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Editorial Note

The May 2017 issue of the *Journal of International Business Disciplines (JIBD)* has been the result of a rigorous process in two stages:

- Stage 1: all papers that were submitted to the 2017 IABD conference went through blind reviews, and high quality papers were accepted for presentation at conference.
- Stage 2: approximately ten percent of the accepted articles and one invited manuscript were selected for possible publication in *JIBD*. The respective authors were contacted and asked to resubmit their papers for a second round of reviews. These manuscripts went through a blind review process by the editorial board members. In the end, three articles were recommended by the editorial board for publication in the May 2017 issue of *JIBD*.

JIBD is committed to maintaining high standards of quality in all of its publications.

Ahmad Tootoonchi, Chief Editor
Journal of International Business Disciplines

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AN ANALYSIS OF SOCIAL MEDIA PRESENTATION AT COMPANY WEBSITES

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ABSTRACT

While social media (SM) has grown remarkably in recent years, it remains an emerging technology. Many organizations are still grappling with how they can leverage social media to support their business goals, while researchers are challenged to deliver insight and value on this topic. Many studies of company attitudes toward social media have been survey-based. This study examines this issue through a content analysis of *INC. 5000* company websites. The results suggest that while SM presentation is pervasive across industries, some sectors appear to emphasize SM more than others based on their website presentation of SM elements. Correlation analysis demonstrated that industry type and website type had a significant effect on SM presentation, while company size did not. This study is designed to motivate further research so that social media can be better understood and utilized.

INTRODUCTION

Social media has been defined as, "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of User Generated Content" (Kaplan & Haenlein, 2010, p. 61). Compared to earlier generations of the Internet that focused on one-way communication from websites to users, social media fosters multiple-way communication between a user, a website, and other users. Social media can take on many forms including: social networking sites (e.g., Facebook), content sharing websites for video, pictures, and other elements (e.g., YouTube, Flickr), user-sponsored blogs, company-sponsored blogs, business networking sites (e.g., LinkedIn), collaborative sites (e.g., Wikipedia), virtual worlds (e.g., Second Life), and social bookmarking sites (e.g., digg, reddit) (Mangold & Faulds, 2009). Social media can help a company understand market trends, manage customer relations, manage brand/reputation risks, improve innovation and productivity, and acquire and retain employees (Kiron, Palmer, Phillips, & Berkman, 2013). Some organizations utilize Twitter to keep their customers informed on short topics; for example, Harley Davidson provides Twitter feeds to its many followers about featured bikes, racing results, and other issues (Weinberg & Pehlivan, 2011). Target and Walmart are among the many companies that use Facebook to connect with millions of their customers/fans (Weinberg & Pehlivan, 2011).

The use of social media by the general public has grown dramatically in recent years. It is common to encounter commercials on television and in other media for companies that say 'like us on Facebook, follow us on Twitter.' According to Statistica.com, the number of monthly active Facebook users rose from 431 million in the first quarter of 2010 to approximately 1.7 trillion in the first quarter of 2016. Over this same time period, Twitter increased its number of users from 30 million to 310 million, and the number of LinkedIn members rose from 64 million to 433 million (statistica.com, 2016a, 2016b, 2016c).

As social media use has grown exponentially, it has made an important impact on business and society. According to Aral, Dellarocas, and Godes (2013, p. 3), "Social media have revolutionized the ways organizations relate to the marketplace and society, creating a new world of possibilities and challenges for all aspects of the enterprise, from marketing and operations to finance and human resources management." Other writers observe that "Increasingly consumers are using platforms to create, modify, share and discuss Internet content. This social media phenomenon can significantly impact a firm's reputation, sales, and even survival" (Kietzmann, Hermkens, McCarthy, & Silvestre, 2011, p. 241).

Some social media companies have also achieved striking success in the financial markets. In early 2014, Facebook surpassed IBM in terms of total market capitalization, or price per share times the number of common shares outstanding. This occurred even though IBM had far more employees than Facebook (431,000 to 7,000), it had far more revenue than Facebook ($100 billion versus $8 billion), and IBM had been in existence much longer (97 years compared to 10) (DeAmicis, 2014). Shares of Facebook rose nearly 300% over four years from May 2012 to May 2016, indicating that investors are very optimistic about its future earnings and growth.

LITERATURE REVIEW

From a more general perspective, social media can be viewed as an important example of an emerging technology. According to Veletsianos (2016, p. 8, 9, 10), some characteristics of emerging technologies are that they are "evolving" or being "continuously refined and developed," "have promising but as yet unfulfilled potential," and "are not yet fully understood or researched." As Veletsianos (2016, p. 4) also points out, emerging technologies extend beyond software to include "tools, concepts, innovations, and advancements."

As noted earlier, social media has achieved a high rate of growth, and it has significantly impacted business and society. At the same time, there are many indications that social media is still evolving, and it is not fully understood or researched. An early social media study of four platforms–Facebook, Twitter, blogs, and client-hosted forums–at Fortune 500 company websites by Culnan, McHugh, and Zubillaga (2010) found that only 7% of these companies had adopted all four of these platforms and 36% did not use any of them. Yet, just two to three years later, there emerged evidence that more organizations were recognizing the importance of social media. In surveys of thousands of business professionals conducted in consecutive years by Kiron, Palmer, Phillips, and Berkman (2012, 2013) the percentage of respondents who reported that social business is important to their company doubled from 18% in 2012 to 36% in 2013.

This series of studies used the term 'social business' to describe the use of social media for business purposes. In the latter study, Kiron et al. (2013) found that when participants were asked to rate their company's maturity with respect to social business on a ten-point scale where 10 indicates the "most mature," more than half of the respondents gave their company a score of 3 or less. These business professionals reported that the biggest barriers to greater social business adoption were the lack of management support and the lack of an overall social media strategy (Kiron et al., 2013). The authors concluded based on these results that, "social business is still in its infancy; like any emerging technology trend, it takes time to understand it and adopt it effectively" (Kiron et al., 2012, p. 18). Kietzmann et al. (2011, p. 241) also observed that many managers have a tendency to ignore social media, "because they do not understand it or how to engage with it." Kaplan and Heinlein (2010, p. 60) comment that there is even some confusion about what social media means saying that "there seems to be confusion among managers and academic researchers alike as to what exactly should be included in this term."

In addressing the need for more social media research, Aral et al. (2013, p. 8) state, "There is a dearth of scholarly work focused on understanding high-level social media firm strategies… It is important to research what types of social media initiatives work best for firms of different industries, sizes, and cultures." These authors point out that many companies need to improve the integration of their social media strategies with their overall corporate strategy and how to organize and manage their social media efforts since "there are no widely accepted industry-specific best practices" (Aral et al., 2013, p.9).

RESEARCH QUESTIONS AND VARIABLES

As noted, there is a need for greater understanding among business professionals and researchers about many dimensions of this relatively new phenomenon called social media that has emerged onto the competitive landscape. One primary focus of this study is to provide a better understanding of organizations' attitudes toward social media. While some prior studies, e.g., Kiron et al. (2012, 2013), have produced useful insight about this issue from a survey perspective, this study will consider it using a content analysis approach. It involves a large-scale examination of the social media presentation at organizational websites. Since these websites often have hundreds or thousands of pages, it is practically impossible to do an exhaustive analysis of a company's entire website, let alone those of thousands of companies. For this reason, the focus of the content analysis was on companies' home pages given the prominence of this page at organizational websites. In specific terms, the research questions guiding this analysis are: To what extent do organizations have a social media presence on their home page? Secondly, what is the nature of the presentation of social media elements on companies' home pages? That is, since many social media platforms are available, which ones appear to be getting more emphasis on company home pages?

A second goal of this study is to identify variables that may be associated with companies' social media website presentation. The effects of four independent variables were considered: industry type, website type, company size (in terms of the number of employees), and company size (based on annual revenue). Thus, the research questions addressed are

(1) Is there a difference in social media presentation at company websites based on industry type?

(2) Is there a difference in social media presentation at company websites based on website type?

(3) Is there a difference in social media presentation at company websites based on company size (number of employees)?

(4) Is there a difference in social media presentation at company websites based on company size (annual revenue)?

Table 1 presents an explanation of variables and concepts used in this investigation. The dependent variable in each of the research questions, social media presentation, was assessed using two sub-measures: social media presence and social media magnitude. These measures recognize that social media elements may be present or absent at a website, and they may also vary in degree. Social media presence refers to whether a home page contains any embedded links and/or any social media links. An embedded link is a social media element contained within the home page itself such as a YouTube video. A social media link is an icon or text link that when clicked redirects the user to an external social media site such as Facebook, Twitter, YouTube, Pinterest, a blog, or some other social media site. In this study, a website was classified as having a social media presence if its home page contained one or more embedded links or social media site links; if these elements were absent, the website was categorized as having no social media presence. Thus, social media presence is a dichotomous variable. In contrast, social media magnitude is a discrete variable to measure the number of embedded links and/or social media site links presented on a home page. For example, if a home page was found to contain one embedded link and two social media links, it was given a social media magnitude score of 3.

TABLE 1: EXPLANATION OF VARIABLES AND CONCEPTS

Variable/ Concept	Definition
Social media presentation	The dependent variable which includes social media presence and social media magnitude
Social media presence	A dichotomous (yes/no) variable that identifies whether a company's home page contains any embedded links or social media links; the value is "yes" if the home page contains either type of link
Social media magnitude	The number of embedded links and/or social media links included on a company's home page
Embedded link	A social media image presented within the home page itself, such as a YouTube video image on the home page
Social media link	An icon or text link presented on the home page that when clicked, redirects the user to a social media site such as Facebook or Twitter
Industry type	An independent variable that classifies each organization as a "tech/media company" or a "non-tech/media company"
Tech/media co.	A company in the "technology" or "media" industries
Non-tech/media co.	A company not in the "technology" or "media" industries
Website type	An independent variable that classifies each organization as an "e-commerce company" or a "Non-e-commerce company"
E-commerce co.	A company that offers online sales as indicated by cues on its home page
Non-e-commerce co.	A company that does not offer online sales as indicated by cues on its home page

For industry type, the *INC. 5000* company list classified each company into one of 25 industries, as shown in Table 2. Industry type was considered as an independent variable possibly affecting social media website presentation based on prior research. In their study of the use of four selected social media platforms by Fortune 500 companies, Culnan et al. (2010) found that information technology companies had a far greater adoption of these platforms than companies in the distribution and energy industries. Similarly, the Kiron et al. (2013) survey found that social business was rated as "important" by 61% of respondents in the entertainment, media and publishing industries and 52% in the information technology and technology industry compared to only 40% in the consumer goods industry, 29% in the energy and utilities industries, and 25% in financial services. Kiron et al. (2012) also observed that technology and media companies have been at the forefront of embracing social media. Thus, this study considered inter-industry comparisons for social media website presentation by grouping companies into two categories: tech/media companies and non-tech/media companies. Companies in five industries in the *INC. 5000* list were classified as tech/media companies: computer hardware, IT services, software, telecommunications, and media industries. A non-tech/media company was considered an organization in one of the other 20 industry classifications in the *INC. 5000* list. This resulted in a total of 1,197 tech/media companies (24.3% of companies) and 3,719 non-tech/media companies (75.7%).

A second independent variable that was examined as possibly impacting social media presentation was website type. Since those companies who sell products or services at their websites have a greater dependence on the Web more for their success, it was anticipated that these firms would make a greater social media effort and therefore present more social media elements on their websites. To test the effects of website type, each firm was classified into one of two types based on the presentation of elements on its home page. If the home page contained icons or links for a shopping cart, a shopping bag, or other cues to suggest it offers online sales such as a "shopping" or "shop now" option, the company was classified as an "e-commerce" company; if these elements were absent, the firm was categorized as a non-e-commerce company. This resulted in 477 of 4916 companies (9.7%) in the sample classified as "e-commerce companies" and 4,439 (90.3%) as "non-e-commerce companies."

Finally, the effect of company size on social media website presentation was examined using two measures of organization size reported in the *INC. 5000*-company list: company size in terms of number of employees and company size based on annual revenue. There is some research evidence to suggest that company size makes a difference in terms of a company's website practices and its attitude toward social media. For example, in a website usability study, Huang and Cappel (2012) found that Fortune 500 companies (very large firms) followed the recommended expert usability guidelines significantly more frequently than *Inc. 500* companies (which are considerably smaller) for six of eleven measures. This indicates that while this tendency was not pervasive across all measures, it appeared to be true more often than not. The Kiron et al. (2012) survey found that respondents from small companies (less than 100 employees) and large companies (more than 100,000 employees) rated social media twice as important to their business as participants from midsize companies. In explaining these differences, Professor Gerald Kane comments, "smaller firms like social business because they don't have the buying power or the resources to conduct traditional media campaigns" (Kiron et al., 2012, p. 8). Kane also points out that very large companies "can afford to experiment with trendy technologies like social media. It can make them seem smaller, more intimate than they are… (and that they) really care about their products and customers" (Kiron et al., 2012, p. 8). In summation, since prior research suggests that company size can sometimes makes a difference to outcomes such as website practices and attitudes toward social media, the issue of whether company size appears to affect company social media website presentation was considered in this study.

METHODOLOGY

This study utilizes content analysis, which has been defined as "the systematic, objective, quantitative analysis of message characteristics" (Neuendorf, 2002, p. 1). This research method has been used in various prior studies in analyzing company website information (e.g., Cappel & Huang, 2007; Case & King, 2014; Huang & Cappel, 2012; Jiang, Raghupathi, & Raghupathi, 2009; Liu & Arnett, 2002; Singh, Zhao, & Hu, 2003; Tarafdar & Zhang, 2005; Zhao & Zhao, 2004). The sample of *INC. 5000* companies was used based on the availability of this large data set from the *INC.* website; this source has been used in various previous studies (e.g., Cappel & Huang, 2007; Huang & Cappel, 2012; Zhao & Zhao, 2004).

A content analysis of *INC. 5000* company websites was conducted in 2014 by three coders. The URLs for the company websites were obtained wherever possible from the *INC. 5000* company list available at that publication's website. For any firms that did not have a URL on this list, the researchers used Google to locate the organization's website. The measures of this study were evaluated based on a review of each company's home page, since this page is often the most important and one of the most frequently visited pages of a website (Krug, 2014).

The researchers performed two rounds of pre-tests to develop the coding scheme used in the content analysis and to establish the reliability of the research method employed. A pre-test was conducted of 500 selected randomly sites to assess inter-coder reliability. The Krippendorff inter-coder reliability (K-Alpha) was calculated for each measure using SPSS with the KALPHA macro (Hayes & Krippendorff, 2007). As shown in Appendix A, the inter-coder reliabilities achieved for individual measures ranged from .9088 to 1.00 and the average inter-coder reliability for all measures was .9716. These values are acceptable according to the content analysis guidelines of Krippendorff (2004) that K-Alpha values should be at the .90 level or above. This approach is also consistent with content analysis guidelines of Neuendorf (2002) that at least 10% of the overall sample should be included in pre-tests with inter-coder reliability coefficients at least .90. Since these requirements were met, the remainder of the data collection was conducted by the coders individually reviewing an equal number of websites.

The results of this study are based on 4,916 websites on the INC. 5000 company list. The remaining 84 websites could not be included in this analysis for one of several reasons: (1) their websites were under construction or maintenance; (2) their website could not be opened or was infected with a virus; or (3) the company apparently did not have a website, since there was no URL entry in the *INC. 5000* list and no site was found as a result of a follow-up Google search.

RESULTS

The findings for social media presentation by industry are summarized in Table 2. This table shows the number of companies by industry as well as the descriptive statistics for social media presence and social media magnitude. As indicated, more than two-thirds of companies had a social media presence at their home page and the number of social media elements on this page averaged more than three.

TABLE 2: SOCIAL MEDIA PRESENTATION BY INDUSTRY

Industry	No. of Companies	Social Media Presence Percentage	Social Media Magnitude	
			Mean	SD
Advertising & Marketing	411	81.8%	4.24	1.90
Business Products & Services	582	65.1%	3.49	1.65
Computer Hardware	44	68.2 %	3.71	1.87
Construction	163	46.6%	3.26	1.82
Consumer Products & Services	242	79.8 %	3.88	1.74
Education	73	74.0%	3.96	1.79
Energy	85	60.0 %	3.11	1.64
Engineering	91	44.0 %	2.98	1.75
Environmental Services	82	62.2 %	3.39	1.97
Financial Services	215	59.1 %	3.42	1.73
Food & Beverage	145	77.9 %	3.37	1.61
Government Services	307	51.1 %	2.76	1.41
Health	409	63.1 %	3.62	1.72
Human Resources	149	75.8 %	3.76	1.60
Insurance	66	56.1 %	3.45	1.70
IT Services	633	74.2 %	3.75	1.63
Logistics & Transportation	121	62.0 %	3.28	1.51
Manufacturing	228	46.5 %	2.93	1.67
Media	69	75.4 %	3.42	1.82
Real Estate	52	78.8 %	3.29	1.79
Retail	199	85.4 %	3.83	1.71
Security	64	67.2 %	4.05	1.63
Software	305	80.7 %	4.11	1.79
Telecommunications	146	71.2 %	3.19	1.84
Travel	35	82.9 %	3.69	1.42
All companies	4,916	68.2 %	3.63	1.75

The inter-industry differences for social media presence are emphasized graphically in Appendix B. As shown in this Appendix, social media presence was highest (over 80%) for the retail, travel, advertising & marketing, and software industries, and lowest for the engineering, manufacturing, and construction industries whose rates were under 50%.

A cross-industry comparison for social media magnitude is presented in Appendix C. As shown in this Appendix, the average social media magnitude score for all companies was 3.63. Social media magnitude was found to be highest for the advertising & marketing, software, and security industries (whose means were greater than 4) and lowest for the government services, manufacturing, and engineering industries (whose means were under 3).

Table 3 summarizes the types of social media elements presented at company websites. Overall, social media links were far more common than embedded links. As indicated in the table, the

most popular social media links were to Facebook (57.9%), Twitter (54.9%), LinkedIn (38.0%), internal blogs (28.3%), and YouTube (22.6%), and the most common types of embedded links were to internal blogs (7.6%) and YouTube (7.5%). As noted previously, a social media link when clicked goes to an external site such as Facebook or Twitter, while an embedded link is an image contained in the home page itself such as a YouTube video image. Accordingly, an "internal" blog refers to a blog included at a company's website, while an "external" blog is a blog residing at another website such as WordPress.com.

TABLE 3: USE OF SOCIAL MEDIA PLATFORMS AT COMPANY WEBSITES

Social Media Platforms	Percent of Websites Containing a Social Media Link to: *	Percent of Websites Containing an Embedded Link for: *
Facebook	57.9%	2.0%
Twitter	54.9%	5.6%
LinkedIn	38.0%	-
Internal Blog	28.3%	7.6%
YouTube	22.6%	7.5%
Google +	14.0%	-
Pinterest	5.3%	-
External Blog	3.0%	-
Flickr	2.0%	-
Vimeo	1.1%	1.0 %

*Additional social media links that were presented at less than 1% of the company websites included Tumblr, SlideShare, StumbleUpon, and Digg.

To assess the effect of the four different independent variables on the dichotomous variable, social media presence, a binary logistic regression analysis was performed. The results, presented in Table 4, indicate that two variables were significantly associated with social media presence: industry type and website type. Tech/media companies had significantly more social media presence than non-tech/media companies, and companies whose websites had an e-commerce capability had significantly more social media presence than companies whose websites lacked this capability. The two other independent variables examined were not significant: company size in annual revenue ($p = .649$) and company size in number of employees ($p = .463$).

In addition, to evaluate the effect of the independent variables on social media magnitude, a linear regression was performed. The results, shown in Table 5, indicate that industry type and website type were significantly associated with social media magnitude. Tech/media companies had a significantly higher social media magnitude than non-tech/media companies, and companies whose websites had an e-commerce capability had a significantly higher social media magnitude than companies whose websites lacked this capability. The two other independent

variables were not significant: company size in annual revenue (p = .406) and company size based on number of employees (p = .208).

TABLE 4: CORRELATIONAL ANALYSIS: SOCIAL MEDIA PRESENCE

Variables	B	S.E.	Wald	df	Sig.	Exp(B)
(Constant)	1.685	.146	133.353	1	.000	5.395
Website type	1.212	.140	75.347	1	.000***	3.360
Industry type	-.535	.079	45.657	1	.000***	.586
Co. size (annual revenue)	.000	.000	.208	1	.649	1.000
Co. size (# of employees)	.000	.000	.540	1	.463	1.000

(* significant at 0.1 level, ** significant 0.05 level, *** significant at 0.01 level)

TABLE 5: CORRELATIONAL ANALYSIS: SOCIAL MEDIA MAGNITUDE

Variables	Unstandardized coefficients		Standardized coefficients	t	Sig.
	B	Std. error	Beta		
(Constant)	3.219	.125		25.807	.000
Website type	1.026	.098	.148	10.497	.000***
Industry type	-.552	.069	-.133	-8.031	.000***
Co. size (annual revenue)	-9.245E-005	.000	-.029	-.831	.406
Co. size (# of employees)	2.353E-005	.000	.044	1.260	.208

(* significant at 0.1 level, ** significant 0.05 level, *** significant at 0.01 level)

DISCUSSION AND CONCLUSIONS

The goals of this study were: (1) to measure the extent and nature of social media presentation by companies at their websites, and (2) to identify factors that appear to explain differences in companies' social media website presentation.

The results indicate that more than two-thirds of the companies had a social media presence on the home page of their websites. In fact, this study found that companies presented an average of 3.63 social media elements on their home pages. These results suggest that many organizations are embracing social media by allocating a portion of the 'prime real estate' on their home pages to promote the use of social media by their customers and other stakeholders. Companies in the retail, travel, advertising and marketing, software, and consumer products and services industries were found to have the highest social media presence on their websites, while engineering, manufacturing, and construction companies had the lowest. These results suggest that some industries are making social media a greater priority than others, and they are consistent with

prior studies by Kiron et al. (2012, 2013) and Culnan et al. (2010) that found industry social media differences.

Concerning the specific types of social media elements presented on company websites, this study found that social media links were far more common than embedded links. The most popular social media links, in order, were Facebook, Twitter, LinkedIn, an Internal Blog, YouTube, and Google+. These results are somewhat consistent with a study of Fortune 500 company websites by Case and King (2014) that found the same social media elements finishing in the top six, albeit in the slightly different order of: LinkedIn, Twitter, Facebook, YouTube, Blogs, and Google+. The difference of results between these two studies could suggest that larger, Fortune 500 companies may use social media more commonly for recruiting purposes though LinkedIn while the smaller *INC. 5000* companies might place a greater emphasis on Facebook and Twitter to reach customers directly about their products or services. This observation is entirely conjectural and is need of exploration by future research studies.

This study tested the effect of industry type on companies' social media website presentation. The correlational results revealed that tech/media companies had a significantly higher social media presence and a significantly higher social media magnitude than non-tech/media companies. These results suggest that tech/media companies are making social media a greater priority than other types of companies. The results are also intuitively consistent with the idea that companies in the technology or media sectors would be expected to be more technically savvy and make greater use of social media, an Internet-enabled media technology.

This correlational analysis also found that website type had a significant impact on companies' social media presentation. The results showed that companies whose websites contained an e-commerce capability had both a significantly higher social media presence and social media magnitude than companies whose websites did not possess this capability. These findings have intuitive appeal, since it would be expected that companies who sell products or services at their website (and hence have a greater dependence on their websites for their growth and survival) would make greater use of social media to lure customers.

The results suggest that company size, both in terms of the number of employees and annual revenue, did not make a significant difference in terms of a company's social media website presentation. It was anticipated that as company size increased, a company might have more social media presentation at its website as it presumably would have more resources and staff to support these efforts. However, this study which focused on *INC. 5000* companies (small to medium sized, high growth firms) was not able to demonstrate these effects. This potential relationship could be tested in follow-up studies that might contain a more diverse sample with respect to company size.

Several observations and limitations about this study should be acknowledged. First, it involves a cross-sectional analysis where the data were collected at 'one point in time', i.e., within several weeks. Since websites are updated on an ongoing basis and companies' social media practices continue to evolve, later studies may produce somewhat different results. Second, this study is based on the websites of *INC. 5000* companies. These small to medium sized, high growth businesses may not be representative of organizations in general, so follow-up studies using

other company samples are encouraged. Third, to complete this study in a timely way, it was necessary to confine our focus to social media elements presented on the home page. The assumption was that if a company's website had social media presentation it would most likely appear on the home page. If a website presented social media elements on pages other than the home page, these would not be recognized in this study. Fourth, while social media presence was relatively easy to measure as present or absent based on the home page, the operationalization of social media magnitude may be open to more interpretations. This study quantified each occurrence of a social media link or embedded link in an additive fashion. However, other researchers might choose to use an alternative metric such as giving a greater weight to embedded links than social media links since embedded links tend to be more prominent in size. This issue is open to debate and interpretation. Lastly, this study focused on website social media presentation as an indicator of companies' perception of the importance of social media. It does not necessarily imply anything about their actual use of social media. While we might expect some consistency between companies' attitudes toward social media and their use of it, it should be recognized that a firm could present multiple social media elements at its home page while in fact not being very active in the use of social media. The reverse of this scenario is also true. Thus, any study whose focus is social media use by organizations would be designed quite differently from this study with a focus on other variables.

This is an exploratory study into a relatively untapped area. As noted earlier, social media is an emerging technology and like other emerging technologies, it is not fully understood or researched. This provides researchers with many opportunities to examine social media from a variety of perspectives. Some issues warranting further investigation include: how to integrate social media strategy with corporate strategy; how companies in different industries can best make use of different social media platforms to further their business goals (Aral et al., 2013); what factors still serve as obstacles to limit social media adoption and how they can be overcome; how social media efforts should be organized and managed; how social media practices are evolving as this emerging technology grows; and how to measure the effectiveness of social media initiatives.

Research insights into these issues would enable companies to compare their social media practices with those of other organizations. Surveys and interviews of business professionals about company social media practices would likely continue to generate new insights, and longitudinal studies of company social media practices would be useful in tracking the evolution of this technology. In this study, the researchers had to undertake considerable effort to identify, define, and operationalize various measures that were not addressed in previous research, including social media presentation, social media presence, social media magnitude, social media links, and embedded links. The identification and measurement of these variables can serve as an important resource to other researchers who continue to further the knowledge in this domain.

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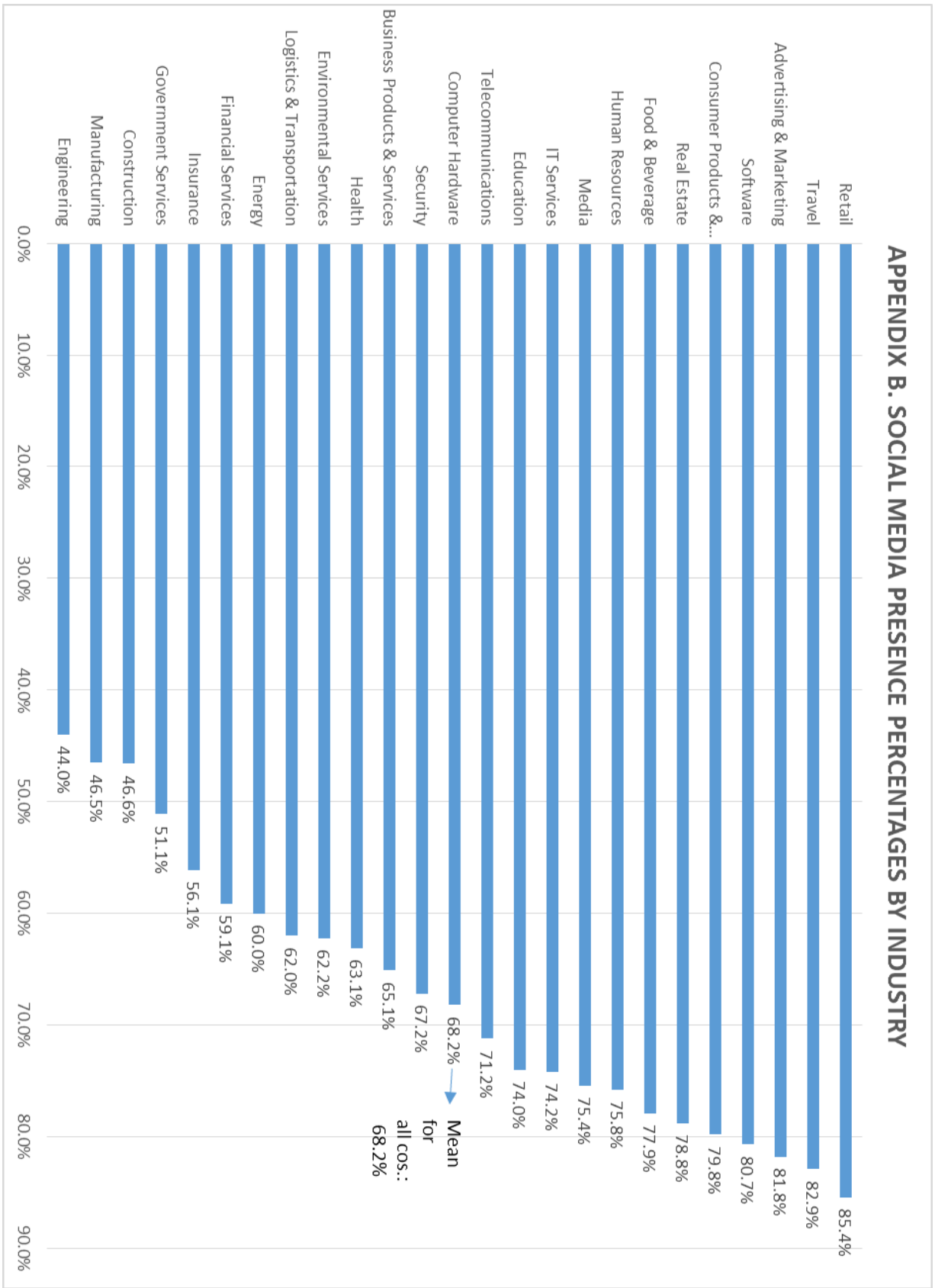
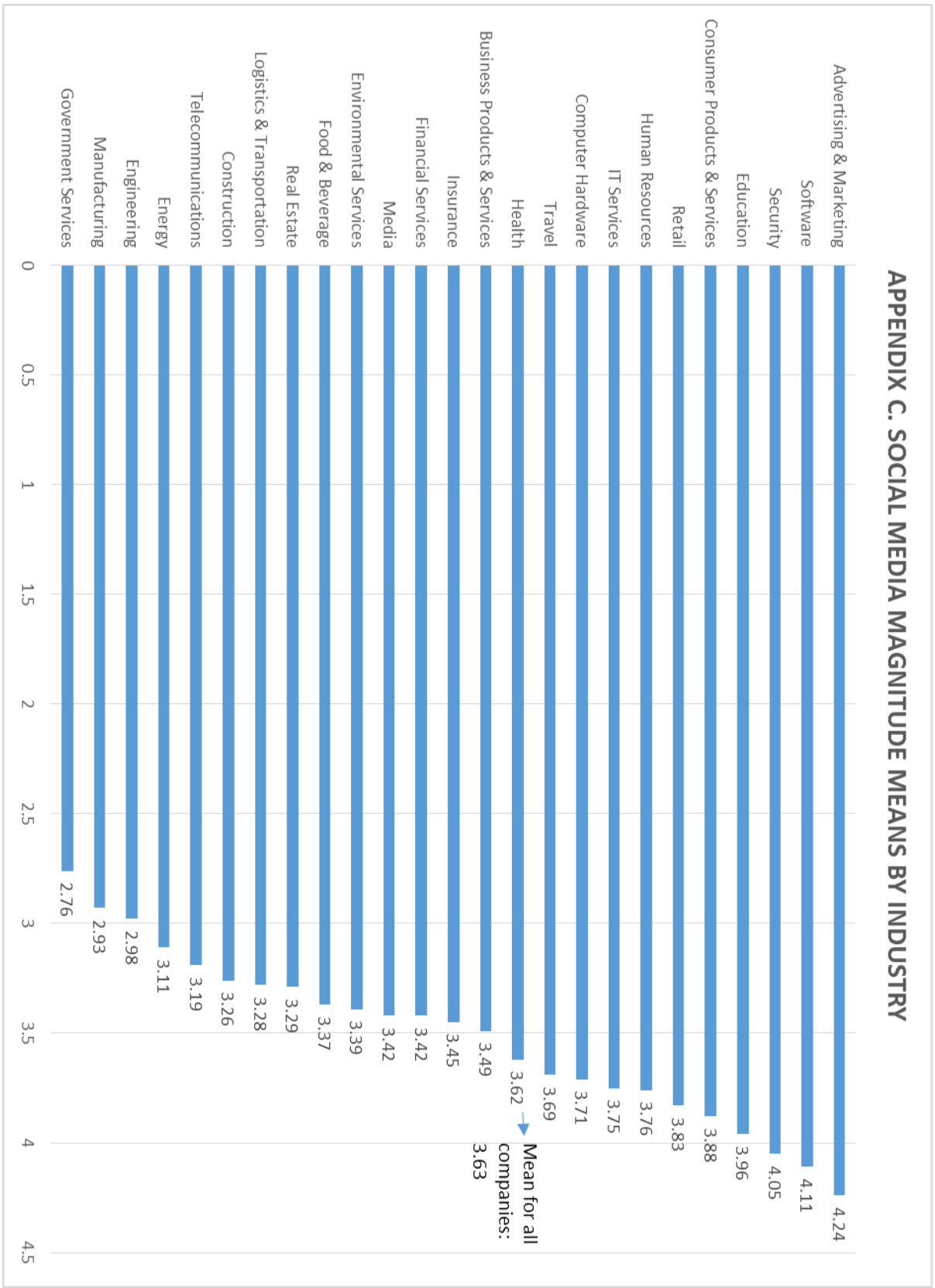
APPENDIX A. INTER-CODER RELIABILITIES

Measures	Inter-coder Reliability (K-alpha)
Social media links	
Facebook	.9915
Twitter	.9917
LinkedIn	.9899
Google+	.9843
YouTube	.9801
External Blog	.9555
Internal Blog	.9877
Pinterest	.9814
SlideShare	1.0000
Flickr	.9649
Vimeo	1.0000
Digg	.9285
Reddit	.9088
StumbleUpon	.9782
Tumblr	.9353
+Share	.9327
Embedded links	
Blog Postings	.9726
Tweets	.9827
YouTube Videos	.9845
Facebook Links	.9532
Vimeo Videos	1.0000
Mean: All Measures	.9716


APPENDIX B. SOCIAL MEDIA PRESENCE PERCENTAGES BY INDUSTRY
Retail 85.4%
Travel 82.9%
Advertising & Marketing 81.8%
Software 80.7%
Consumer Products &... 79.8%
Real Estate 78.8%
Food & Beverage 77.9%
Human Resources 75.8%
Media 75.4%
IT Services 74.2%
Education 74.0%
Telecommunications 71.2%
Computer Hardware 68.2%
Security 67.2%
Business Products & Services 65.1%
Health 63.1%
Environmental Services 62.2%
Logistics & Transportation 62.0%
Energy 60.0%
Financial Services 59.1%
Insurance 56.1%
Government Services 51.1%
Construction 46.6%
Manufacturing 46.5%
Engineering 44.0%
Mean for all cos.: 68.2%
0.0% 10.0% 20.0% 30.0% 40.0% 50.0% 60.0% 70.0% 80.0% 90.0%


APPENDIX C. SOCIAL MEDIA MAGNITUDE MEANS BY INDUSTRY
Advertising & Marketing 4.24
Software 4.11
Security 4.05
Education 3.96
Consumer Products & Services 3.88
Retail 3.83
Human Resources 3.76
IT Services 3.75
Computer Hardware 3.71
Travel 3.69
Health 3.62
Business Products & Services 3.49
Insurance 3.45
Financial Services 3.42
Media 3.42
Environmental Services 3.39
Food & Beverage 3.37
Real Estate 3.29
Logistics & Transportation 3.28
Construction 3.26
Telecommunications 3.19
Energy 3.11
Engineering 2.98
Manufacturing 2.93
Government Services 2.76
Mean for all companies: 3.63
0
0.5
1
1.5
2
2.5
3
3.5
4
4.5

AN EMPIRICAL STUDY OF THE RELATIONSHIP BETWEEN FOREIGN DIRECT INVESTMENT AND KEY MACROECONOMIC VARIABLES IN MEXICO

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ABSTRACT

In this study, we investigate the relationship between foreign direct investment (FDI) in Mexico and key economic variables: GDP growth rate, unemployment rate, total export (as percent of the GDP), total industry production, export to the US, import from the US, and total factor productivity. Time series and auto-regression techniques were employed in the analysis. Results from both analyses indicated that FDI in Mexico had a significant negative relationship with import from the US. There was no clear indication that FDI had any significant relationship with the other economic variables listed above. Possible factors contributing to these results are discussed.

INTRODUCTION

Foreign direct investment (FDI) has been a significant factor in the world economy. It has contributed to its growth and integration. FDI is considered important because it brings in needed capital and presumably enhances employment and economic growth (Borensztein et al., 1998; De Mello, 1999).

An increasing proportion of FDI flows have been to developing countries, such as those of Latin America and the Caribbean (Ramirez, 2001). The introduction of economic liberalization policies and trade promotion in Mexico has helped in attracting foreign direct investment. Mexico has been open to foreign direct investment (FDI) in most of its economic sectors and has been the largest recipient of FDI among developing countries.

According to the United Nations Conference on Trade and Development Report (UNCTAD, 2006), FDI flow into Mexico places it among the top 13 in the world and the top four among developing countries. The largest share of the FDI inflow into the country comes from the United States. These investments were mostly in manufacturing, retail/commerce, and financial services. Foreign direct investment has been largely concentrated in the states close to the US border, and in Mexico City and its surrounding areas (Political Risk Yearbook, 2011).

After the NAFTA treaty in 1994, most of the FDI coming into Mexico from the US went into the Border States maquiladora industry where plants can import from the US material and equipment duty-free and export the manufactured products back to the US. This kind of supply chain may have had little effect on developing the Mexican economy. Further, Mexico has lagged behind in the development of its infrastructure and in the skilled work force, which are essential for reaping full economic benefits from FDI (Stracke, 2003). Also, cheaper labor in China did not help the Mexican economy in that it reduced foreign direct investment in the manufacturing sector.

The literature is not in agreement with regard to the effect of FDI on the economy in Mexico. The effect of FDI on economic growth in Mexico is an open question. While FDI benefits may have been regional, the question remains as to whether the regional concentration of FDI has had an effect on the Mexican economy as a whole.

In this empirical study, we use time series methodology in order to investigate the relationship of FDI to key macroeconomic variables in Mexico: GDP growth rate, unemployment rate, total export, export to and from the US, total industry production and total factor productivity.

LITERATURE REVIEW

In a study on factors determining foreign direct investment in Mexico, Romano and Gamboa (2013) reported that higher education levels (or years of schooling) and lower delinquency rates were significant factors in attracting FDI. Other important determinants were GDP, proximity to the US (Border States), Mexico City, wages, industrial units, infrastructure, and FDI in neighboring regions.

Jordaan and Rodriguez-Oreggia (2012) investigated the effects of agglomeration and FDI on regional growth in Mexico under trade liberalization. Indicators of agglomeration used in the multiple regression model were regional number of manufacturing employees, regional population size, regional level of density of manufacturing, and regional population density. The authors concluded that both agglomeration and FDI generated positive as well as negative regional economic growth. Regional density of manufacturing had a positive effect on growth. On the other hand, population density, as a measure of total economic activity, had a negative growth effect. Total regional FDI had a positive regional growth effect, especially in the Border States, while the level of foreign participation in regional manufacturing (measured as the level of regional employment in manufacturing from foreign-owned manufacturing firms) had a negative effect on regional growth.

Jordaan (2008) used multiple regression to identify regional characteristics that influenced the locational choice of FDI. Results indicated that infrastructure, level of schooling of labor, wages, good communication network, regional demand, and agglomeration had an influence on FDI flow. States with a high level of manufacturing and with foreign manufacturing firms had a positive effect on FDI inflow.

Waldkirch et al. (2009) investigated the effect of FDI on employment in Mexico's non-maquiladora manufacturing. Results showed that FDI had a significant but modest positive effect on employment (both blue and white collar) in the non-maquiladora manufacturing sector.
FDI had more of a positive effect on employment in export-oriented industries. In capital-intensive industries, FDI had an enhancing effect on blue collar employment, but not white collar. It was emphasized that labor market rigidity and lack of skilled labor limited the demand for labor and hindered the enhancing effect of FDI on employment.

In a study of the effect of infrastructure on FDI in Mexico, Mollick et. al. (2006) reported that the most important infrastructure inductive to FDI was international in nature, namely telephone lines. This was by far more important than domestic infrastructure, such as interstate and secondary roads.

Ramirez (2001), in an assessment of the economic impact of FDI flow into Mexico, reported that Mexico's FDI flow was to operations in the manufacturing sector. In this regard, FDI had a positive and significant effect on average labor productivity in the maquiladora sector. This impact was especially important in the auto and engine assembly industry. Moreover, there was evidence of a spillover effect from subcontracting for parts and repair from local suppliers.

Cole and Ensign (2005) reported that FDI in Mexico was tending toward lower environmental polluting industry. There was no indication that industry movement to Mexico favored either skilled or unskilled workers. It was proposed that the reason being that both skilled and unskilled workers in Mexico had equal comparative advantage over US workers in wage and productivity.

Oladipo and Galán (2009) investigated the effect of FDI on economic growth in Mexico using an autoregressive vector analysis. They reported that FDI effect on growth was not as strong as the export effect on growth. The impact of FDI was smaller than that of domestic investment. The reason given was that FDI was concentrated in industries like the maquiladora industries with limited link to local suppliers. Key factors having positive effects on economic growth were FDI in manufacturing, domestic investment, labor force, and human capital.

Waldkirch (2010) investigated the effect of FDI flows into Mexico on total factor productivity and wages in the post-NAFTA period, 1994-2010. Results of the study showed that FDI had a positive effect on total factor productivity. However, FDI had no effect on wages and perhaps a negative effect on wages with regard to the maquiladora firms. The disconnect between productivity and wages may not be due to FDI, but rather to the time period which was characterized by a severe economic crisis.

Ramirez and Ramirez (2000), using a co-integration analysis and an error correction model approach, showed that private investment and lagged FDI as well as export had a significant positive effect on labor productivity. On the other hand, an economically active population was negatively related to labor productivity.

Oladipo (2007), in an empirical investigation of economic growth in Mexico as influenced by FDI, reported that FDI impact on growth was not as strong as the export impact. Also, it was

found that trade liberalization improved FDI flow and that labor force and human capital had significant positive effects on economic growth

Noria (2015) investigated the relative importance of the degree of trade openness (measured in terms of tariff level) and FDI on inter-industry wage differentials (WD) in Mexico. In a regression analysis using data from a national survey of urban employment for the period 1994-2004, the author reported that trade openness had no significant effect on inter-industry wage differentials, whereas FDI had a positive and nonlinear relationship with WD.

METHODS

In order to determine if foreign direct investment is related to different factors in the economy, three analytical procedures (cross correlation, time series, and auto-regression) were utilized using the SAS software. These procedures constitute the correct approach for analyzing the relationship between two time series data where the errors are auto correlated. In such a case, it is known that ordinary regression analysis can give unreliable results.

Cross correlation

The sample cross correlation between two stationary time series y and x is expressed as follows

$$r_k = \frac{\sum_{t=1}^{n-k}(x_t - \bar{x})(y_{t+k} - \bar{y})}{n\, S_x\, S_y} \quad k \geq 0 \qquad (1)$$

where, s_x and s_y are the standard deviations for x and y , $\bar{x}$ and $\bar{y}$ are the sample means and n is the sample size. Calculating the cross correlation between two time series is necessary in order to apply the time series model in the following section.

Time Series Model

A time series model relating a stationary output series y_t to a stationary input series x_i is expressed as

$$y_t = v(B)\, x_t + a_t \qquad (2)$$

where $v(B) = w(B)B^c/d(B)$.

Here, $w(B) = w_0 - w_1B - \ldots - w_sB^s$

$d(B) = 1 - d_1B - \ldots - d_rB^r$.

and c represents the time delay (or lag) until the input variable x_t produces an effect on the output variable y_t.

The function v(B) with its lags is determined from the cross correlations between x_t and y_t, namely the significance at a given lag and the pattern of the cross correlations over lags (Wei, 2006). For instance, if the correlation is significant at only lag 0, then Equation 2 can be written as

$y_t = w_0 x_t + a_t$. On the other hand, if the correlation is significant at only lag 1, then one has

$y_t = w_0 x_{t+1} + a_t$

Once v(B) is identified, one can express a_t in Equation 2 as

$$a_t = y_t - v(B)\, x_t \qquad (3)$$

and identify the appropriate time series model for Equation 3. With a_t known, one can determine the final model in Equation 2.

Auto-regression

The auto-regression model employed takes the form

$$y_t = a + bx_t + n_t \qquad (4)$$

Where n_t is an auto-regressive process of the first order, $n_t = \theta n_{t-1} + e_t$ ($|\theta| < 1$), where e_t is random error. The order was determined using the Durbin-Watson statistic.

Data

Data on GDP growth rate, unemployment rate, total export (as percent of the GDP), and total industry production (index with 2010 = 1) were obtained from the Federal Reserve in the Saint Louis (FRED) website. Foreign direct investment data (in millions of dollars) were obtained from the World Bank Data on line. Data for Export to the US (millions of dollars) and import from the US (millions of dollars) were obtained from the US. Bureau of Economic Analysis, US. Bureau of the Census. The total factor productivity index source was Feenstrac et al. 2013. Plots of the time series data are presented in the Appendix.

RESULTS

For the time series analysis, we checked for stationarity using the autocorrelation and partial autocorrelation dampening pattern approach (Wei, 2006). Results indicated that all series, except for growth rate, were not stationary. However, first differences were stationary. The time series analysis was conducted using the stationary series.

Foreign direct investment (FDI)

The time series analysis using the model in Equation 2 showed that FDI had no significant effect on the variables: total export, export to the US, total factor productivity, total industry production, unemployment rate, and growth rate.

The variable FDI at lag 2 had a negative and significant effect on import from the US (w_0 in the model = $--1.11x10^{-1}$). This was also confirmed by the auto-regressive analysis (b in the model = $-1.10x10^{-1}$ when both year and FDI were in the model). This can be interpreted as every increase of one million dollars in FDI reduces import by about 0.11 million dollars.

For import from the US as the dependent variables and FDI as the independent variable, the time series model from the analysis in Equation 2 is expressed as:

$$impUS(1)_t = 717.93 - 0.111\ FDI(1)_{t+2} + e_t \quad (5)$$

Here, $impUS(1)_t = impUS_t - impUS_{t-1}$

Analysis using the auto-regression approach of Equation 4 showed that FDI had a significant positive relationship with total industry production. However, this effect became insignificant when year entered the model with FDI. On the other hand, FDI at lag 2 was significantly related to import from the US. FDI was not significantly related to any of the other economic variables: growth rate, unemployment rate, total export, export to the US, and total factor productivity.

For import from the US as the dependent variable and FDI as the independent variable, Equation 4 takes the form

$$impUS_t = -1425416 + 717.89\ year - .110\ FDI_{t+2} + n_t \quad (6)$$

Where $n_t = e_t/(1-0.82B)$

It is interesting to see that the time series analysis and the auto regression analysis gave the same results in the sense that FDI at lag 2 was significantly related to Import from the US. The coefficients for FDI at lag 2 in Equations 5 and 6 were - 0.111 and – 0.110, respectively. The time series model in Equation 2 is more general than the model in Equation 4. They do agree when $v(B) = w_0$ as was the case. This was further indication of the reliability of results.

Time series characterization

In this section, we examine the time series that had no relation to FDI in order to gain an understanding of their dynamic behavior over time. The differenced stationary series that were white noise were characterized as to whether they were white noise with no drift or white noise with drift. The plot of a series over years that is white noise with a drift factor D has a deterministic trend with slope D, which over time can dominate and cause the series to follow a deterministic pattern (Wei, 2006) as indicated by Figures 4, 5, and 6 in the Appendix.

White noise series

Total export and unemployment rate are white noise when differenced. This means that each original series before differencing is represented by a random walk, $X_t = X_{t-1} + e_t$, and that changes in a series over time are random with no predictable direction.

White noise series with drift

Differenced or stationary series with drift include the following series: Export to the US (expUS), total industrial productivity (tip), and growth rate (GR). This means that each original series (not differenced), is represented by a random walk with drift factor D, $X_t = X_{t-1} + D + e$. This implies that the present value of the series depends on its past value plus a constant drift term plus or minus an error term. In other words, changes in the value of the series are equal to a constant D plus or minus a random error.

The time series equations with drift are as follows:

$$GR_t = 2.507 + e_t \quad (7)$$

$$expUS_t = expUS_{t-1} + 771.84 + e_t \quad (8)$$

$$tip_t = tip_{t-1} + 0.0156 + e_t \quad (9)$$

Also, the total factor productivity (tfp) is represented by an autoregressive process of order one, AR(1).

$$Tfp_t = 0.365tfp_{t-1} + e_t \quad (10)$$

DISCUSSION

This study is a comprehensive quantitative analysis involving the relationship of FDI with key macroeconomic variables in Mexico. It is of interest to find that FDI had little to no relationship to a number of important economic variables: growth rate, unemployment rate, total export, export to the US, total factor productivity, and total industry production.

Equation 7 shows that the growth rate is a white noise with drift, which indicates that the growth rate is on average 2.5 per year. Equations 8 and 9 show that export to the US, and total industry production are random walks with drift. The drift or constant component D is the slope of the growth curve over time. This indicates that these variables are growing over time, perhaps due to other factors, but not to FDI.

It is of interest to see from the statistical analysis that FDI had little to no effect on Mexico's economic variables under study. FDI had a significant positive effect on total industry production, but this effect vanished when year was entered as a control variable. This implies that FDI could not explain an increase in industry production beyond what was already occurring over years.

FDI at lag 2 had a negative effect on import from the US (Equations 5 and 6). This was the case whether the time series model in Equation 2 or the auto-regression model in Equation 4 were used. An increase in FDI could have reduced the dependence of Mexico on US products through direct import. The fact that FDI had little to no effect on Mexico's economy may be explained by the fact that FDI inflows into Mexico was mostly regional, the Border States with the US, and Mexico City. The lack of the so called spill-over effect from the local areas to the economy at the national level may be attributed to factors such as lack of adequate infrastructure, lack of skilled workers, and lack of adequately educated and trained labor. Also, most of the FDI coming into Mexico from the US went into the Border States' maquiladora industry where plants can import from the US material and equipment duty-free and export the manufactured products back to the US. This kind of supply chain may have had little effect on developing the Mexican economy (Stracke, 2003; Salvatore, 2007).

CONCLUSION

In this study, the authors investigated the relationship of foreign direct investment to key economic variables, namely GDP growth rate, export, import from the US, export to the US, unemployment rate, total industry production, and total factor productivity. Results from the statistical analysis, using time series and auto-regression techniques, showed that foreign direct investment had a negative relationship with import from the United States, but no relationship to any of the other economic variables above. It is shown that many of the economic variables that are not related to FDI are characterized by positive drift or constant terms, which represent the slopes of their growth curves over years. This growth must be due to factors, other than FDI, not observed in the data.

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APPENDIX

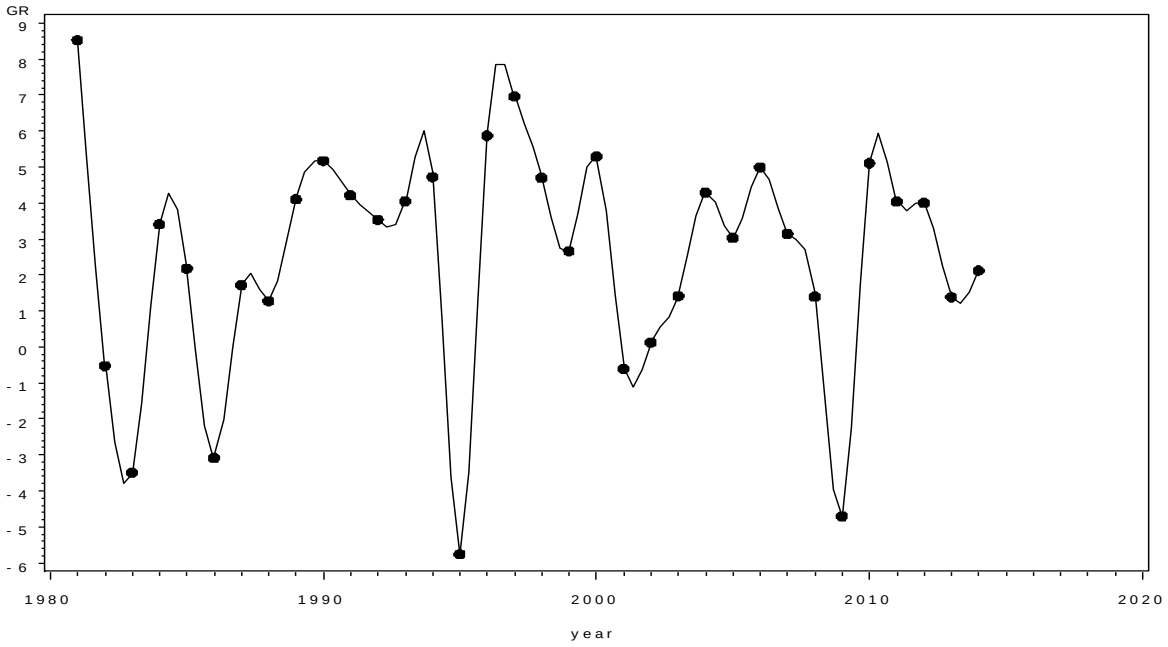


FIGURE 1: PLOT OF GROWTH RATE (GR) OVER YEARS

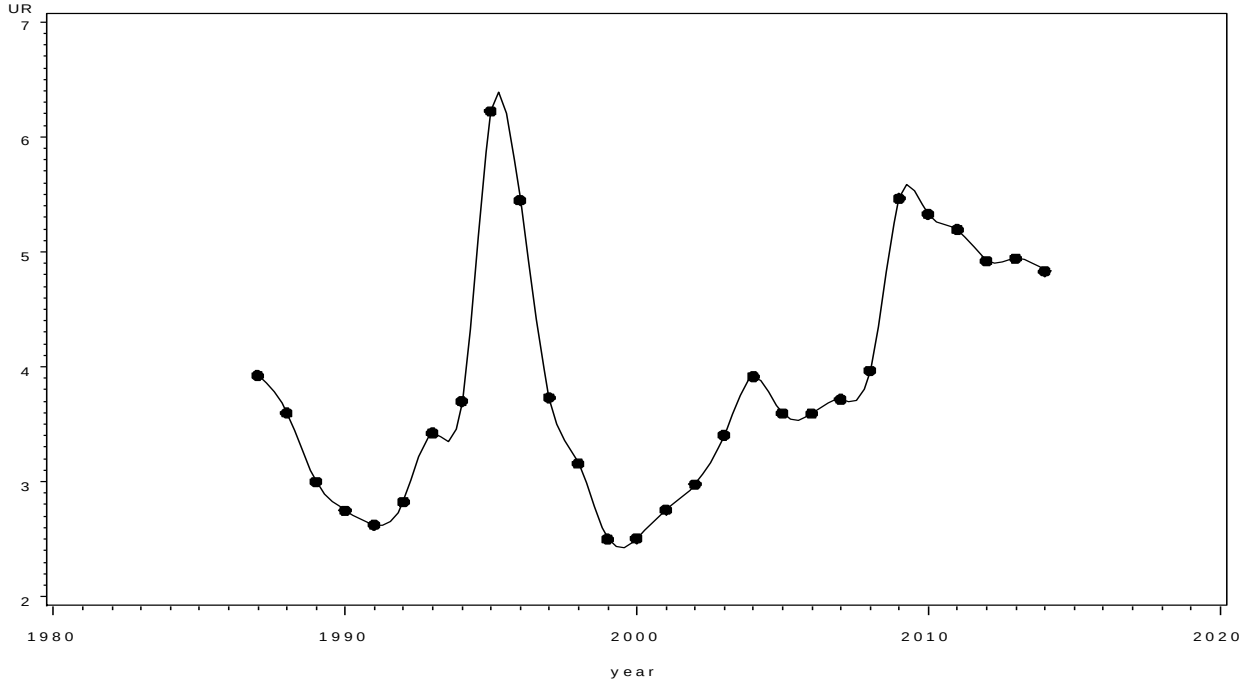


FIGURE 2: PLOT OF UNEMPLOYMENT RATE (UR) OVER YEARS

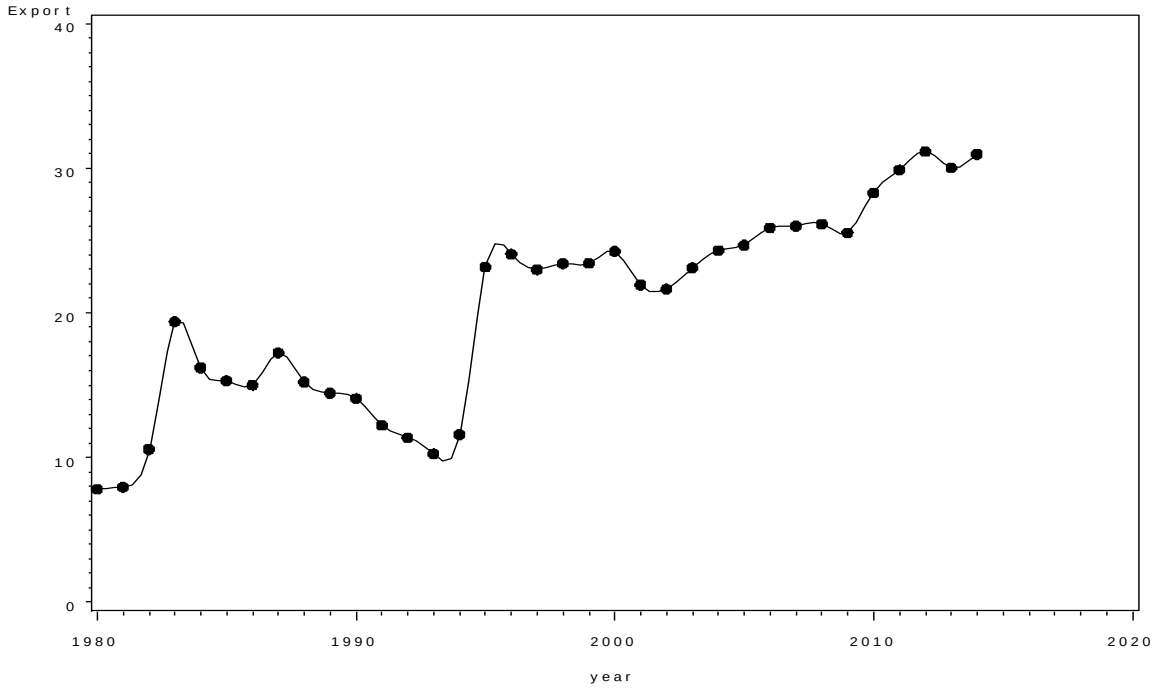


FIGURE 3: PLOT OF TOTAL EXPORT OVER YEARS

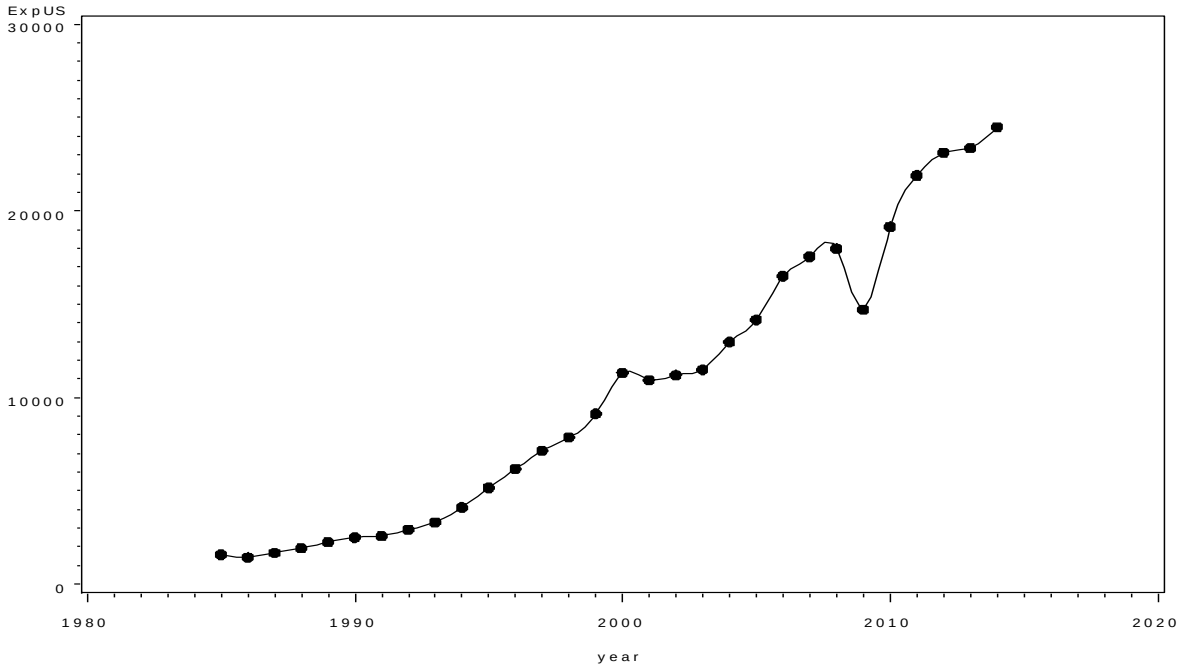


FIGURE 4: PLOT OF EXPORT TO THE US (EXPUS) OVER YEARS

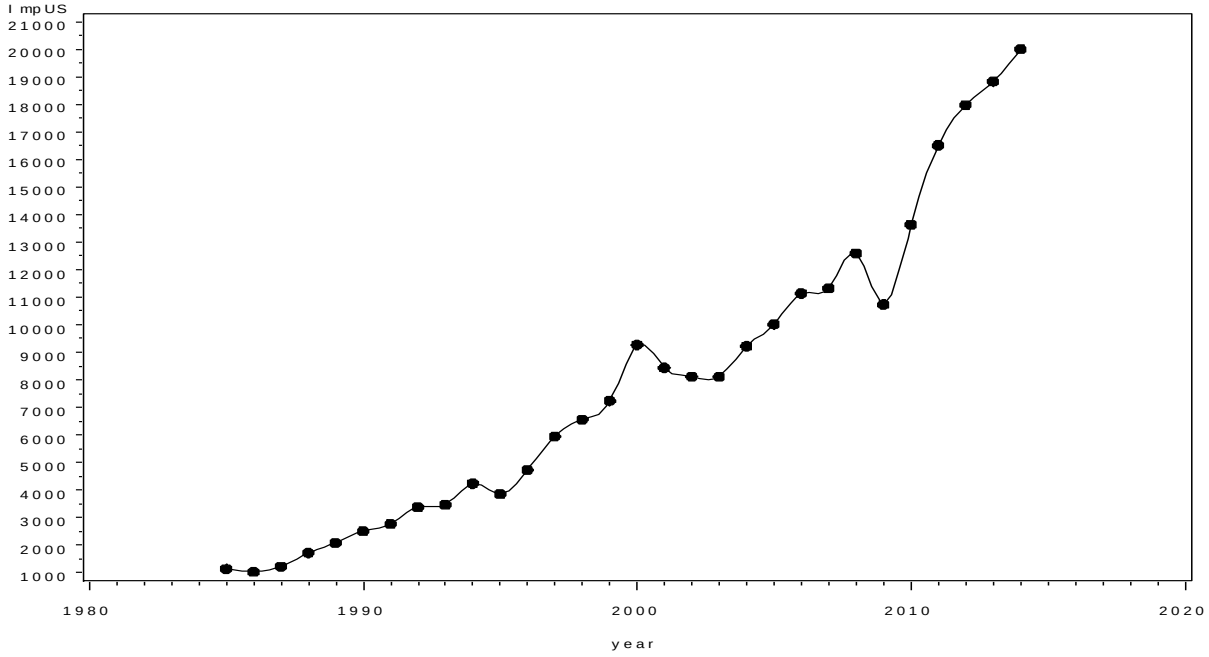


FIGURE 5: PLOT OF IMPORT FROM THE US (IMPUS) OVER YEARS

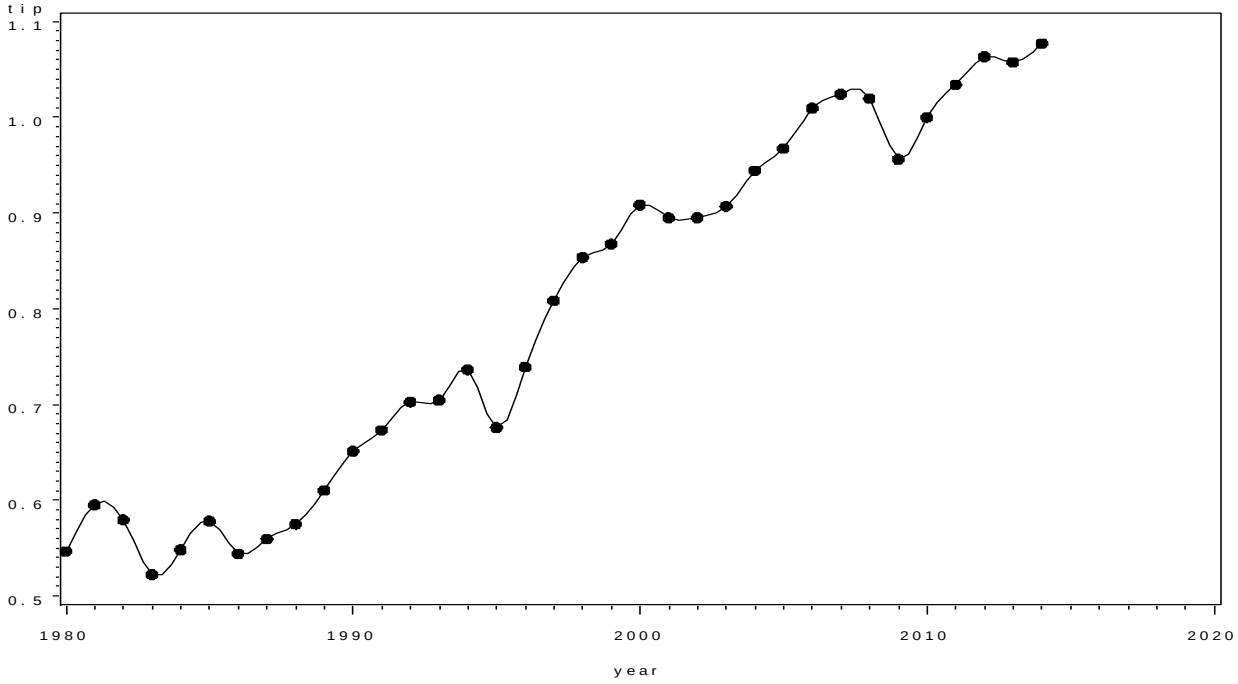
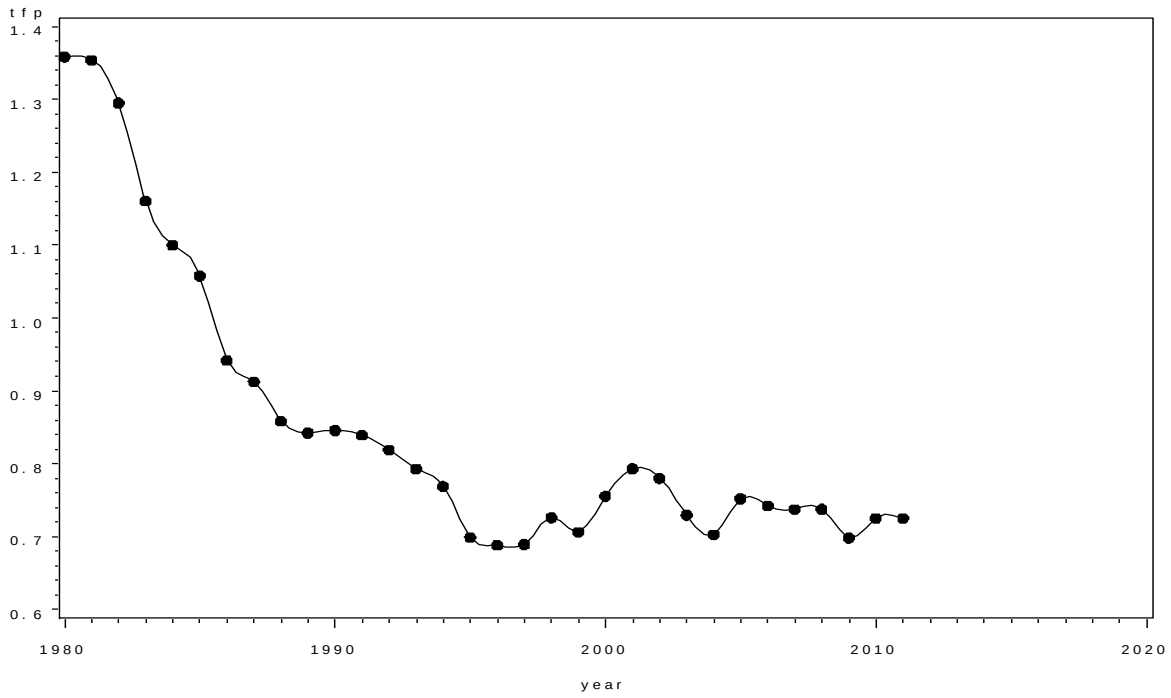


FIGURE 6: PLOT OF TOTAL INDUSTRY PRODUCTION (TIP) OVER YEARS



FIGURES 7: PLOT OF TOTAL FACTOR PRODUCTIVITY (TFP) OVER YEARS

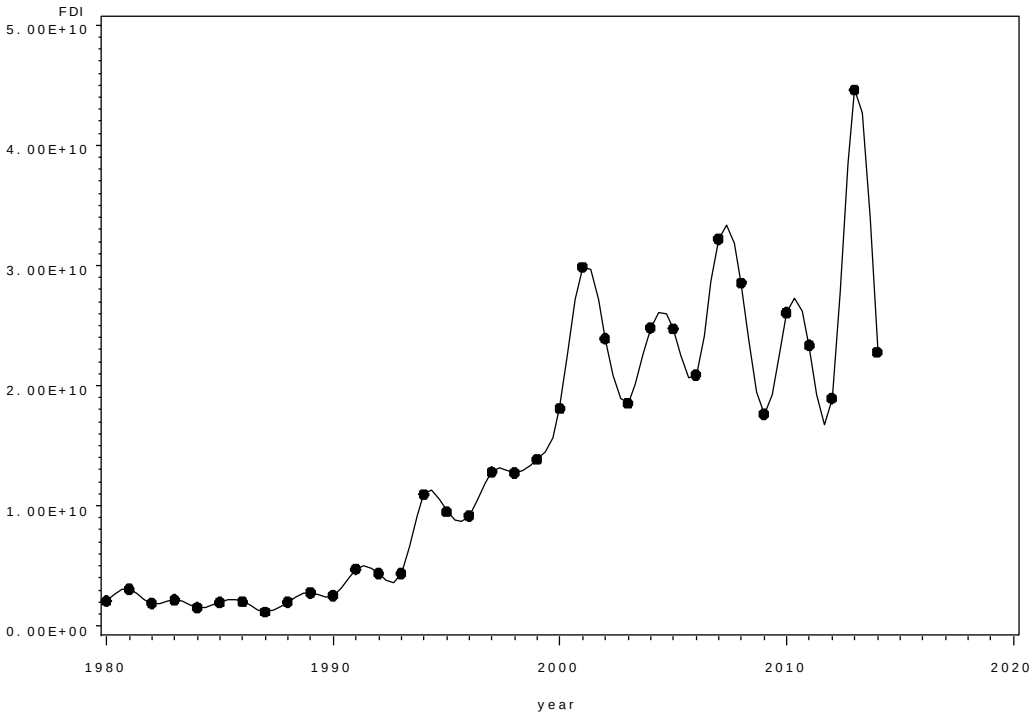


FIGURE 8: PLOT OF FOREIGN DIRECT INVESTMENT (FDI) OVER YEARS

WHO IS YOUR CHAMPION? ATTRIBUTES OF ORGANIZATIONAL CHAMPIONS WHO TRANSFORM ORGANIZATIONS THROUGH INNOVATION

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ABSTRACT

Innovation can be used as a tool for competitive advantage within organizations. It is, however, often difficult to gain momentum and support for new innovations. Managers seeking to develop new innovations and to diffuse them through their organization should seek innovation champions to lead their cause. A rapid evidence assessment and synthesis of literature revealed five core attributes that innovation champions must possess before and after the decision stage of Rogers' (1983) Diffusion of Innovations theory. These include: networking and relationship development, persistence, knowledge of champion, political savvy, and enthusiastic support. These attributes are examined and interpreted using a theoretical lens of transformational leadership. Implications to managers from this research are the ability to use the attributes of innovation champions and determine which leaders would be appropriate to champion innovations.

INTRODUCTION

Diffusion of innovations in organizations is a concern for many managers seeking to effectively diffuse new ideas and innovations (Rogers, 2003). Innovation is critical for organizations to remain competitive and productive (Howell, 2005). Adoption of new innovations is often a challenge for organizations, even though that innovation may have obvious advantages (Rogers, 1983). Diffusion of innovation takes time, even years, and so leading the process in the most efficient and effective manner possible is advantageous for organizations. The importance of innovation champions is recognized, yet they have received relatively little systematic attention (Jenssen & Jørgensen, 2004). Managers understand the need for innovation diffusion, however more research is needed to understand the leadership attributes required of champions that will allow them to implement diffusions of innovation (Mansfeld, Holze, & Gemunden, 2010). Champions of innovation diffusion should be purposefully supported as part of the innovation process in order to effectively diffuse innovations (Howell, 2005). Determining the attributes of leaders that champion organizational innovation diffusion will allow managers to effectively recruit the individuals needed to promote innovation.

Innovation champions are managers who lead and sponsor innovation activities in organizations (Schon, 1963). Diffusion of innovations is the process of communicating innovation through certain social channels within an organization (Rogers, 2003). Although some might think that innovations diffuse quickly and on their own, due to their unique nature, innovations often take

time to be implemented and require champions for their diffusion (Rogers, 1983). According to Rogers (1983), opinion leaders and change agents are leaders and members that take on the role of championing diffusion of innovations. The process of diffusion of innovation takes place in various stages, as noted by Rogers (1983). These stages are: (1) Knowledge, (2) Persuasion, (3) Decision, (4) Implementation, and (5) Confirmation. Determining the attributes of leaders who champion innovation diffusion before and after the decision stage will be the focus of this study. The choice to explore attributes of champions before and after the decision stage was because this is the stage of innovation diffusion where the innovation is either adopted or rejected (Rogers, 1983). Therefore, this research attempts to explore the attributes of champions leading to the adoption of an innovation, and the attributes of champions after an innovation has been adopted.

Using a theoretical lens of transformational leadership, this research will explore the attributes of innovation champions in the innovation diffusion process. This research will allow managers to understand the specific leadership attributes that will develop innovation champions who lead effective innovation diffusion. This is relevant to management theory as it expands the literature on transformational leadership and innovation theories. The significance of this research is to managers seeking to diffuse innovation throughout their organizations, so they can determine what attributes of leadership the innovation champion should possess. Knowing these attributes will then allow managers to put the right leaders in place depending on the stage of innovation diffusion.

This research explores the question: What are the attributes of innovation champions before and after the decision stage of innovation diffusion?

LITERATURE BACKGROUND

The following section will offer a background on the literature relevant to the topics central to this paper. First, a review of innovation management will be presented. Next a background on diffusions of innovation theory will be presented. Then, a background on the concept of innovation champions is offered. Finally, a description of the theoretical lens of transformational leadership, through which this research is viewed, is put forward.

Innovation

Innovation is crucial if an organization is to continue to be dynamic and competitive in their industry. Innovation can be considered as the "adoption of an internally generated or purchased device, system, policy, program, process, product, or service that is new to the adopting organization" (Damanpour, 1991, p. 556). Innovation can occur in various aspects of organizational life. This includes innovation that is both "administrative and technical, product and process, and radical and incremental" (Daft, 1978; Uzkurt, Kumar, & Ensari, 2013). Innovation is important to firms seeking to gain an advantage, as well as maintain their creative

edge. For innovations to be brought to life in organizations, innovation champions must be supported and fixed as a part of the organization structure and strategy (Howell, 2005).

Diffusion of innovations

Diffusion of innovations is important to managers because getting a new idea or innovation adopted by an organization can be very difficult (Rogers, 1983). In fact, it can sometimes take years for innovations to be adopted. Diffusion of innovation theory involves the innovation process and diffusion, where "(1) an innovation (2) is communicated through certain channels (3) over time (4) among the members of a social system" (Rogers, 2003, p. 990). The characteristics of innovation determine how quickly innovations are spread and adopted (Rogers, 2003). Therefore, new ideas are diffused through four elements of "(1) innovation, (2) communication channels, (3) time, and (4) the social system" (Rogers, 2003, p. 990). Innovations, by nature, have a certain uncertainty to them, as an employee may express their unsureness and look for support from leadership (Roger, 2003).

Rogers (1983) defined five stages of innovation diffusion: (1) Knowledge, (2) Persuasion, (3) Decision, (4) Implementation, and (5) Confirmation. The knowledge stage involves exposure and understanding of the innovation (Rogers, 1983). The persuasion stage is where a perception of whether the innovation is favorable or unfavorable is formed (Rogers, 1983). The decision stage is when the choice of whether to adopt or reject the innovation occurs (Rogers, 1983). The implementation stage involves using the innovation. Finally, the confirmation stage is where the leader seeks reinforcement that the decision made was a valid one. For the purpose of this paper, the attributes of innovation champions before and after the decision stage will be explored. This is to be able to determine the attributes of an innovation champion leading to the adoption of an innovation, and the attributes of champions after the adoption of an innovation. Diffusion of innovations theory still gains practical support today for managers (Wonglimpiyarat & Yuberk, 2005).

Innovation champions

Innovation champions are necessary to bring innovations to fruition, and because of this, this important role is one that should be embedded within organizations (Howell, 2005). Champions are people who arise within a firm and make purposeful support to an innovation by eagerly encouraging its development throughout various critical stages (Howell, Shea, & Higgins, 2005). Champions are necessary for innovations to be diffused in organizations, and those champions must be dedicated, determined, and courageous in sponsoring that innovation (Schon, 1963). According to Howell (2005), champions are enthusiastic and excited about innovations, able to gain key support, and endure through hardship. Champions are able to keep the momentum of innovations going and are needed for innovation success (Dougherty & Hardy, 1996). Innovation champions are individuals that are confident regarding the innovation, able to gain support, and determined under conditions of adversity (Howell et al., 2005). These champions are considered

leaders, and a valiant effort should be made to determine how to recruit, define, and place the innovations champions in an organization.

For the purposes of this study, innovation champions are considered leaders, specifically opinion leaders and change agents, as defined by Rogers (1983). Opinion leaders are able to influence others' behaviors and attitudes, in an informal manner (Roger, 1983). These leaders are innovative and able to champion an innovation by influencing attitudes and behaviors. Change agents seek to influence to adoption of new innovations; however, they also will slow the innovation diffusion process if necessary to avoid the adoption of unfavorable innovations (Rogers, 1983). Given these definitions, an innovation champion is a leader who is able to influence the attitudes and behaviors of others to the adoption of new favorable innovation through the five stages of innovation diffusion presented by Rogers (1983).

THEORETICAL LENS

The following section describes the theoretical lens through which this research will be examined–transformational leadership theory. Transformational leadership was chosen as the theoretical lens for this study as innovation champions are defined as a leader who influences attitudes and behaviors of others to adopt a favorable innovation.

Transformational leadership theory

A leader's influence on employees can be tied to their leadership style. Transformational leaders influence employees by taking them from concerns of security and belonging to a higher level of self-actualization (Burns, 1978). This allows followers to not be concerned with themselves, but rather to consider the collective whole, whether that be the group or organization they are a part of (Burns, 1978). "Authentic transformational leaders motivate followers to work for transcendental goals that go beyond immediate self-interests" (Bass, 1997, p. 133). Followers are encouraged to put aside their own self-interests, in support of that of the organization as a whole (Bass, 1997). Transformational leadership moves beyond the approach of leadership as being nothing more than a transactional relationship (Bass, 1997). Instead, it is made up of elements such as idealized influence (charisma), inspirational motivation, intellectual stimulation, and individualized consideration (Bass, 1997). This is contrary to transactional leadership, which takes a more "carrot or stick approach" (Bass, 1997, p. 133).

The unique nature of transformational leaders to influence followers through inspirational appeal makes it a relevant lens through which to view the innovation champion's attributes in diffusion. Inspirational appeal can be used to influence, and influence is necessary to get organizations to adopt innovative ideas that may be difficult to adapt. Further, this lens is useful, because transformational leaders inspire others to move beyond themselves and focus on the organization as a whole. In diffusion of innovations they can be useful, as it encourages followers to look beyond their own self-interests and adopt innovations that would benefit the organization.

CLAIMS

It is proposed that leadership champions change at the different stages of innovation diffusion. Innovation diffusion, by its nature, requires leadership, but the type of leadership, or the attributes of the leader at various stages of innovation diffusion is still unknown. This research aims to determine the attributes that a champion of innovation possesses before and after the decision stage of the innovation diffusion process. Two propositions (P1; P2) were formed through which this research will be organized.

P1: Champions of innovation utilize attributes of transformational leadership before the decision stage of the innovation diffusion process, thereby facilitating innovation diffusion.

P2: Champions of innovation utilize attributes of transformational leadership after the decision stage of the innovation diffusion process, thereby facilitating innovation diffusion.

METHOD

This research will use a rapid systematic review approach. Rapid evidence assessment is a systematic process that is beneficial for short-turn around evidence assessment (Ganann, Ciliska, & Thomas, 2010). This research needed to be completed in a short frame of time, specifically six weeks. Rapid evidence assessment is appropriate for studies that are six months or less (Ganann et al., 2010). The short time frame in which such an assessment is performed and synthesized offers benefits, such as quicker utilization of the evidence. The performance speed of rapid evidence assessment also presents some limitations, specifically, overlooking important evidence, search bias, lack of rigor, and lack of quality assessment.

The development of the search strategy, PRISMA diagram of the search strategy, summary of research findings, summary of research themes, and the weight of evidence assessment are presented in Appendices A through E. Utilizing the UMUC One Search database, the terms (innovation w1 management) AND (champions) were used to find the relevant literature for this study. The search string revealed 159 articles. "Scholarly peer-reviewed articles" was selected as a limiter, resulting in 102 articles. After duplicates were removed, 44 articles remained. All 44 article abstract and titles were scanned for a relevance assessment, resulting in 17 relevant articles. The resultant 17 articles we analyzed using a Weight of Evidence (WoE) quality assessment as purported by Harden and Gough (2012). The WoE allows the researcher to determine the studies appropriateness to answering the review question (Harden & Gough, 2012, p. 160). The weights used for this assessment are 30% soundness of study, 30% appropriateness of study design for answering the review question, and 40% relevance of the study focus to the review. This quality assessment warrants the dependability of the study and results by ensuring that the literature is systematically reviewed in these three areas (Harden & Gough, 2012, p. 160). A thematic synthesis was used to determine the relevant themes in the literature assessed. The thematic synthesis involved scanning the discussion section of each article to find emerging

themes using Atlas.ti software. A noted limitation to this approach is that the data in the discussion may not reveal the exact findings of the research study.

RESULTS

Below are the most relevant themes that emerged from the literature. These themes are used to address the research question: What are the attributes of innovation champions before and after the decision stage of innovation diffusion?

Networking and Relationship Development

Networking and relationship development were found to be a common theme that emerged from the literature, as 6 out of 17 studies support this theme. According to Howell (2005) one of the determining characteristics of a champion of innovation is how well they are able to manage relationships with others. Champions play the role of marriage broker as they develop relationships in networks across business enterprises (Gupta, Cadeaux, & Dubelaa, 2006). Howell et al. (2005) determined that one of the key characteristics of a champion of innovation is that they are able to get the right people involved in the process. Building and navigating informal networks can help lead champions to new innovations (Howell & Boeis, 2004). Champions must network and gain support from key decision makers in order to make them realize the project is meaningful (Howell et al., 2005; Walter, Parboteeah, Riesenhuber, & Hoegl, 2011). Support from others and networking is crucial to keeping an idea alive (Walter et al., 2011). Managers must maintain good relations with key individuals to gain continued support and resources (Walter et al., 2011). This points to networking and relationship development as vital during stages after the decision-making stage in the innovation diffusion process. Jenssen and Jørgensen (2004) examined the factors that allow corporate champions to promote innovation through a systematic review process. The authors determined that human and social capital and coalition building were important factors for corporate champions to possess (Jenssen & Jørgensen, 2004).

Networking and relationship development are necessary attributes of innovation champions in the stages both prior to the decision-making process and after, therefore, this finding supports P1 and P2. Networking and relationship development allows for innovation champions to develop relationships with suppliers and develop strategy that will lead to implementation and diffusion of a new innovation idea. Using the lens of transformational leadership, the attributes of networking and relationship-building hints at concern for others beyond oneself, as well as moving beyond transactional interactions.

Persistence

Champions of innovation must be able to persevere when facing obstacles and adversity (Howell, 2005). In his seminal work, Schon (1963) states that invention champions often display persistence, and even heroic, courageous characteristics. Champions invite challenge and openly question the status quo (Howell, 2005). According to Jenssen and Jørgensen (2004), persistence is one of the defining characteristics of a champion. The evidence shows that persistence then may allow innovation champions to persevere through the early stages of the innovation diffusion process prior to the decision-making stage. Persistence in the face of adversity was a key behavior measure of champions of innovation (Howell et al., 2005; Lichtenthaler & Ernst, 2009). Walter et al. (2011) states that champions play a vital role in innovation diffusion through organizational stages by persevering and overcoming obstacles. Specifically, champions must persevere through the early stages where they must promote their idea and risk their positions, and even reputations, to work toward success (Walter et al., 2011).

Persistence was found to support P1, in that it was present in the early stages of innovation diffusion before the decision-making stage. Transformational leaders are characterized as charismatic, facing challenges, and able to gain support through inspirational appeal. Persistence is an attribute that would be favorable for transformational leaders seeking to move others beyond their own self-interests, to that of the organization. Similarly, innovation champions persist as they move others beyond their self-interests to adopt an innovation.

Knowledge of champion

Knowledge in various aspects of innovation, as well as organization knowledge is an emergent attribute of innovation champions. According to Gupta et al. (2006), knowledge of champions within organization improves the strategy development of that firm. Howell (2005) states that one of the major characteristics of a champion of innovation is that they have a breadth of knowledge. Similarly, Howell and Boeis (2004) found that employees with relational and strategic knowledge were able to promote innovations more effectively. Beath (1991) found that knowledge of technology was an attribute of innovation champions that was helpful prior to the decision and implementation phase of a new innovation. Day (1994) found that knowledgeable lower level champions can emerge and should be utilized by managers that want to keep radical innovations away from the entrenched power structure of some organizations.

These findings point to knowledge as an attribute necessary for an innovation champion in the early stages of innovation diffusion, supporting P1. Viewed through the transformational leader lens, the champion of innovation must be knowledgeable, just as a transformational leader might use intellectual appeal to influence. Again, this moves the champion beyond being a leader who takes a transactional approach, to a more transformational one.

Political Savvy

Champions influence in a political environment and therefore need to have political skills (Beath, 1991). Champions not only need to know the skills needed to interact in a political environment; they also need political support from management so that they can support innovations (Beath, 1991). If resources are hard to obtain, champions without the political know-how may find it difficult to gain the resources they need (Dougherty & Hardy, 1996). Gaining this support is necessary prior to the decision stage of the innovation diffusion process as well as for continued innovation. Lack of political savvy can leave innovation projects vulnerable and thereby undermine the champion's support (Dougherty & Hardy, 1996). Innovation champions should be politically savvy and able to gain political support (Jenssen & Jørgensen, 2004). Furthermore, champions recognize that there are consequences in the political realm as a result of any failures (Lichtenthaler & Ernst, 2009).

The attribute, political savvy, was found to support both P1 and P2, meaning it was a theme that was recognized both before and after the decision stage of innovation diffusion. Again, the research points to champions needing skills that go beyond a transactional leadership approach. Political savvy can help champions influence and gain organizational support.

Enthusiastic Support

Enthusiastic support for diffusion of innovations is a common theme noted for innovation champions. Enthusiastic support involves leaders who shelter "new ideas from premature evaluation, advocate new ideas, and recognize and reward the production of new ideas" (Howell & Boies, 2004). Champions, compared to non-champions, were found to display more enthusiastic support for new ideas before the decision-making stage of the innovation diffusion process (Howell & Boies, 2004; Howell, 2005; Howell et al., 2005). Expressing enthusiasm and confidence in the early stages of the innovation diffusion process is a critical attribute for champions that are seeking to gain support for the innovation idea (Howell & Boies, 2004; Howell, 2005; Howell et al., 2005). According to Jenssen and Jørgensen (2004), the characteristics of an innovation champion prior to the decision-making stage of innovation diffusion are that they are enthusiastic and able to inspire individuals toward the adaptation of the new innovation idea. Further, employees who are convinced to "buy in" to the innovation idea from the innovation champion are found to be more enthusiastically supportive of the innovation idea during the implementation stage of the innovation diffusion process (Meyer, 2000). Although some authors would state that enthusiastic support is a characteristic of innovation champions through all stages of innovation diffusion implementation, the research revealed evidence primarily for support through the early stages of innovation diffusion prior to the decision-making stage.

Enthusiastic support was found to support P1, as it was a theme noted in the early stages of innovation diffusion, prior to the decision stage. The attribute of enthusiastic support found in innovation champions is similar to the theory of transformational leadership, in that

transformational leaders have inspirational appeal, charisma, and are motivating to their followers.

The results above illustrate the various themes that emerged from the systematic review of literature. Networking and relationship development was found to be the most prominent theme, as it emerged in 6 out of the 17 articles reviewed and is present both prior to the decision stage of innovation diffusion and after the decision stage. Political savvy was also found to be an attribute before and after the decision stage of innovation diffusion. Both networking and relationship development and political savvy support P1 and P2. Persistence, enthusiastic support, and knowledge of the champion were all attributes that were found prior to the decision-making stage, supporting P1. These results, when viewed through the lens of transformational leadership, indicate support of champions of innovation as more than transactional leaders, as they utilize attributes of transformational leaders in the innovation diffusion process.

Shown below in Table 1 is the list of articles, themes, and weight of evidence. As indicated in the findings above, P2 is not supported as strongly by the evidence as P1 is. This is significant in that there is more support for P1, whereby innovation champions may be more likely to possess these attributes in the stages of innovation diffusion prior to the decision-making stage.

TABLE 1: WEIGHT OF EVIDENCE (WOE), ARTICLES, AND THEMES

Study	Weight of Evidence	Proposition Support	Theme
Beath (1991)	80%	P1	Vision, Resources, Political Savvy
Bstieler et al. (2015)	100%	P1	Motivate others toward goals; Develop trust
Day (1994)	100%	P1; P2	Champions at all levels of management (middle, lower, upper); Trust
Dougherty & Hardy (1996)	80%	P1	Vision; Resources; Political savvy; Personal power not sustainable; Involve others in strategic process
Galbraith et al. (1982)	70%	P1	Motivate others toward goals; Need to achieve and take risk
Gupta et al. (2006)	100%	P1	Networking and relationship development; Knowledge of champion
Howell (2005)	85%	P1	Networking and relationship development; Knowledge of champion; Persistence; self-monitoring; Flexible role orientation, Enthusiastic support
Howell & Boeis (2004)	100%	P1	Networking and relationship development; knowledge of champion; Flexible role orientation, Enthusiastic support
Howell et al. (2005)	100%	P1	Networking and relationship development, Persistence Enthusiastic support
Jenssen & Jørgensen, (2004)	100%	P1; P2	Networking and relationship development; Motivate others toward goals, Political savvy Persistence, Knowledge of champion; Need to achieve and take risk
Kelley & Lee (2010)	100%	P1	Empowered, Autonomy and Freedom
Lichtenthaler & Ernst (2009)	80%	P2	Persistence; Enthusiastic support; Avoid high risk; Political savvy
Mansfeld et al. (2010)	80%	P1	Empowered, Autonomy and Freedom; Enthusiastic support; Self-monitoring
Meyer (2000)	80%	P1	Challenge innovation
Rese et al. (2013)	65%	P1	Flexible role orientation
Schon (1963)	100%	P1	Need to achieve and take risk; Persistence; Knowledge of champion; Courageous and heroic
Walter et al. (2011)	100%	P2	Networking and relationship development; Persistence; Heroic and courageous; Over performing

Table 1. This table illustrates the themes that emerged from thematic synthesis of the literature, as well as the propositions they support. Support for P1 is strong, and, while there is support for P2, it is not as evident as the support for P1.

CONCEPTUAL FRAMEWORK

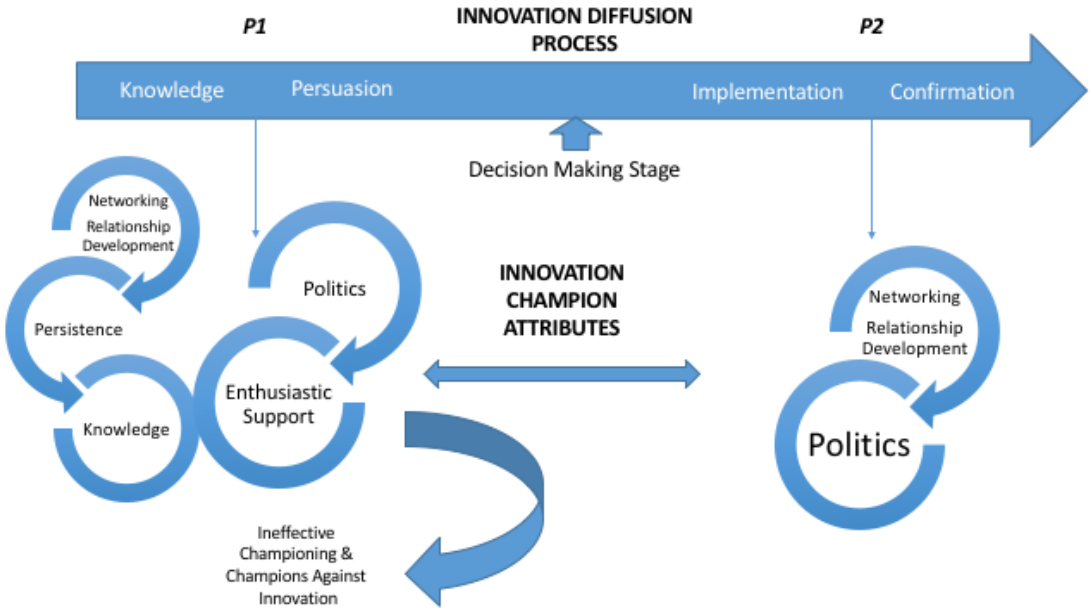

FIGURE 1: CONCEPT MODEL

Figure 1. The concept model presented above illustrates the innovation diffusion process and the attributes of innovation champions that emerged from the research findings. Portrayed within this model are the five stages of innovation diffusion as presented by Rogers (1983). The focus in this conceptual model is on the various attributes that innovation champions possess both before and after the decision-making stage of the innovation process. The attributes that an innovation champion may possess that will lead to successful innovation diffusion prior to the decision-making stage are: networking and relationship development, persistence, knowledge of champion, political savvy, and enthusiastic support. The following attributes were found to be possessed by innovation champions after the decision-making stage: networking and relationship development and political savvy. Ineffective championing and championing against innovation is noted in the diffusion process as restarting the process.

DISCUSSION

The following section will offer a discussion of the conceptual model as well as an interpretation of the findings through a theoretical lens of transformational leadership. Through a synthesis and analysis of the research findings, it was determined that there are various attributes that an innovation champion should possess. According to the definition of innovation champions proposed in this research, champions are leaders within organizations. Therefore, if attributes of champions can be realized, then leaders can be recognized and recruited in organizations to lead innovation diffusion before and after the decision-making stage. Transformational leadership theory shows that transformational leaders are motivational leaders with inspirational appeal, as well as being authentic and motivated beyond their own self-interests (Bass, 1997). The various attributes of innovation champions may lead them to possess characteristics similar to a transformational leader.

Figure 1 above shows the five stages of the innovation diffusion process with a focus on what occurs before and after the decision-making stage. This model was adapted from the five stages of innovation presented by Rogers (1983). The model is centered around the various attributes an innovation champion may possess in order to successfully diffuse innovations throughout and organization. Networking and relationship development, persistence, knowledge, politics, and enthusiastic support were major themes that emerged from the analysis of relevant literature as preferable innovation champion attributes prior to the decision-making stage of the innovation diffusion process. Champions that possess these attributes are more likely to be successful in championing their cause and getting traction with a new innovation idea. Although innovation champions are often thought of in positive light, it should be noted that sometimes innovation champions can prove ineffective or some leaders may potentially champion against or challenge innovation, disrupting the innovation diffusion process (Meyer, 2000). The attributes of innovation champions are organized below according to the proposition for which they are confirmed.

P1: Champions of innovation utilize attributes of transformational leadership before the decision stage of the innovation diffusion process, thereby facilitating innovation diffusion.

Networking and relationship development were found to be important attributes to innovation champions before and after the decision-making stage, once implementation and confirmation of an idea is occurring. This finding of networking and relationship development as an attribute by 6 out of 17 articles supports both P1 and P2. Political savvy was another attribute that was found to benefit champions before and after the decision stage of innovation diffusion. Persistence is an attribute that may be valuable to all leaders, but particularly innovation champions as they need persistence and perseverance to keep pushing their cause, even in the face of adversity (Howell et al., 2005; Lichtenthaler & Ernst, 2009). This is especially important in the early stages of innovation diffusion where the pushback to new ideas may be stronger. Knowledge at various levels of the organization, technical knowledge, and strategic knowledge are attributes that serve an innovation champion well in the early stages of diffusion of innovations (Beath, 1991; Day,

1994; Howell & Boeis, 2004; Howell, 2005). This may be due to the fact that knowledge helps innovation champions to be perceived as experts. Finally, champions should be enthusiastically supportive through the early stages of the innovation diffusion process as this likely offers motivation and inspirational appeal to followers and helps the innovation idea to gain traction (Howell & Boies, 2004; Howell, 2005; Howell et al., 2005).

P2: Champions of innovation utilize attributes of transformational leadership after the decision stage of the innovation diffusion process, thereby facilitating innovation diffusion.

There was less evidence to support the attributes of innovation champions after the decision-making stage. As stated previously, innovation champions, as leaders within organizations, that are seeking to diffuse innovations were found to seek to network and develop relationships prior to and after the decision-making stage of the innovation diffusion process. These network connections will help innovation champions gain support from key decision makers and get the right people involved throughout the process (Howell et al., 2005; Walter, Parboteeah, Riesenhuber, & Hoegl, 2011). Political savvy, again, was found both prior to and after the decision-making stage. Knowing who to gain support and resources from is essential, and champions should be aware of the political ramifications of any failures they may have (Dougherty et al., 1994; Jenssen & Jørgensen, 2004; Lichtenthaler & Ernst, 2009).

IMPACT ON PRACTICE

This research offers several implications for management practice. The synthesis of results reveals five attributes of innovation champions before and after the decision stage of the innovation diffusion process. Organizations that seek innovation for competitive advantage and strategy should seek to identify the innovation champions that may be able to diffuse innovations and gain acceptance of innovations. Managers can find these champions by determining the leaders that possess these five attributes: networking and relationship development, persistence, knowledge of the champion, political savvy, and enthusiastic support. Once these individuals are identified they can be groomed to be innovation champions, who will support new ideas that are presented in the organization.

IMPACT ON THEORY

The synthesis of evidence presented contributes to the literature on innovation champions by revealing the attributes that innovation champions possess as leaders within an organization. Furthermore, these attributes were examined through various stages of innovation diffusion, supporting innovation champions as necessary leaders of innovation throughout organizations. This literature also contributes to the body of knowledge on transformational leadership as the theoretical lens through which the research was viewed. Innovation champions as leaders may

possess qualities of transformational leaders, particularly their relationship development and enthusiastic support of new ideas, which are similar to a transformational leader's inspirational influence and appeal.

LIMITATIONS

Although this study is impactful on both management practice and theory, it is not without its limitations. As mentioned previously, one of the inherent limitations to a rapid evidence assessment is that the fast delivery time in which the review is expected to be performed may sometimes result in search bias and a lack of rigor (Ganann et al., 2010). It should be noted that this study was performed in six-week time frame with only one author, and because of this short time frame, search bias and lack of rigor could be a concern. Sometimes in this process, important evidence can be overlooked and may not be included. Although a thorough search was performed and the methodology presented is transparent and replicable, there may have been further research that could have been included. Another limitation of note is that three of the studies that were heavily used were by the same author: Howell and Boies (2004), Howell et al. (2005), and Howell (2005). However, it should be noted that those studies scored high on the WoE quality assessment. Another limitation to this study is that the majority of the studies pointed to attributes of innovation champions in the stages prior to the decision process, therefore, results concerning innovation champions after the decision process have less evidence to support the claims made. Finally, the thematic review involved scanning the discussion areas of each article. Admittedly, this approach may have left out important data or information from the results.

AREAS FOR FUTURE RESEARCH

The evidence reviewed has shown that there are significant noted attributes of innovation champions prior to the decision-making stage of innovation diffusion. While some of the evidence does, in fact, point to attributes of champions after the decision-making stage, the weight of evidence was much less. Future research should focus on the attributes of innovation champions in the later stages of innovation diffusion, after the decision-making stage. Enthusiastic support, for instance, was shown to support P1 and the early stages of innovation diffusion. However, it may be needed in all stages of the innovation diffusion process. This is a potential gap in the literature that would warrant a full systematic review.

CONCLUSION

Innovation is a crucial strategy for many organizations seeking to gain a competitive advantage. Diffusion of innovations is an important and necessary process for managers that want to get new innovation ideas accepted. While it is recognized that innovation is important, and

champions can lead those innovations, the leadership attributes those champions have is still being understood. Innovation champions should be sought out, recruited, and be supported within organizations that seek to leverage the strategic advantage that innovation may offer. Although these champions may emerge informally within organizations, managers would do best to seek a strategic approach to define who these individuals are and then support them to champion new ideas. The attributes of innovation champions that emerged from this research are able to help managers take a first step toward identifying who their innovation champions are. Further, they can determine which stage of innovation diffusion is appropriate to utilize those champions. Future research should address the attributes of leaders in the stages after the decision-making stage of innovation diffusion as the evidence mostly pointed to attributes of champions prior to the decision-making stage.

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