.780**
	(0.821)	(1.821)	(0.504)	(2.848)	(1.226)	(2.370)
dum_l4	-127.353*	-47.756	-40.001	26.206	-78.378	-16.032
(Australia)	(-1.656)	(-0.549)	(-1.224)	(0.563)	(-1.053)	(-0.184)
dum_l5	-94.340	14.516	-4.070	70.374**	-76.560	9.645
(East Asia)	(-1.224)	(0.265)	(-0.191)	(2.124)	(-0.988)	(0.257)
dum_l6	76.389	128.889*	31.042	65.049	68.920	119.025*
(Other)	(1.235)	(1.880)	(0.794)	(1.348)	(1.230)	(1.948)
dum_u2	-48.782	-43.989	-95.492***	-55.283**	-80.889**	47.075**
(Insti)	(-1.580)	(-1.172)	(-2.808)	(-2.263)	(-2.315)	(-1.960)
dum_u3	-111.459*	-99.547	-122.335***	-107.505**	-133.837**	-109.565*
(Enter)	(-1.730)	(-1.568)	(-2.779)	(-2.080)	(-2.360)	(-1.868)
dum_u4	-34.735	4.775	-60.740	-14.428	-78.625**	-26.697
(Other)	(-0.761)	(0.057)	(-0.956)	(-0.175)	(-2.078)	(-0.431)
dum_f1	122.342	109.520	129.874	107.315	133.204	80.466
(HP)	(1.400)	(1.346)	(1.476)	(1.280)	(1.471)	(0.968)
dum_f3	62.294**	58.612	78.958**	50.264*	82.129***	66.344**
(VP)	(2.084)	(1.455)	(2.501)	(1.786)	(2.642)	(2.290)
J_ImpactFactor	66.278***	167.494***	81.327***	160.500***	76.256***	161.608***
	(5.434)	(3.548)	(6.011)	(5.816)	(6.308)	(5.912)
TIME	12.963***	9.986***	10.833***	9.030***	11.887***	9.463***
	(4.887)	(4.583)	(5.073)	(4.488)	(5.039)	(4.768)
ALENGTH	4.127***	3.568*				
	(2.639)	(1.781)				
dum_b2	1.607	49.738				
(FEP)	(0.064)	(0.891)				
dum_b3	-5.679	24.524				
(RBT)	(-0.229)	(0.318)				
dum_b4	47.874	101.897				
(ST)	(0.949)	(1.024)				
dum_b5	-29.354	28.107				
(Other)	(-0.803)	(0.482)				
SSIZE	0.005	0.004	0.007	0.006		
	(0.674)	(0.455)	(1.041)	(0.866)		
dum_sl2	39.575	99.724			30.298	25.309
(Canada)	(0.881)	(0.491)			(0.664)	(0.583)

Table 6. continue

dum_sl3	-8.893	-22.837	-19.919	-32.384
(EU)	(-0.225)	(-0.384)	(-0.514)	(-0.768)
dum_sl4	71.452	72.230	60.438	56.030
(Australia)	(1.037)	(0.915)	(0.893)	(0.733)
dum_sl5	77.816	52.618	105.949	77.626***
(East Asia)	(0.973)	(0.732)	(1.303)	(2.832)
dum_sl6	-36.059	-72.741	-45.333	-95.228**
(Other)	(-0.919)	(-1.277)	(-1.461)	(-2.204)
dum_sl7	125.028*	97.536	170.005**	115.711*
(Cross)	(1.780)	(1.212)	(2.319)	(1.704)
dum_t1	-188.236**	-207.335**		
(PCTM)	(-2.259)	(-2.042)		
dum_t2	-125.974**	-128.938		
(IMARB)	(-2.305)	(-1.270)		
dum_t3	-81.033*	-14.376		
(CS)	(-1.765)	(-0.138)		
dum_t4	-142.385**	-105.531		
(FBD)	(-2.506)	(-1.047)		
dum_t5	286.844	241.090		
(DPIP)	(1.604)	(1.336)		
dum_t6	-78.473	-28.131		
(Entre.)	(-1.512)	(-0.229)		
dum_t7	-125.646**	-48.813		
(IBC)	(-2.360)	(-0.437)		
dum_t8	-107.784	246.461		
(LF)	(-1.407)	(0.145)		
dum_t9	-77.506	-51.885		
(IFCM)	(-1.216)	(-0.461)		
dum_t10	-132.121	-86.585		
(AF)	(-1.035)	(-0.838)		
dum_t12	-97.432	-3.098		
(RM)	(-1.513)	(-0.023)		
dum_t13	-128.006*	-70.352		
(CSR)	(-1.654)	(-0.633)		
dum_t14	-247.827***	-350.623***		
(WM)	(-3.155)	(-3.057)		
dum_t15	-83.829	-64.111		
(DRM)	(-1.030)	(-0.513)		
dum_t16	120.752	1117.490		
(Review)	(1.368)	(0.327)		
dum_t18	-94.119*	-60.144		
(SC)	(-1.905)	(-0.506)		
dum_t19	-56.258	13.235		
(PPD)	(-1.059)	(0.128)		
dum_t20	-110.347*	-120.308		
(AAC)	(-1.743)	(-1.512)		
dum_t21	-77.211	-14.583		
(SM)	(-1.494)	(-0.115)		

Table 6. continue

dum_t22	-76.305	-50.454				
(ICC)	(-1.497)	(-0.481)				
dum_t23	-97.299*	-63.812				
(RH)	(-1.869)	(-0.501)				
dum_t24	-87.976	-52.870				
(FTM)	(-1.331)	(-0.433)				
dum_t25	-138.177**	-39.161				
(ID)	(-1.985)	(-0.331)				
N	438	438	439	439	438	438
r2_a	0.296	0.115	0.216	0.109	0.251	0.134
F/ Wald	4.60	116.24	3.996	61.66	3.585	111.58
J-statistic		0.9842		0.1153		0.8964
Hausman Test	chi2(48)=-14.97		0.0000		0.7849	

Notes: The definitions of the variables are as presented in Table 2. The constant term is included in the regression but not reported. F-statistics (OLS) and Wald-statistics (GMM) are calculated from robust standard errors. *, ** and *** indicate significance at the 10%, 5%and 1%respectively. The subsample mainly included the empirical articles, still some articles of investigative research, mathematical analysis and multi-methods subsamples are included, because these articles also used sample data. p-value for Hansen J-statistic and Hausman Test in brackets.

in all of the models aren't high enough (within 0.09 - 0.2) to give a affirmative conclusion here, there may exist some other factors, no matter characteristics of journal and author or characteristics of article, that may influent the citation decision process. The next section, we will move forward, and analyze the impact of sample characteristics on citation rate.

The Impact of Sample Characteristics on Citation Rate

Table 6 reports the results of OLS and GMM regressions for statistics-based research subsample. Still we will analyze the impact of the characteristics of journals, authors and articles on Citation Rate, especially; we will focus on the sample characteristics. There are 438 articles in the statistics-based subsample and it mainly included the empirical articles, still some articles of investigative research, mathematical analysis and multi-methods subsamples are included, because these articles also used sample data. Column (1) and (2) of table 6 presents the OLS estimate and GMM estimate with a base specification (Model 6), we include all the explanatory variables present in the model 1 except the research methods dummies and add information about sample characteristics (proxied by two additional variables: sample size and sample location) to the regression. We also run the OLS and GMM regressions for Model 7 and Model 8 which restrict the characteristics of individual articles to sample size and the dummies of sample location, respectively. The estimates are as presented in Column (3) to (6) of table 6. A Durbin–Wu–Hausman test for endogeneity is performed via instrumental variables in the three models. The null hypothesis states that an OLS estimator of the same equation would yield consistent estimates. The rejection of the null hypothesis (Model 6 have a negative chi-value respectively, which means the data fails to meet the asymptotic assumptions of the Hausman test; Model 7 is at 1% level rejection of the null hypothesis) in model 6 and model 7 mean that the endogenous regressors have meaningful effects on coefficients, and instrumental variables techniques are required. While model 8 can't reject the null hypothesis (p=0.7849) means that the data meet the asymptotic assumptions of the Hausman test, the OLS estimator of model 8 yield consistent estimates. We also run a Hansen J-test for over identifying restrictions, J-test statistic (0.9842, 0.1153 and 0.8964 for the models, respectively) does not reject the null hypothesis that our instruments are appropriate.

The main result about characteristics of journal and authorship we found in table 4 do not change much here. As we can see from the table, Both the OLS and GMM estimate in all the three models suggests that journal impact factor statistically significant (at 1% level) associated with the citation rate which support HYPOTHESIS 1. The articles which written by author (first author if the article written by multi-authors) from EU (positive significantly at 10% level in GMM estimate of model 6 and 1% level in GMM estimate of model 7, the OLS estimate in model 8 is positive, but statistically insignificant) and other regions (positive significantly at 10% level in GMM estimate of model 6 and model 8) tend to have higher citation rate, comparing with those from American in general. However, there are many difference when we consider the results of Canada

(positive significantly at 10% level in GMM estimate of model 6, but negative relate to citation rate in GMM estimate of model 7 and OLS estimate of model 8 with statistically insignificant, comparing with those from American), Australia (negative relate to citation rate in GMM estimate of model 6 and OLS estimate of model 8, while positive relate to citation rate in GMM estimate of model 7 comparing with those from American, all of them statistically insignificant,) and East Asia (positive significantly at 5% level in GMM estimate of model 7 and statistically insignificant in model 6; while negative relate to citation rate in OLS estimate of model 8 with statistically insignificant, comparing with those from American), they are not consistence among the three models. These differences seem to confirm our expectation, to some extent, that articles written by author from American have higher citation rate than those from other regions, comparing to the result show in the table 5. It suggests that authors in American are dominant in the statistics-based research of family business, although we can not find the same trend in the full sample. As for affiliation prestige, it show that articles which written by authors who (at least one of them if the article written by multi-authors) are from World's Best Colleges and Universities: Top 100 (2010) attract (positive significantly at 5% level in OLS estimate of Model 8 and statistically insignificant in GMM estimate of Model 7) more citations than those written by authors with lower prestige affiliations, while GMM estimate of Model 6 indicate a negative relation , although statistically insignificant which is contrary to our expectation. The result of affiliation strengthen those present in the table 4 that articles produced by researchers from lawyers/ accountants firms and advisory institutes (negative significantly at 5% level in GMM estimate of model 7, 5% level in OLS estimate of model 8), enterprise groups (negative significantly at 5% level in GMM estimate of model 7, 5% level in OLS estimate of model 8) or other affiliations (negative significantly at 5% level in OLS estimate of model 8) tended to receive less citation rates than those from university and other research institutes. The result of funding sources also confirm those present in the table 4 that articles which report the funding sources receive more citation rates than those did not report, especially those supported by (vertical projects) government/public sources, university, foundation and professional society, with positive significant at 10% level in GMM estimate of model 7 and 1% level in OLS estimate of model 8. Aside from these, the result of author number (ANUM), if authors of the article are from different region (CREGION) and if authors of the article have different unit affiliations (CUNIT) are consistence with those of table 5 too, no statistically significant can be found in both of the GMM estimate and OLS estimate of all the three models. All in all, these results provide strong support for our prediction in HYPOTHESIS 2 that the authors' characteristics are important predictors of the citation rate of individual family business article. When we consider the characteristics of individual article, we found that there is a positive correlation between sample size and citation rates, but statistically insignificant in both of the GMM estimate and OLS estimate of model 6 and model 7. Although sample size which determines the power of statistical tests, was considered as one of the indictors of the methodological quality, its influence on the citation rates seems limited. Thus, our prediction in HYPOTHESIS 3 that the citation rate of individual family business article is positively associated with the sample size cannot be supported by the data. The GMM estimate and OLS estimate of SLOC in model 6 and model 8 indicate that the articles with Canada, Australia, East Asia (significantly at 1% level in GMM estimate of model 8) and cross-regions (significantly at 10% level in OLS estimate of model 6 and GMM estimate of model 8, 5% level in OLS estimate of model 8) institutional background (proxied by the location of the sample) have positive relation with citation rates, comparing with American institutional background. While articles with EU and other regions institutional background tended to receive less citation rates than those with American institutional background, statistically insignificant. It suggests that there is a marginally significant correlation between citation rates and the location of the sample. Once again, however, it seems that the characteristics of individual article of family business research only have marginally explanatory power on the citation rates although a stable trend can be found among the models. The asymmetric influences of characteristics of journals, authors and articles on citation rate still stand by when we consider the characteristics of sample.

Table 7. OLS Regression of the Impact of the Characteristics of Journals, Authors and Articles on Citation Rate

	Full sample					Subsample with empirical research articles		
	OLS_w(1)	**OLS_w(2)**	**OLS_w(3)**	**OLS_w(4)**	**OLS_w(5)**	**OLS_w(6)**	**OLS_w(7)**	**OLS_w(8)**
WBCU_Top100	20.550**	22.851***	27.734***	26.706***	28.985***	8.462	21.324*	19.337
	(2.444)	(2.783)	(3.368)	(3.222)	(3.454)	(0.630)	(1.665)	(1.533)
dum_l2(Canada)	23.954	33.574**	24.528	29.599*	25.852	17.817	33.370	35.267
	(1.443)	(1.978)	(1.387)	(1.738)	(1.513)	(0.554)	(1.225)	(0.978)
dum_l3(EU)	19.235*	25.022**	25.081**	24.102**	20.648*	24.033	18.106	46.095* (1.750)
	(1.766)	(2.351)	(2.329)	(2.184)	(1.851)	(0.979)	(1.221)	
dum_u2(Insti)	-26.178	-35.023**	-43.352***	-36.407***	-36.067**	-47.162**	-79.349***	-70.630***
	(-1.635)	(-2.522)	(-3.171)	(-2.640)	(-2.313)	(-2.188)	(-3.527)	(-2.931)
dum_u3(Enter)	-45.151***	-44.546***	-53.941***	-47.951***	-53.516***	-80.010*	-83.481***	-93.797***
	(-3.213)	(-3.877)	(-4.334)	(-3.941)	(-4.009)	(-1.943)	(-3.316)	(-2.711)
dum_u4(Other)	-31.842*	-35.010**	-36.922*	-26.168	-42.319**	-20.577	-44.989	-51.316**
	(-1.754)	(-1.975)	(-1.874)	(-1.326)	(-2.028)	(-0.485)	(-0.862)	(-1.997)
dum_f3(VP)	39.256***	40.784***	48.685***	49.495***	50.242***	23.452*	36.347**	41.475***
	(2.977)	(3.194)	(3.681)	(3.611)	(3.823)	(1.707)	(2.372)	(2.747)
J_ImpactFactor	59.836***	62.881***	62.790***	66.921***	65.582***	62.330***	72.940***	69.730***
	(9.454)	(9.782)	(9.965)	(10.126)	(9.953)	(7.238)	(8.482)	(8.382)
TIME	6.248***	5.599***	5.670***	5.739***	5.736***	9.590***	8.345***	8.728***
	(6.421)	(6.548)	(6.477)	(6.300)	(6.172)	(5.870)	(5.548)	(5.772)
ALENGTH	2.354***		2.711***			2.342***		
	(4.006)		(5.007)			(3.076)		
dum_b2(FEP)	-21.734		-42.469***			-11.391		
	(-1.546)		(-3.712)			(-0.636)		
dum_b3(RBT)	-25.090**		-41.357***			-21.491		
	(-1.965)		(-4.849)			(-1.236)		
dum_b4(ST)	-2.957		-26.145**			2.838		
	(-0.108)		(-2.323)			(0.086)		
dum_b5(Other)	-42.399***		-51.286***			-43.401*		
	(-2.729)		(-4.623)			(-1.848)		
dum_m1(Case)	32.722*			33.314*				
	(1.656)			(1.822)				
dum_m2(Method)	82.220*			72.795**				
	(1.877)			(2.066)				

Table 7. continued.

dum_m3(Theory)	32.427**	32.732**			
	(2.231)	(2.421)			
dum_m6(Review)	59.018*	74.004***			
	(1.948)	(2.592)			
dum_m9(Empiri.)	23.708	50.479***			
	(1.362)	(3.305)			
dum_m10(Math.)	83.679*	109.551**			
	(1.959)	(2.574)			
dum_t1(PCTM)	-45.902*		-53.514**	-93.702**	
	(-1.726)		(-2.277)	(-2.131)	
dum_t2(IMARB)	-24.990		-33.826	-61.713**	
	(-0.782)		(-1.073)	(-2.045)	
dum_t4(FBD)	-60.379**		-90.126***	-74.646**	
	(-2.394)		(-4.805)	(-2.281)	
dum_t5(DPIP)	63.252		68.644	223.406**	
	(0.859)		(0.930)	(2.174)	
dum_t7(IBC)	-31.697		-66.168***	-55.078**	
	(-1.456)		(-3.495)	(-2.078)	
dum_t14(WM)	-99.454**		-104.578**	-163.595***	
	(-2.009)		(-2.120)	(-3.953)	
dum_t16(Review)	1.585		-16.455	174.421***	
	(0.047)		(-0.476)	(3.831)	
dum_t17(Other)	-64.663		-39.219*	0.000	
	(-1.306)		(-1.892)	.	
dum_t18(SC)	-17.700		-36.880**	-36.267	
	(-0.845)		(-2.101)	(-1.380)	
dum_t21(SM)	-3.275		-31.378*	-16.481	
	(-0.146)		(-1.712)	(-0.540)	
dum_t22(ICC)	-13.544		-46.839***	-15.721	
	(-0.669)		(-2.806)	(-0.588)	
dum_t23(RH)	-20.435		-49.745***	-35.214	
	(-0.943)		(-2.743)	(-1.171)	
dum_t25(ID)	-38.940		-36.740	-92.900**	
	(-1.014)		(-0.945)	(-2.357)	
SSIZE				0.014**	0.015**
				(2.033)	(2.048)

Table 7. continued.

dum_sl6(Other)						-53.115*		-61.410***
						(-1.887)		(-2.625)
dum_sl7(Cross)						72.093**		103.587***
						(2.257)		(3.072)
N	825	825	825	825	825	438	439	438
r2_a	0.352	0.338	0.323	0.318	0.321	0.447	0.345	0.373
F	.	9.245	8.153	6.629	.	.	6.671	5.539

Notes:
This table reports the OLS regression of determinants of Citation Rate including variables used to proxy for the Characteristics of Journals, Authors and Articles. Effects are presented separately for the full sample and the sub-sample of empirical research. The definitions of the variables are as presented in Table 2 and Variables have winsorized in fraction 2% for robust. t-statistics calculated from robust standard errors are reported in parentheses. *, ** and *** indicate significance at 10%, 5%and 1%respectively. All the variables in the model (consistence with the model in table4 and table6) are included in regressions but omitted the variables which are not significant in all the model from the table for brevity. The constant term is included in the regression but not reported.

As for the length of an article, theoretical grounding, research topics and the number of years since publicized, we found both of the GMM estimate and OLS estimate are similar to the result of the previous models present in the table 5. Specifically, it suggest that there is a significant positive correlation (positive significant at 10% level in GMM estimate of model 6) between the length of an article in pages and its citation rate which partial support for our prediction in HYPOTHESIS 3. and we still cannot find any statistically significant result about theoretical grounding here, although the positive GMM estimates of model 6 indicate that articles which written based on family embeddedness perspective, resource-based theory and stakeholders' theory tended to receive more citations than those based on agency theory. The GMM estimates of model 6 shows that articles which focus on the topics relatively special in family business area were cited less than were articles focus on corporate governance, which have been widespread concerned in the mainstream academic field also during the last two decades, although most of them are statistically significant(wealth management articles are negative significant at 1% level while political connection, tax management (PCTM) articles are negative significant at 10% level). What we found different from model 1 and model 5 is that there are some topics, say, dividend policy, investor protection(DPIP), law and finance(LF), review articles, performance, stock price and developmental (PPD), exhibit a positive coefficient which means that these articles have received more citation rates than those focus on corporate governance. However, just as the corporate governance, these topics have been widespread concerned in the mainstream academic field too, rather than the special topics in family business area, hence, the main conclusion about research topic we showed before still stand by here. In addition, the number of years since publicized of an article positive (significantly at 1% level in OLS estimate and GMM estimate of all the three models) impacts the citation rate. It is also consistence with the previous results presented in table 5.

Additional test

We also test the sensitivity of our results to the presence of outliers and influential articles. We winsorized the continuous variable in fraction 2%, and run the regressions for the model 1 to model 8, Effects are presented separately for the full sample and the sub-sample of empirical research. All the variables in the models (consistence with the models in table5 and table6) are included in regressions but omitted the variables which are not significant in all the models from the table for brevity. The adjust R square in all of the models improve to a greater level (within 0.318 - 0.447), comparing with those in the previous regressions (within 0.09 - 0.2). It seems that removed outliers and influential articles increased the explanatory power of our models. We also conducted the GMM regressions for all the models here (no reported in

the table), but cannot reject the null hypothesis of Durbin–Wu–Hausman test, means that the OLS estimators are more effective after winsorized the continuous variables.

The main results were similar to those reported in table 5 and table 6, and do not change substantively when winsorized the continuous variable in fraction 2% level in the models. As we can see from the table, the influences (either positive or negative) of the characteristics of journal and authorship on citation rates are consistence with those in the previous estimates, with a more significant level (most of them significantly at 1% level), while the variables which found no significant relationship with citation rate before still are statistically insignificant here, such as the result of author number (ANUM), if authors of the article are from different region (CREGION) and if authors of the article have different unit affiliations (CUNIT). In common with the results reported in Table 5, the coefficients of ALENGTH are all significant in OLS estimates of model 1, model 3 and model 6 (positive significant at 1% level) after winsorized the continuous variable which means that longer articles receive more citations than do shorter ones. The coefficients of dummy variables THEORY and TOPIC also confirm our previous results that articles are written based on/ focus on theories/ topics relatively special in family business area were cited less than were articles based on/ focus on those have been widespread concerned in the mainstream academic field during the last two decades, and the significant level have improved to some extent. As for the research methods, we find a relatively strong and consistence relation about the reaesrch methods and citation rate in the family business research field which is contrary to our previous results present in table 5. The OLS estimate of model 1 and model 4 after winsorized the continuous variable indicate that articles using Case study (positive significant at 10% level in both the two models), method only(positive significant at 10% level in model 1 and 5% level in model 4), Theory only (positive significant at 5% level in both the two models), review (positive significant at 10% level in model 1 and 1% level in model 4), empirical Study (positive significant at 1% level in model 4) and mathematical analysis (positive significant at 10% level in model 1 and 5% level in model 4) tend to received more citation rate than practice articles do which are consistent with our expectations. Overall, these results show that our conclusions hold after winsorized the continuous variable.

CONCLUSION

In this study, we used a sample data of 832 family business research articles from 98 journals over the period from 1989 to 2010 to investigate extensively the association between the citation rates and various characteristics of journals, articles and authors. It is, to our knowledge, the first attempt to empirically examine the structure of and scholarly activities in the family business research field. Our analysis shows that there are asymmetric impacts of characteristics of journals, authors and articles on citation rate, social factors play a significant role in citation decisions in family business research, while the characteristics of individual article exhibit a relatively moderate influence on citation rate. We found that although the special aspects (e.g. topics, theories, methods) in family business research are weakly and instable (even negative) correlative with citation rates comparing with those from mainstream academic area, there is a strong and stable correlation between citation rates and most characteristics of journal and author, which are other than the scientific utility of a study. In addition, we investigated the characteristics of sample, say, sample size and sample location (regarded as institutional background), and we found that the characteristics of sample only have marginally explanatory power on the citation rates although a stable trend can be found among the models. That is, once again, confirmed our argument that there are asymmetric influences of characteristics of journals, authors and articles on citation rate in the family business research field. Scientists are motivated to cite a publication not only to acknowledge intellectual and cognitive influences of scientific peers, but also for other, possibly non-scientific, reasons. Nevertheless, here we should point out that, to some extent, the results could extend to other areas as well, consider the characteristics of journals, authors and many characteristics of article (such as the length of an article, the methodology et al.) are common and would be the same with other disciplines. However, we argue that only choose a special area, can we deepen the bibliometrics literature on citation rate to the content of the research that we can then answer the questions like: “whether choose a special topic or apply special theories bring citation rates bonus?”. This is one of the reasons why we focus on the family business research in this paper, because it is a relatively special area and is an interdisciplinary of Economics, Finance, Management, Business, and related disciplines.

Furthermore, as the fast development of family business research, many new characteristics in this field have emergent, the definition, measurement of various characteristics of family business Articles and their distribution present in this paper deepen the understanding of family business research structure, especially in the last ten year with the growing attention being devoted to family business and the growth of scholarship on this area. Thus, our investigation not only complements prior studies on bibliometrics literature of family business research by empirically examine the determinates of citation rates, but also extends the existing literature on the topics, theoretical groundings,

research methods, funding supported, authors distribution characteristics et cetera of family business research.

Citation analysis is increasingly being used to evaluate scientists and the quality of their productivity. Despite the many problems of this bibliometric tool, it is unlikely that the most well known mechanism for addressing research quality will be abandoned. However, it is clear that all scientists should become familiar with the method of citation analysis and the various applications to which it is being put, whether or not they consider the basis for such applications well-founded; while librarians, editors, publishers, and other stakeholders need a clearer understanding of citation rates data if they are to use it in a more sophisticated and critical way. For example, our results indicate that collaborative work involving multi-authors might result in a citation bonus compared with single-author studies. Instead, it suggests that choose a special aspect (e.g. topic, theory) in family business research can not guarantee a higher citation rate. Also, Government and private funding sources can monitor the return on their investment. We hope that our study will stimulate more detailed analyses of individual determinants associated with citation rates of family business articles.

ACKNOWLEDGEMENTS

We thank Professor Shijun Cheng (University of Maryland) and Professor Xiaowei Luo (University of Illinois) for their constructive comments on the earlier versions of the article. We also thank The 4nd Annual Conference of Youth Accounting Scholars of China, Guanghua School of Management，Peking University and the doctoral forum of Accounting Department of Management School, Jinan University. The comments of two anonymous referees are gratefully acknowledged. We acknowledge financial support from the Key Program of National Natural Science Foundation of China (Grant no. 71032006), Youth Program of National Social Science Foundation of China (Grant no. 12CGL034),Guangdong Province Humanities and Social Science Research Program (Grant no.09JDXM63005), Guangdong Province 11th Five-Year Plan Philosophy and Social Sciences Program (Grant no. GD10CGL01) and the Fundamental Research Funds for the Central Universities at Jinan University (Grant no. 12JNYH003).

What Determines the Citation Rates of Family Business Research Articles?

REFERENCES

Adam D (2002). “The counting house”, Nature, 415:726–729.

Alex Stewart (2008). “Who Could Best Complement a Team of Family Business Researchers—Scholars Down the Hall or in another Building?” Family Business Review 21(4):279-293.

Ann Jorissen, Eddy Laveren, Rudy Martens, Anne-Mie Reheul (2005). “Real Versus Sample-Based Differences in Comparative Family Business Research”, Family Business Review 18(3):229-246.

Annette Flanagin, Phil B Fontanarosa, Catherine D DeAngelis (2002). “Authorship for Research Groups”, The Journal of the American Medical Association, 288(24):3166-3168.

Anne-Wil Harzing, Ron van der Wal (2009). “A Google Scholar h-Index for Journals: An alternative Metric to Measure Journal Impact in Economic and Business”, Journal American Society for Information Science Technology, 60(1):41–46.

AW Harzing, R van der Wal (2008). “A Google Scholar h‐index for journals: An alternative metric to measure journal impact in economics and business”, Journal of the American Society for Information Science and Technology, 60(1):41‐46.

Baltagi, Badi H (2001). “Econometric Analysis of Panel Data”, .2nd ed.Chichester: John Wiley and Sons.

Barbara Bird, Harold Welsch, Joseph H Astrachan, David Pistrui (2002). “Family Business Research: The Evolution of an Academic Field”, Family Business Review, 15(4):337-350.

Brian D Cameron (2005). “Trends in the Usage of ISI Bibliometric Data: Uses, Abuses, and Implications”, portal: Libraries and the Academy, 5(1):105–125.

C Kellsey, J Knievel (2011).”Overlap between Humanities Faculty Citations and Library Monograph Collections 2004–2009”, College & Research Libraries, Working paper, University of Colorado Boulder.

Case DO, Higgins GM (2000). “How can we investigate citation behaviour? A study of reasons for citing literature in communication”, Journal of American society for information, 51:635–645.

CF Baum, ME Schaffer, S Stillman (2003). “Instrumental Variables and GMM: Estimation and Testing”, Boston College Working Paper no.545.Chestnut Hill, Mass.: Boston College.

Christensen-Szalanski, JJJ, Beach LR (1984). “The citation bias: fad and fashion in the judgment and decision literature”, American Psychologist, 39:75–78.

Davenport E, Snyder H (1995). “Why cites women? Whom do women cite? An exploration of gender and scholarly citation in sociology”, Journal of Documentation, 51: 404–410.

Dietmar Harhoff, Francis Narin, FM Scherer, Katrin Vopel (2006). “Citation Frequency and the Value of Patented Inventions”, Review of Economics and statistics, 81(3):511-515.

Duncan Lindsey (1980). “Production and Citation Measures in the Sociology of Science: The Problem of Multiple Authorship”, Social Studies of Science, 10(2):145-162.

DW Aksnes, RE Taxt (2004).” Peer reviews and bibliometric indicators: a comparative study at a Norwegian university”, Research evaluation, 13 (1): 33-41.

Eugene Garfield (1955). “Citation Indexes for Science: A New Dimension in Documentation through Association of Ideas”, International journal of epidemiology, 35(5):1123-1127.

G Corbetta, C Salvato (2004).” Self-Serving or Self-Actualizing? Models of Man and Agency Costs in Different Types of Family Firms: A Commentary on “Comparing the Agency Costs of Family and Non-family Firms: Conceptual Issues and Exploratory Evidence”, Entrepreneurship Theory and Practice, 28(4): 355–362.

G Paris, G De Leo, P Menozzi, M Gatto (1998). “Region-based citation bias in science”, Nature, 396(6708):210.

G Singh, KM Haddad, CW Chow (2007).” Are articles in “top” management journals necessarily of

Garfield (1979). “Is citation analysis a legitimate evaluation tool?” Scientometrics, 1:359–375.

Garfield E (1972). “Citation analysis as a tool in journal evaluation”, Science, 178:471–479.

Garfield E, Welljams-Dorof A (1992). “Citation data: their use as quantitative indicators for science and technology evaluation and policy-making”, Science, 19:321–327.

Herbertz H (1995). “Does it pay to cooperate? A bibliometric case study in molecular biology”, Scientometrics, 33:117–122.

higher quality?” Journal of Management Inquiry, 16 (4): 319-331.

James J Chrisman, Jess H Chua, Pramodita Sharma (2003). “Current trends and future directions in family business management studies:

toward a theory of the family firm", Coleman white paper series.
Jesús Rey-Rocha, M José Martín-Sempere, Jesús Martínez-Frías, Fernando López-Vera (2001). "Some Misuses of Journal Impact Factor in Research Evaluation", Cortex, 37:595-597.
Jose Casillas, Francisco Acedo (2007). "Evolution of the Intellectual Structure of Family Business Literature: A Bibliometric Study of FBR", family business review, 20:141–162.
K Kousha, M Thelwall (2007)." Google Scholar citations and Google Web/URL citations: A multi-discipline exploratory analysis", Journal of the American Society for Information Science and Technology, 58(7):1055–1065.
King DA (2004). "The scientific impact of nations", Nature, 430:311–316.
Kjaergard LL, Gluud C (2002). "Citation bias in hepato-biliary randomized clinical trials", Journal of clinical epidemiology, 55:407–410.
Koricheva J (2003). "Non-significant results in ecology: a burden or a blessing in disguise?" Oikos, 102:397–401.
KW Boyack, R Klavans, K Börner (2005)."Mapping the backbone of science", Scientometrics, 64(3): 351-374.
L Bornmann, HD Daniel (2005)."Does the h-index for ranking of scientists really work?" Scientometrics, 65 (3): 391-392.
Lawrence PA (2003). "The politics of publication", Nature, 422:259–2611.
Lewison G, Dawson G (1998). "The effect of funding on the outputs of biomedical research", Scientometrics, 41:17–27.
Loet Leydesdorff and Ismael Rafols (2009). "A Global Map of Science Based on the ISI Subject Categories", Journal of the American Society for Information Science Technology, 60(2):348–362.
Luis Ben'tez-Bribiesca (2002). "The Ups and Downs of the Impact Factor: The Case of the Archives of Medical Research", Archives of Medical Research, 33(2):91-94.
Lydia L Lange, PA Frensch (1999). "Gaining scientific recognition by position: Does editorship increase citation rates?" Scientometrics, 44(3): 459-486.
M Burkart, F Panunzi, A Shleifer (2003)."Family firms", The Journal of Finance, 58(5): 2167–2202.
May RM (1997). "The scientific wealth of nations", Science, 275:793–796.
Merton RK (1942). "Science and technology in a democratic order", Journal of legal and political sociology, 1:115–126.
Michael Callaham, Robert L Wears, Ellen Weber (2002). "Journal prestige, publication bias, and other characteristics associated with citation of published studies in peer-reviewed journals", The Journal of the American Medical Association, 287:2847–2850.
Opthof T (1997). "Sense and nonsense about the impact factor", Cardiovascular research, 33:1–7.
P0 Seglen (1997). "Citations and journal impact factors: questionable indicators of research quality", Allergy, 52:1050-1056.
Peter Jacso (2005). "As we may search–Comparison of major features of the Web of Science, Scopus, and Google Scholar citation-based and citation-enhanced databases", Current Science, 89:1537-1547.
Peters RH (1991). "A Critique for Ecology", Cambridge University Press.
PF Volpin (2002). "Governance with poor investor protection: Evidence from top executive turnover in Italy", Journal of Financial Economics, 64(1):61–90.
Pramodita Sharma (2004). "An Overview of the Field of Family Business Studies: Current Status and Directions for the Future", Family Business Review, 17(1):1-36.
S Hauser, B Lauterbach (2004)." The value of voting rights to majority shareholders: Evidence from dual-class stock unifications", Review of Financial Studies, 17 (4):1167-1184.
See M Oromaner (1974). "Collaboration and Impact: The Career of Multi-authored Publications", Social Science Information, 14:147-55.
Seglen PO (1994). "Causal relationship between article citedness and journal impact", Journal of the American society for information, 45:1-11.
Seglen PO (1998). "Citation rates and journal impact factors are not suitable for evaluation of research", Acta Orthopaedica Scandinavica, 69:224–229.
Shaker A Zahra, Pramodita Sharma (2004). "Family Business Research: A Strategic Reflection", Family Business Review, 17(4):331-346.
Steel CM (1966). "Read before you cite", Lancet, 3:48-144.
Ulrich Schmoch, Torben Schubert (2008). "Are international co-publications an indicator for quality of scientific research?" Scientometrics, 74(3):361-377.
W Gibb Dyer Jr, Marcelino Sánchez (1998). "Current State of Family Business Theory and Practice as Reflected in Family Business Review 1988–1997", Family Business Review, 11(4):287-295.
W Yue, CS Wilson (2004)." Measuring the citation impact of research journals in clinical neurology: A structural equation modelling analysis", Scientometrics, 60(3): 317-332.
Wardle DA (1995). "Journal citation impact factors and parochial citation practices", Bulletin of the Ecological Society of America, 76:102–104.
YL Cheung, PR Rau, A Stouraitis (2006)." Tunneling, propping, and expropriation: evidence from connected party transactions in Hong Kong", Journal of Financial Economics, 82(2):343–386.