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# QRBD

## QUARTERLY REVIEW OF BUSINESS DISCIPLINES

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## FROM THE EDITORS

We begin this issue of *Quarterly Review of Business Disciplines* with the research of Ali M. Kanso, University of Texas at San Antonio and Richard Alan Nelson, University of Nevada, Las Vegas. They examine media selection considerations by U.S. multinational advertisers when considering foreign markets and reveal the most serious problem for American firms. Pavel Slutskiy, Chulalongkorn University Bangkok Thailand, and Enric Ordeix, Ramon Llull University Barcelona Spain, present a conceptual analysis of the development of integrated marketing communication and some difficulties faced by the ‘open-window’ approach to outsourcing communication services. Priscilla L. Flores, Louis K. Falk, and Douglas Stoves, University of Texas Rio Grande Valley delve into Trumps Social Media and present a content analysis of the first 100 days of his Presidency.

Ying Wang, Michael Campbell, and Debra Schoenfeld, Montana State University-Billings analyze whether impairment recognition is associated with a company’s desire to manage earnings and boost income growth. Vance Johnson Lewis and Kaye McKinzie, University of Central Arkansas, explore the impact of industry and teaching experience, course level, and department on student evaluations. Rama Malladi, Prakash Dheeriya, and Jose Martinez, California State University-Dominguez Hills test the hypothesis that bitcoin price is partly determined by the stock index, gold prices, and fear gauge. Their findings are interesting.

Margaret A. Goralski, *Quinnipiac University*, Editor-in Chief

Charles A. Lubbers, *University of South Dakota*, Associate Editor

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## **INTERNATIONAL ADVERTISING DECISION MAKING: HOW ARE THE CHOICES INFLUENCED?**

Ali M. Kanso, The University of Texas at San Antonio

Richard Alan Nelson, University of Nevada, Las Vegas

### **ABSTRACT**

This study examines media selection considerations for foreign markets as perceived by U.S. multinational advertisers. The main objectives are to: (1) identify the most serious problems that American advertising managers face in their media selection for foreign markets, (2) investigate the levels of access to traditional media in international campaigns, (3) examine if advertising executives place more importance on certain factors in their media selection for overseas markets, and (4) determine if the types of advertising decisions (decentralization versus centralization) in U.S. multinational companies influence the media selection for non-domestic markets. A questionnaire was sent to advertising executives of U.S. consumer durable product manufacturers. The findings reveal that the most serious problem that American firms face is lack of reliable data about markets. Magazines, followed by newspapers, are the most accessible media in foreign markets. The findings also show that advertising managers tend to place more importance on general factors (type of product, target audience, budget size, cost efficiency, reach and frequency and competition) than they place on specific non-domestic factors (media availability, language diversity, legal constraints, level of economy, literacy and cultural considerations). In addition, the data suggest that the types of decisions have no bearing on the managers' views of the relative importance of factors of media selection. The authors make several recommendations for future research, including examination of the: (1) impact of accelerating changes in media technology, (2) influence of various product types and market areas, and (3) significance of consumer perceptions of media.

*Keywords:* Challenges of international media selection, levels of access to media, impact of culture, and centralization and decentralization of advertising campaigns.

### **INTRODUCTION**

Advertising has always been an integral part of the promotional mix in international marketing. Only in recent years, however, have scholars investigated cultural factors that affect the development of international advertising programs. Because understanding of advertising is culture-bound, companies that strive to achieve successful international campaigns should recognize specific cultural aspects of every single market. Intense competition for world markets and increased cost of advertising production have led multinational corporations (MNCs) to seek more sophisticated advertising strategies. However, these companies have been confronted with many challenges ranging from using effective messages to selecting appropriate media. This study is concerned only with media selection decisions by U.S. companies operating internationally. In focusing on this major element of the foreign advertising campaign, one can

develop a better understanding of whether MNCs effectively consider cultural dynamics in media selection. Specifically, the objectives of the study are to: (1) identify the most serious problems that American advertising managers face in their media selection for foreign markets, (2) investigate the levels of access to media when designing international campaigns, (3) figure out if advertising executives place more importance on certain factors in their media selection for overseas markets, and (4) determine if the types of advertising decisions (decentralization vs. centralization) among U.S. multinational companies have any bearing on their media selection for non-domestic markets.

## LITERATURE REVIEW

Much research in the last five decades has investigated creative advertising approaches (message selection) for foreign markets, centering on whether U.S. MNCs should use standardized (universal) or localized (individualized) ad approaches. Although most nations have the same kind of media, some specific considerations and problems differ across countries. An advertiser may not have many alternatives to choose from. Differences in media accessibility may hamper the advertising program. The practitioner may want to focus on the visual aspect of the product, but television may not be accessible to air the commercial. Recent studies have concluded that localization of advertising campaigns is gaining more ground than standardization and international advertising managers are becoming more sensitive to cultural differences in designing messages for foreign markets (Albers-Miller & Gelb, 1996; Boddewyn, Soehl & Picard, 1986; Cheng, 2014; Gillespie & Hennessey, 2016; Kanso, 1992; Kanso & Kitchen, 2004; Laroche, Kirpalani, Pons & Zhou, 2001; Papavassiliou & Sthakopoulos, 1997; Solberg, 2002; Wills & Ryans, 1977).

Very little research has addressed the issue of media selection, though media are as important as messages. An early study of factors of media selection for foreign markets revealed that the majority of U.S. international advertising managers depended on the same criteria they used for domestic markets (Donnelly, 1968). Another study of international media buyers examined the importance of media characteristics to these buyers in their selection decisions (Stewart & McAuliffe, 1988). The findings suggested a considerable commonality in the domestic and international media decisions. International media buyers placed importance on media characteristics that were also critical to domestic media purchases (further confirmed by Griffith, Chandra & Ryans, 2003).

Although most nations have the same kinds of media, some specific considerations and problems differ across nations. For example, an advertiser may not have many alternatives to choose from. Differences in media accessibility may hamper the advertising program used by his or her firm. He or she may want to focus on the visual aspect of the product, but television may not be accessible to air the commercial. Therefore, he or she has to consider other media to communicate with the target public (Bang & Moon, 2002; Cateora, 1993; Cateora, Gilly & Graham, 2019).

Several general environmental (marketing) factors may affect the firm's decisions in any media selection situation--whether in domestic or non-domestic markets. The most frequently mentioned factors are type of product, target audience, budget size, cost efficiency, reach and

frequency, and competitor's advertising (Barnes, 1975; Barnes, Moscovice & Rassouli, 1982; Coulter & Sarkis, 2005; Donnelly, 1968; Stewart & McAuliffe, 1988). The relative importance of each may vary from one situation to another.

However, there are specific cultural factors that enter into media selection decisions in non-domestic markets to a greater extent than in domestic markets. These include media availability, language diversity, economic level of the area, literacy level, cultural considerations and legal constraints. Several scholars suggested such factors add more complexity to the media selection process (Barnes et al., 1982; Cateora et al., 2019; Donnelly, 1968; Leighton, 1966; Mueller, 2010; Terpstra, Foley & Sarathy, 2016).

This study investigates the importance of both general environmental factors and specific cultural factors in media selection as viewed by U.S headquarters advertising executives. The general environmental factors are labeled general factors, while the specific cultural factors are called specific non-domestic factors. The following is an explanation of the significance of each group of factors.

### **General factors of media selection**

**Type of product.** A product is the sum of the physical and psychological satisfaction it provides the user (Cateora, Gilly, & Graham, 2019). In both domestic and non-domestic markets, the basic characteristics of the product affect media decisions because they may limit media choices. Certain consumer products of an intimate nature may make it difficult to employ certain types of mass media without antagonizing large segments of the public, including potential customers (Dirksen & Kroger, 1973). Marketers and advertising agencies get frustrated by widely differing restrictions on how products can be advertised. Sometimes they have to produce several versions to comply with various national regulations. In the United Kingdom, for instance, advertisers cannot show a real person applying an underarm deodorant. Explicit advertisements of contraceptives are common in Sweden but far less frequent in most parts of the world (Czinkota & Ronkainen, 2012).

**Target market.** In every media selection situation the task of the advertiser is to develop a definite understanding of the market for his or her product. He or she can select the medium to carry the message after identifying the group of consumers to whom the message is to be targeted. This, however, may not be as simple as it seems—especially when it is recognized that an optimal medium may not be available in some areas of the world (Jeannet & Hennessey, 2004).

**Budget size.** Allocation of dollars to advertising limits the flexibility of media choice in both domestic and non-domestic markets. Often, the budget is not large enough to allow year round advertising. In such a situation the planner may allocate the advertising dollars to the best selling months (Sissors & Baron, 2010) In some cases, the budget may not permit advertisers to use more than one medium. Still in other cases, the cost of reach and frequency varies widely from country to country. Sometimes, the budget may have to be split between markets, taking into account the communication objectives of the company or brand (Mooij, 1994).

**Cost efficiency.** It is imperative for the advertiser to compare costs with ability of the medium to render the kind of service desired (Mueller, 2010). Most advertisers attempt to select the medium that can: (a) deliver their message to their prospects with a minimum of waste (Sissors & Baron, 2010) or (b) reach their target audience most effectively and efficiently (Belch & Belch, 2018). In general, a non-domestic campaign is more expensive than a domestic one. In several countries, additional costs may be incurred due to translations, rewrites and larger amount of management time needed to make sure that a campaign is executed properly (Dahringer & Mühlbacher, 1991). With chaotic buying practices in some international markets, media costs present a major challenge to advertisers in executing cost-effective advertising campaigns (O’Guinn, Allen & Semenik, 2006).

**Reach and frequency** Closely tied to media budget is the reach and frequency factor. When a media budget is very high, it may be possible to achieve both high reach and high frequency. But most often, the cost is too high to do both (Sissors & Baron, 2010). Media vary considerably in their ability to contact the target market. In many countries, a broad variety of media (national, regional, and international) must be used to reach the majority of the market. However, this tactic often spreads the advertising budget too thin, thereby sacrificing frequency (Dahringer & Mühlbacher, 1991).

**Competition.** Advertising efforts should always consider the activities of the competition (Sissors & Baron, 2010). By analyzing the competitive expenditures in various media, an advertiser can determine the relative evaluation of the different media by competitors. In some countries, the international company may stimulate national competitors to follow its course of action. In other countries, an aggressive entry may lead nationals to ask their governments to restrict the “intruder” to protect national producers. Also, sound advertising strategy in one market is not necessarily sound in another market with a different competitive situation (Mooij, 1994; Mooij, 2014; Terpstra et al., 2016).

### **Specific non-domestic factors of media selection**

**Literacy level.** Firms accustomed to advertising in countries where high literacy is taken for granted may find it difficult to adjust to non-domestic markets where literacy is as low as 10%. Low literacy in many countries seriously impedes communication and calls for greater creativity and use of visual media to reach a large segment of the population (Cateora et al., 2019).

**Level of economy.** Markets require not only people, but people who have money to spend and are able to choose between different brands. The wide range of per capita income figures among nations may necessitate different media selections (O’Guinn et al., 2006; Terpstra et al., 2016).

**Media availability.** Media patterns differ significantly from country to country (Belch & Belch, 2018). The alternatives that are open to the advertiser in the United States are usually more limited in foreign markets (Cateora, 1993; Cateora et al., 2019; Czinkota & Ronkainen, 2012; Jeannet & Hennessey, 2004; Mueller, 2010; O’Guinn et al., 2006). American firms that depend heavily on television as an advertising medium find they have to forego it in some markets (for example, until rather recently Denmark and Sweden did not allow broadcast advertising) or wait in line for the limited amount of time they can buy in countries such as France and Germany

(Mueller, 2010). By contrast, advertising in cinemas—a relatively minor medium in the U.S.—is important in many countries (Czinkota & Ronkainen, 2012; Dunn, Barban, Krugman & Reid, 1990). Sometimes the problem is having a plethora of media choices rather than a dismal few. A nationwide ad campaign using newspapers in India would require the purchase of space in about a hundred major papers (Dahringer & Mühlbacher, 1991).

**Legal constraints.** The legal system of a country often has an impact on which media to select for campaigns. Broadcast advertising, for example, is not available in all countries. In some countries, radio and TV stations are owned and operated by government. The effects are not limited to types of media. They may extend to include prohibition on using certain words or styles such as comparative claims. Also, most countries do not allow broadcast advertising for cigarettes or alcoholic beverages though they usually permit such ads in print media (Belch & Belch, 2018; Dahringer & Mühlbacher, 1991; Jeannet & Hennessey, 2004; O’Guinn et al., 2006; Onkvisit & Shaw, 2000).

**Language diversity.** Media selection becomes more complicated when firms advertise in multiple-language areas of the world. The language multiplicity may entail fragmented media and higher cost per message delivery. Incautious handling of language may cause different kinds of problems (Cateora et al., 2019; Dahringer & Mühlbacher, 1991; Terpstra et al., 2016).

**Cultural considerations.** Cultural differences exist within as well as between nations requiring advertisers to be constantly alert to a wide variation in people’s beliefs, values and customs which pose a great challenge to their activities (Cateora, Gilly, & Graham, 2019; Kanso & Nelson, 2002). The presence of sub-cultures affects media options (Frith & Mueller, 2003). In the Netherlands, for example, major newspapers appeal to Protestant, Roman Catholic, or non-religious groups. In the U.S., radio programming is often designed to appeal to specific ethnic or regional sub-cultures (Dahringer & Mühlbacher, 1991). Some people in developing countries still do not own a television set, not because they cannot afford it, but reportedly because they believe that the medium corrupts their society.

### **Advertising decision alternatives**

Related to factors of media selection is the management of international advertising. Various companies exercise varying degrees of control over ad practices. Numerous scholars have discussed the general scope of management. Some writers have criticized management’s insensitivity to foreign markets. Almaney (1974), for example, perceived the major problem in international business as failure to communicate effectively rather than any lack of business knowledge or technical skills. He suggested that multinational executives have to practice empathy, while minimizing ethnocentrism, to function successfully. Kothari (1979), on the other hand, attributed the failure of U.S. marketing programs in foreign markets to the adoption of a regional or global approach. He recommended U.S. firms follow a “country orientation” to satisfy the interest of the host country. Adherence to foreign cultures and adjustment to local (non domestic) conditions are some guidelines to the orientation. Though neither of these two writers specified international advertising management in particular, the implication was clear.

A constant issue running through the various attempts at establishing an organizational structure appropriate for international marketing is the role of the parent company headquarters. Goold and Campbell (1989) outlined three roles that corporate headquarters can play in dealing with subsidiaries scattered around the world: controller, coach and orchestrator. The controller gives considerable autonomy to subsidiaries and uses some measures to determine when to intervene. The coach also decentralizes authority but is ready to provide advice and support to subsidiaries. The orchestrator acts as an interventionist with central control and responsibility for various activities, thus, giving subsidiary managers less autonomy. In fact, the question of organizing international advertising is not separated from the company's overall organization for international business. A firm has three basic organizational alternatives: (1) it can centralize all decision making for international advertising at headquarters; (2) it can completely decentralize the decision making for foreign markets; and (3) it can use some blend of these two alternatives (Terpstra et al., 2016).

Complete centralization of international advertising implies that campaign preparation, media and agency selection, and budgeting are all done in the headquarters country. This alternative is less likely where the firm operates through foreign subsidiaries desirous of having a voice in decisions affecting "their" markets. However, centralized control is more feasible when media conditions are similar from market to market and international advertising is standardized by the firm (Terpstra et al., 2016).

Complete decentralization of international advertising means that foreign subsidiaries make all their own advertising decisions and have sufficient skills to perform successfully (Jeannet & Hennessey, 2004). This approach may result from several different considerations: (1) the volume of international business and advertising is too small to warrant executive attention at headquarters; (2) the communication problems between home and field render a centralized approach impossible; (3) the firm feels it can allow local decision making in this area to gain a more national image for itself; and (4) the firm feels that the nationals know the local scene best and will be motivated if given this responsibility (Terpstra et al., 2016). Between the extremes of complete centralization and complete decentralization of international advertising decisions a compromise approach can be reached. Some writers called this approach "coordinated decentralization" in which the advertising managers at headquarters are responsible for international advertising policy, and they establish standard operating procedures and prepare a manual for subsidiaries including budget and reporting forms. The role of subsidiary personnel is stronger in media selection and in the adaptation of advertising appeals to local market needs, while the headquarters' role is stronger in establishing budget and setting objectives (Terpstra et al., 2016).

From the discussion of the centralization and decentralization concepts one may assume that a company with centralized policy should place more importance on general factors because they enter into media selection in non-domestic markets to a greater extent than in domestic markets. One may also assume that a company with decentralized policy should place more importance on specific cultural factors because they enter into media selection in non-domestic markets to a greater extent than in domestic markets.

Thus, the study will deal with two alternatives of media decisions: centralization and decentralization. The “coordinated decentralization” will not be treated as an independent third type. This is specified because the approach emphasizes variations in management control over specific media decisions. Such variations can be measured along with the two alternatives: centralization and decentralization. The terms “foreign markets” and “non-domestic markets” will be used interchangeably.

## RESEARCH QUESTIONS AND HYPOTHESES

The study addresses the following research questions and hypotheses:

- RQ1: What are the most serious problems that American advertising managers face in their media selection for foreign markets?
- RQ2: What are the American firms’ levels of access to traditional media in their process of selecting media for foreign markets?
- RQ3: Do international ad managers place more importance on specific non-domestic factors than on general factors when they make media selection decisions for foreign markets?
- H1: Managers in centralized decision firms tend to place more importance on general factors of media selection decisions than do managers in decentralized decision firms.
- H2: Managers in decentralized decision firms tend to place more importance on specific non-domestic factors of media selection decisions than do managers in centralized decision firms.

The proposed relationship in hypotheses 1 and 2 are based on the assumption that the structure of an organization may influence management perceptions of factors of media selection decisions. Thus, where decisions are made at headquarters’ levels, the management’s concern is expected to be higher with general factors (i.e., type of product, target audience, budget size, reach and frequency, cost efficiency, and competition) than with specific cultural factors (i.e., media availability, cultural considerations, legal constraints, level of economy, language diversity, and literacy level). This is mainly due to headquarters’ desire to have upper hands in advertising decisions that are equally related to domestic and non-domestic markets. By the same token, managers in decentralized decision firms may attach more importance to specific non-domestic factors (i.e., media availability, cultural considerations, language diversity, level of economy, legal constraints, and literacy). This can be attributed to managers’ recognition of diversified non-domestic markets and their adaptation to local (foreign) cultures.

## METHODOLOGY

The study surveyed international managers of U.S. consumer durable manufacturers. The sample consisted of 118 firms from the *Fortune directory of the 500 largest industrial corporations*. The

business activities of each firm covered areas ranging in scope from three to 57 countries. Overall, the business network of the selected companies reached 120 countries. Most of these companies have conducted business overseas for at least 10 years. However, we cannot identify the individual companies that responded because of our promise of confidentiality. Two major attempts were made to ensure that all chosen firms manufacture consumer durable goods and are involved in foreign markets through either subsidiaries, affiliates or branches. The first attempt screened three industry directories to: (1) name and locate the American firms, and (2) verify their foreign operations. The directories were: *America's corporate families and international affiliates*, *Directory of American firms operating in foreign countries* (now *Uniworld online*), and *Directory of corporate affiliations - Who owns whom*. The second attempt involved long-distance telephone calls to U.S. headquarters of companies screened from the three directories. This effort aimed at (1) getting a precise list of the intended companies and (2) identifying executives who were in charge of international advertising. The latter was especially important because the job title of the international advertising manager varies from firm to firm.

Prior to data collection, a questionnaire addressing several issues of international advertising was mailed to 44 advertising executives whose companies sold consumer durable goods in overseas markets but were not listed in the original sample. These managers represented business firms with smaller operations than those who were included in the sample. Such a procedure was essential to validate the research instrument. Probing into all pretest responses, the writers found that the importance of two media selection factors (consumer database and mechanical considerations) cannot be determined by the majority of the advertising executives. Many managers said that the use of a consumer database is either unavailable, inaccessible, or questionable in non-domestic markets. Managers also wrote comments such as “no response,” “don't know,” and “unable to answer” on the question pertaining to mechanical considerations. This was mainly due to a wide variation in the availability and quality of broadcast transmissions and print reproduction techniques. Thus, the two factors of consumer database and mechanical considerations were dropped from the questionnaire. One open-ended question was revised concerning serious problems that ad managers face when selecting media for foreign markets. The first version of the question yielded some echo effect because it provided respondents with unintended cues.

The data were collected through a mail survey. For research purposes, it was stressed that both pretest and real test must be administered in the same manner. Three waves of the same questionnaire, along with cover letters and self-addressed, stamped return envelopes, were sent to managers in the chosen firms. Instructions in the second and third waves were given to recipients not to fill out the questionnaire if they already responded. Also, before the third wave went out, managers were called to determine if they received the questionnaire. Those who did not fill it out were urged to do so. Of the 118 advertising executives who were on the mailing list, 96 returned the questionnaire that addressed a wide range of international advertising issues. However, only 84 managers were able to answer questions pertaining to the media selection issue. The other 12 executives stated that they were not involved in media selection because their subsidiaries were in full charge. Thus, adjusting the sample size of executives from 118 to 106 and the number of respondents from 96 to 84 would make the return rate 79.3%.

To identify the most serious problems that American advertising managers face in their media selection for foreign markets (Research Question 1), respondents were asked through an open-ended question to pinpoint these problems. Their answers were coded in several categories which indicated the following: budget restrictions, lack of media research, lack of information about media effectiveness, unavailability of appropriate media, lack of reliable data, lack of market research, competition, government control, and inappropriate language and inadequate translation. The categories were established by a marketing professor and an advertising professor at a mid-Western university, and a co-author of this study. The responses were first coded by the co-author and then checked independently by the advertising professor. It turned out that 95% of the responses were placed in the same categories by the co-author and the professor.

To gain insight into the levels of access to media in foreign markets (Research Question 2), American advertising executives were asked to indicate whether they had no access, partial access, or full access to each of the following traditional media: direct mail, magazine, newspaper, outdoor, radio and television.

To determine the relative importance of culture in media selection decisions (Research Question 3), managers were asked to evaluate 12 factors (target market, type of product, reach and frequency, budget size, cost efficiency, competition, media availability, cultural considerations, language diversity, level of economy, legal constraints, and literacy) on a scale providing four levels of importance. The levels were: “very important,” “important,” “slightly important,” and “unimportant.” Scores from 4 to 1 were assigned to these levels respectively. A mean score was computed for each factor. The factors were grouped in two categories: (1) general factors such as product type, reach and frequency, target market, budget size, cost efficiency, and competition, and (2) specific non-domestic factors such as cultural considerations, legal constraints, media availability, language diversity, level of economy, and literacy.

To identify types of advertising decisions (Hypotheses 1 and 2), respondents were asked to estimate the percentage of advertising decisions that their U.S. home offices made for local foreign markets. The percentage of decisions was presented in six brackets: U.S. home office made no decisions, 1% - 25%, 26%- 50%, 51% - 75%, 76% - 99%, and U.S. home office made all decisions. In cases where U.S. home offices were involved in less than 50% of advertising decisions for foreign markets, they were classified as decentralized decision firms. The rest were categorized as centralized decision firms.

## FINDINGS

In answering Research Question 1 about the most serious problems that American firms face when they make media decisions for foreign markets, an analysis of 62 responses to an open-ended question revealed that 25% of the reported problems pertain to budget limitation and excessive cost of media, 16% to lack of media research and audited circulation, 15% to lack of information about media effectiveness, 11% to unavailability of appropriate media and 8% to lack of reliable data. The remaining 24% of the mentioned problems relate to limited understanding of local foreign markets, presence of local foreign competition, government restrictions on media and inadequacy in language translation.

The overall picture indicates that the most serious problem that American firms face is lack of information about markets. Information about media availability, reach and effectiveness is either unavailable or questionable in overseas markets. About 39% of the reported problems relate to research matters. This finding itself is not surprising, but the intensity of such problems may raise a question about the appropriateness of media decisions for foreign markets. Such decisions, to be effective and meet market demands, must be based on accurate and reliable data.

In answering Research Question 2 about levels of access to media in foreign markets, an analysis of responses from 84 managers showed magazines as the most accessible medium in foreign markets. Newspapers come in second. About 85.7% of the respondents said they had full access to magazines while 71.4% said the same of newspapers. Amazingly, about 32.1% of the responding managers claimed to have full access to radio, and only about 27.4% reported full access to television (Table 1).

The last finding does not seem to be promising to those who stress the increasing power of television in facilitating unified worldwide advertising campaigns. The study is not concerned with reasons of inaccessibility. However, one can reasonably assume that legal restrictions and/or technical considerations as well as state ownership which rules out commercials are major barriers that prevent access to television in many areas of the world.

Table 1. Levels of Access to Media as Reported by Advertising Managers

	Full Access	Partial Access	No Access	Total Percentage*
Magazine	85.7%	14.3%	---	100%
Newspaper	71.4%	25.0%	3.6%	100%
Direct Mail	50.0%	39.3%	10.7%	100%
Outdoor	34.5%	36.9%	28.6%	100%
Radio	32.1%	39.3%	28.6%	100%
Television	27.4%	46.4%	26.2%	100%
*Base figure for each percentage is 84, the total number of respondents for these analyses.				

Research Question 3 addressed the relative importance of factors of media selection. The findings revealed, as presented in Table 2 that general factors were rated more important than specific non-domestic factors. Target market, product type, and reach and frequency had the highest mean scores (3.59, 3.58, and 3.27 respectively).

Table 2. Relative Importance of Factors of Media Selection Assessed by International Advertising Manager

Target Market*	3.59
Type of Product*	3.58
Reach and Frequency*	3.27
Budget Size*	3.21
Media Availability	3.05
Cost Efficiency*	2.89
Cultural Considerations	2.81
Language Diversity	2.63
Level of Economy	2.55
Legal Constraints	2.51
Competition*	2.32
Literacy	2.19

\*General Factors. All others are specific.

Media availability (3.05), followed by cultural considerations (2.81), was rated as the most important in the group of specific non-domestic factors. This could be attributed to the complexity of media conditions in many countries which may have led advertisers to seriously consider the available options. The literacy factor had the lowest mean score (2.19).

Overall, the ratings suggest that in selecting media for foreign markets, U.S. firms still emphasize criteria supported by American domestic advertising research (i.e., target market, product type, reach and frequency, and budget size). Some of these ratings were similar to ones reported by Donnelly (1968).

Hypothesis 1 assumed that managers in centralized decision firms tend to place more importance on general media selection factors than counterparts in decentralized decision firms. The general factors involve: product type, target market, reach and frequency, cost efficiency, budget size, and competition. The data showed that 59 firms (70%) were decentralized in their advertising decisions for foreign markets. Only eight of the 25 centralized decision firms reported that U.S. headquarters made all advertising decisions for their foreign markets. In conducting a multivariate Wilks' lambda test, the findings (Table 3) did not support this hypothesis. Also, univariate F-tests provided no significant differences between the two groups of managers regarding their assessment of each factor of media selection.

Table 3. Importance of General Factors  
Based on Alternatives of Advertising Decisions in the Firm

General Factors	Mean, Decentralized	Mean, Centralized	<u>F</u>	<u>P</u>
Product Type	3.54	3.65	.40	N.S.D.
Target Market	3.52	3.72	.17	N.S.D.
Reach and Frequency	3.20	3.41	.21	N.S.D.
Cost Efficiency	2.85	2.96	.51	N.S.D.
Budget Size	3.10	3.41	.07	N.S.D.
Competition	2.30	2.34	.86	N.S.D.

Wilks' lambda = .94, d.f. 6, 77; P = .58.

The degree of freedom for each univariate F = 1, 82.

In all statistical tests, the region of rejection was set at .05.

Hypothesis 2 assumed that managers in decentralized decision firms tend to place more importance on specific non-domestic factors than do managers in centralized decision firms. The specific non-domestic factors comprise: media availability, cultural considerations, legal constraints, level of economy, language diversity, and literacy level. Like the previous one, hypothesis 2 gained no support. Wilks' lambda test, as presented in Table 4, showed no significant difference. Also, none of the univariate F-tests revealed a significant difference.

Table 4. Importance of Specific Non-Domestic Factors Based  
on Alternative Advertising Decisions in the Firm

Specific Non-Domestic Factors	Mean, Decentralized	Mean, Centralized	<u>F</u>	<u>P</u>
Media Availability	3.00	3.13	.45	N.S.D.
Cultural Considerations (e. g., customs, values)	2.89	2.69	.23	N.S.D.
Legal Constraints	2.47	2.58	.60	N.S.D.
Level of Economy	2.43	2.75	.14	N.S.D.
Language Diversity	2.68	2.62	.94	N.S.D.
Literacy Level	2.12	2.31	.41	N.S.D.

Wilks' lambda = .92, d.f. 6, 77; P = .43.

The degree of freedom for each univariate F = 1, 82.

In all statistical tests, the region of rejection was set at .05.

The findings of hypotheses 1 and 2 suggest that the relative importance of both specific non-domestic and general factors of media selection is not influenced by alternatives of advertising decisions. Advertising managers appear to have a consensus in favor of general factors. These factors affect media selection in any situation -- whether in domestic or non-domestic markets. The limited literature reported a relationship between alternatives of advertising decisions and

some non-domestic factors addressed in this study. For example, Donnelly (1968) noticed that managers in decentralized decision firms rated media availability, level of economy, language and literacy as being more important than did managers in centralized decision firms. This study, however, suggests that non-domestic factors of media selection are losing rather than gaining recognition.

## DISCUSSION

In general, the findings are not fully consistent with the literature. International advertising managers do not seem to display a deep concern for specific non-domestic factors. Rather, they tend to be “domestic criteria oriented” in their media selection. Lack of recognition of non-domestic factors might be attributed to several reasons. One reason is that advertising managers may feel frustrated by variations in worldwide media infrastructure. As Terpstra and Sarathy (1994) put it, “One cannot take a successful media configuration from domestic operations and apply it abroad because the same facilities are often not available” (p. 474).

Another reason is that lack of research may lead managers to misperceive non-domestic media and consumer conditions. About 40% of the problems reported by advertising executives in this study relate to research matters. This finding itself is not surprising but the intensity of such problems may raise a question about the appropriateness of media decisions for foreign markets. Such decisions, to be effective and meet market demands, must be based on accurate and reliable data. Another reason is that potential communication problems with subsidiaries may diminish managers’ interest in estimating appropriate procedures. An additional reason is that some managers may perceive both the world market and the American market segmented into sub-cultures and, therefore, they consider cultural factors as equally important in domestic and non-domestic markets. In fact, media availability and language diversity are already main factors in media selection in the Southwest U.S. where there are major Hispanic and Asian populations. For example, in El Paso, Texas, Arbitron TV and Radio Reports give audience shares for Spanish-speaking and English-speaking audiences.

## CONCLUSIONS AND RECOMMENDATIONS

The literature suggests that more American companies are using localized advertising messages in their international campaigns. Based on the findings of this study, one may conclude that cultural diversity seems to influence the advertising message (creative strategy), not the media vehicles (distribution strategy). While this study provides some meaningful answers about the relative importance of factors of media selection, it also suggests future research possibilities, including:

1. The study found that ad managers place more importance on general rather than specific non-domestic factors of media selection. Further research is needed to determine the relative weight for each factor or group of factors depending on area of foreign markets. For example, media selection criteria in the U.S., Japan and some Western European countries are quite similar. There are audience data companies, huge numbers of media outlets, large advertising budgets and major use of computerized media selection methods. However, media selection methods outside

- the most developed countries are quite different since there are fewer media alternatives and little data on media use by consumers.
2. The study revealed that advertising managers place little importance on literacy. Why this lack of concern exists requires additional research. Questions related to types of products (sophisticated or unsophisticated) and areas of markets (developed or underdeveloped countries) can be addressed.
  3. The study suggested that international advertising managers consider the most important factors in media selection for foreign markets are those frequently supported by domestic media research. Research is needed to determine if these criteria of selection are equally evaluated by a different type of research—research done by an independent foreign expert.
  4. The majority of the firms in this study are decentralized in their advertising decisions. Research is needed to determine if such an alternative is due to fragmented foreign markets or headquarters' intention to have subsidiaries dictate their own decisions. Research is also needed to examine if a relationship exists between the size of foreign subsidiary and alternative of advertising decision.
  5. This study did not address the effect of accelerating changes in media technology, especially social media. Researchers need to investigate if these changes have impacted criteria of media selection in favor of general factors.
  6. One may argue that the type of selling message dictates the appropriate choice of media. For example, advertisers interested in appealing the prospects by color advertisements may find billboard, film, magazine and television serve this purpose more than other media. Research is needed to test such a reasonable assumption.
  7. Consumer confidence of a vehicle should be an important consideration in the process of selecting media for foreign markets. There is a common belief in the U.S. that advertising messages in magazines and newspapers enjoy a higher degree of credibility than in radio and television commercials. Research is needed to determine if such a belief holds true in overseas markets.
  8. Future studies may want to examine the media selection strategies of firms using one policy approach in comparison to the other policy approach within a specific country or region.
  9. A final area worthy of future consideration is the utility of the media selection strategy. It may prove instructive to learn whether certain outcome variables are influenced by the choice of media selection strategy. Knowing whether sales, customer satisfaction, customer loyalty, etc. are impacted would provide additional insight about the significance of the selected media strategy.

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## **THE USE OF IMC CONCEPT BY ADVERTISING AGENCIES: RISE AND DECLINE**

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### **ABSTRACT**

The paper presents a conceptual analysis of the development of integrated marketing communication concept. It is argued that in the early 1990's advertising industry saw IMC as an opportunity to prove its value by offering an integrated approach to managing various communication functions under centralised managerial control. It was an attempt to consolidate the budgets by offering a "one-window" approach to outsourcing communication services. However, the approach faced certain difficulties in proving its value and the allure of the IMC paradigm for agencies declined. As a result, by the early 2010's the term was used more often to refer to in-house communication strategy rather than to describe agencies' service approach.

*Keywords:* IMC, integrated marketing, integrated communication, PR

### **INTRODUCTION**

This paper endeavours to provide a hypothetical explanatory framework for answering the question that has for decades preoccupied the minds of those who think and write about the concept of integrated marketing communication (IMC). Paraphrasing Percy and Rossiter (2001), this question can be formulated as follows: "if IMC is such a valuable concept, then why there is such a large amount of evidence to suggest that truly integrated marketing communication is still the exception rather than the rule"?

As early as 1991, Schultz noted that "that nothing had received as much publicity and discussion at learned meetings, while seeing little real activity, as had the concept of IMC", and he also noticed that not much changed by 1997, when, according to his observations, "IMC still appeared to be in a pre-paradigm as opposed to a post-paradigm state" (Schultz & Kitchen, 1997). Despite the abundance of scholarly articles which dealt with theory building and identification of key issues within IMC paradigm, integration is still not the norm. Although most mainstream marketing texts and textbooks on marketing communication have generally adopted the IMC approach, its prevalence in practice is not as strong as it had been projected in the late 1990's (Schultz & Kitchen, 1997, 1999; McLaughlin, 1997; Schultz, 1999; Wood, 1997).

But why does it take so long for the industry to truly adopt IMC? This questions has been asked for at least twenty-five years, and despite a continuous flow of both academic and professional publications that highlight the growing need for more holistic thinking around IMC, messages consolidation and speaking with one voice, even as late as of 2017, P. J. Kitchen, one of the most vocal proponents of the IMC concept, notes that "the journey toward integration from a consumer or corporate perspective has scarcely begun".

To provide an answer to this question the paper examines the concept of integrated marketing communications from a particular angle: as a tool used by communication agencies in the 1990's-early 2000's to get a competitive advantage. We begin by reviewing the historical context of the communication industry in the second half of the XX century. In section two we briefly explain how PR entered the domain of marketing communications in the form of marketing PR, thus creating a challenge for advertising agencies. In the following section three we describe how advertising agencies responded to the emerging challenges by utilising the concept of IMC (which originated in academia) and explore the phenomenon of IMC from a theoretical perspective. We proceed to reviewing the concept and analysing various limitations which obstructed its development and wider implementation, focusing on indicating the barriers to further development of IMC within communication agencies, which eventually led to the concept going out of agencies' mainstream fashion. We then conclude by analysing the legacy of the concept of IMC on contemporary realities of communication industry, focusing in particular on its ongoing relevance for corporate communication practitioners and a rationale for its further development.

### **Historical context**

Communication management – any type of communication activity undertaken by an organisation to inform, persuade or otherwise relate to individuals and groups in its outside environment — has evolved over the past decades. Although the roots of communication management can be traced to the times of ancient Greece and Rome all the way to the 1900s, when corporations hired publicists, press agents, promoters and propagandists for their communication campaigns, in this article we focus primarily on the history of the industry after the Second World War, when more or less modern market environments started to take shape. This “modern” era of communication management can be characterised by the growing role of communication agencies. Due to the nature of competition between agencies new technologies, techniques and approaches were being constantly developed, and competing paradigms of managing communication emerged and replaced each other (Lears, 1994; McDonough & Egolf, 2002).

One of these strategic approaches was the concept integrated marketing communication, or IMC, which was developed in the late 1980's - early 1990's. It is defined by the American Association of Advertising Agencies (AAAA) as a concept of marketing communication planning that recognizes the added value of a comprehensive plan that evaluates the strategic roles of a variety of communication disciplines – for example, general advertising, direct response, sales promotion, and PR – and combines them to provide clarity, consistency and maximum communication impact through the seamless integration discrete messages.

The concept of IMC to an extent disrupted the realities which formed in the US after the WWII, when professional expertise was brought into the area of business communication in two distinct professional disciplines: advertising and public relations. Prior to the arrival of IMC both advertising (as a part of marketing) and public relations had developed as separate communication disciplines. Although organisations realised that in order to exist and thrive they needed to focus on both the issues of public concern (PR) and promoting products to markets (marketing communications or advertising in a broad sense), both disciplines had been developing independently for decades, with advertising being a more profitable and influential industry with much higher budgets (Cutlip, 1994; Tymorek, 2010).

In this paper we suggest to look at the concept of IMC not only as an approach to strategic management of communication (which has been studied previously in depth, see, for ex., Duncan & Caywood, 1996; Duncan & Everett, 1993; Christensen et al., 2008; Proctor & Kitchen, 2002; Schultz et al., 1994 etc.). Instead we examine IMC as a concept that originally was developed within academia, and later was attempted to be used by advertising agencies as an instrument to get competitive advantage; or at least something that was used as a marketing tool popular among communication agencies in the late 1990s-early 2000s.

We believe that looking at IMC not as a strategic management approach, but as a marketing gimmick used by agencies in their market (corporate clients) can produce some important insights. This angle can add to our understanding of the relevance of the IMC concept not only as the basis of the synergy in the multiple areas of communication, but also as a trend in the development of marketing communication.

### **Fads and fashions in marketing communication**

The question of whether IMC may be no more than another management “fad,” no different from Total Quality Management (TQM) or reengineering or Efficient Customer Response (ECR) has been asked previously by many academics and practitioners (Kitchen, 1996). However, these concerns were usually rejected, as researchers would conclude (after interviewing agency executives) that IMC did not appear to be a fad, but was “being driven into client organizations due to real business needs and is not the “philosophy of the day” (Schultz&Kitchen 1997).

In our opinion the question is not whether the concept of IMC has some validity in it (we actually believe it does), but whether there are enough stimuli and will for communication industry key actors to overcome the well-known barriers on the way to integration. In our opinion, such a will was evident in communication agencies in the 1990s-early 2000s, but by now agencies, which continue to recognise the importance of integration, are no longer the locomotive of the IMC movement.

A hypothetical explanation for this can be found in the evolution of the communication industry from the perspective of economics. Communication industry can be examined as a field where economic actors (communication agencies) compete for the budgets of clients (business organisations) by continuously developing their services and offering new, more sophisticated ways of providing these services to their clients in order to obtain a competitive advantage (Aharoni 1993).

For a communication agency the main way to attract new business is to offer an innovative methodology of developing communication strategies for clients. These innovative methodologies are the “know-hows” of the industry that basically allow agencies to promise higher effectiveness and efficiency of their approaches due to some unique competence or expertise — special knowledge about communication campaign management (Halinen 1997).

Agencies would come up with different ideas, and those concepts which resonated with the current trends and market demands would become successful and form communication management paradigms of particular periods of time. The post-war paradigms that are worth mentioning

followed a particular change pattern: concepts that focused on messaging were replaced by media planning concepts, and then by message-focused concepts again (Dymshitz, 2002).

For example, 1950's were the years of psycho-analysis with its ideas of hidden persuasion and motivation to consume. In 1961 this concept was largely replaced by the idea of Unique Selling Proposition, offered by Rosser Reeves (Reeves, 1961) from Ted Bates agency (New York), in his book «Reality in Advertising». Next decade was the period of new methodologies of media planning, associated with the Minimum Effective Frequency Theory by Herbert E. Krugman (1972). In advertising, the effective frequency is the number of times a person must be exposed to an advertising message before a response is made and before exposure is considered wasteful. This was in turn replaced by the focus on Psychographic Descriptions, epitomised in VALS — Values and Lifestyles — approach to messaging strategy (Mitchell, 1984). Late 1980's were the years when the industry was dominated by approaches focused on globalisation and corporate communication management.

All the “old” approaches were not refuted by the “new” ones, rather, they faded away from the arena of competition, losing their value as innovative communication management approaches that could be used by agencies to achieve competitive advantage. It does not mean that the concept of USP or MEF were “fads”, it merely means that these concepts could no longer add extra value to whatever agencies were doing. As paradigms were being replaced by newer ones, the old approaches would lose their allure, and become regular tools which attracted limited attention as elements of communication agency positioning. What agencies once used as key point of differentiation, or as an approach which could give competitive advantage, later became common tools of communication without much hype surrounding it.

In our opinion the concept of integrated marketing communication (IMC) followed more or less the same pattern: being originally developed within academia as an innovative strategic concept, it was initially promoted by communication agencies to address the challenges at a particular period in time. However, by now IMC largely lost its novelty quality which in the past enabled it to attract interest; instead it became a universally recognised and commonly used approach for in-house organisational communication management, which is known to be challenging in its implementation and measurement (Kitchen, 2017; Mortimer & Laurie, 2011).

### **Drivers for IMC development**

The concept of IMC was the product of its historical context: by the late 1980s the industry faced another period of disruption, associated with a new set of challenges. The advertising industry, which was the locomotive of communications business, was going through hard times explaining to the clients the value of its services and the reasons why the clients should be paying their fees.

Advertising agencies' business model was centred around two major types of services: creative ideas (message development) and media placement (media planning and media buying). However, clients were beginning to realise that message development usually happens only once a year, and media plans are not updated more often than once in three months, simply because trends in media consumption change slowly. It was hard for agencies to give rational reasons why clients needed

to pay agency fees in between these development periods (Belch & Belch, 2012; Dymshitz, 2002; Shultz & Kitchen, 1997).

Another challenge was to explain why creative development and media planning services had to be provided by the same agency, when these two processes were not logically connected. The response to this challenge was the emergence of separate service companies: creative boutiques on the one hand, and media buying houses on the other (Coffee, 2017).

The challenge was also amplified by the overall crisis that the industry was facing in the 1980's. Compared to the previous decades, advertising was losing its magic power of universal promotional instrument. New communication channels and a constantly growing number of media led to a decline of effectiveness of a single message placement. Also new generation of consumers (baby-boomers) were not as naive as their parents, they were able to decode advertising messages more effectively, were better at ignoring them and overall were not as easily manipulatable. Combined these trends led to the situation when traditional advertising was getting more expensive and less effective (Belch & Belch, 2012).

Shultz and Kitchen (1997) summarise these key drivers for the development of IMC by pointing out an increased number of advertising agencies coupled with their inability to embrace the new emphasis placed on communication. These factors have encouraged rapid penetration of public relations, direct marketing and sales promotions in the industry of marketing communication. Direct marketing offered a measurable, database driven and relationship oriented alternative to mass messaging offered by advertising. It focused on direct messages with a call for actions and traceable response, which was aligned with the key trends of increasing segmentation in consumer preferences (Durkin & Lawlor, 2001; Eagle & Kitchen, 2000; Schwartz, 2001; Tedlow, 1990), easier access to consumer databases which took direct marketing to a new level, allowing massive customer data holding and manipulation (Kitchen and Schultz, 1999; McGoon, 1999; Reich, 1998; Duncan, 2002; Maddox, 2001), recognition of the importance of consumer loyalty and long-term relationship (Gonring, 1994; Reich, 1998; Schultz, 2002).

Public relations also started to compete in the traditional field of advertising — consumer markets. Before the 1980's PR was not really focused on mass markets, it was more of what now is called “corporate PR”. However, in the 70's-80's a major change in the U.S. households investment pattern created a unique situation where the stock exchange became a mass market (Lane & Jacobson, 1995). It was no longer an exclusive club, but a street market in which whoever shouts louder — wins. PR, with its toolbox that mixed media hype and sensations, was a welcome instrument that was considered effective in supporting sales of shares to households. This made many practitioners believe that PR can be equally effective in selling consumer products to these households, thus creating the concept of Marketing Public Relations — MPR (Harris 1991, Kitchen 1996). Agencies started to bring PR to achieve marketing objectives: the publicising of news and events related to the launch and promotion of products or services. ‘Marketing public relations’ (MPR) involved the use of public relations techniques for marketing purposes which was found to be a cost-effective tool for generating awareness and brand favourability and to imbue communication about the organisation's brands with credibility, which also answered the challenge of building and increasing a brand's image-based equity (McLaughlin, 1997; Schultz, 1999; Wood, 1997).

This trend towards ‘integrating’ marketing and public relations was noted by many in the field, including Philip Kotler, one of the most influential marketing figures of modern times. Kotler commented that ‘there is a genuine need to develop a new paradigm in which these two subcultures [marketing and public relations] work most effectively in the best interest of the organisation and the publics it serves’ (Kotler & Mindak, 1978).

Until the 1980s, marketing and public relations were considered as distinct in their objectives and activities with each discipline going through its own trajectory of professional development. Marketing dealt with markets, while public relations deals with all the publics (excluding customers and consumers). Markets, from this perspective, are created by the identification of a segment of the population for which a product or service is or could be in demand, and involves product or service-related communication. Publics, on the other hand, are seen as actively creating and mobilising themselves whenever companies make decisions that affect a group of people adversely (Cornelissen, 2015). But the arrival of the concept of MPR took the PR industry to the advertising playing field, with an access to marketing budgets.

### **IMC in advertising agencies**

This trend, combined with the challenge of explaining the value of a full-service agency, created a demand for a new paradigm of managing communication that would focus on strategic planning and coordination. The idea initially was developed in the academic circles, as Clarke Caywood (2012) affirmed, “IMC emerged out of an academic department that, for several decades, had been recognized as the number one advertising program”.

In our opinion, the advertising industry saw an opportunity in proving its value and achieving an advantage over the growing budget share of PR-agencies (with the MPR concept) by offering an integrated approach to managing different functions under managerial control of advertising agencies. This approach, the integrated marketing communication approach, recognised the ‘added value’ of a comprehensive plan that evaluates the strategic role of a variety of disciplines (advertising, direct marketing, sales promotions and public relations) and combined these disciplines to provide clarity, consistency and maximum communication impact (Duncan & Caywood 1996). Understood as “the notion and the practice of aligning symbols, messages, procedures and behaviours in order for an organisation to communicate with clarity, consistency and continuity within and across formal organisational boundaries” (Christensen et al., 2008, p. 424), it justifies centralised control of all communication functions in a business environment that otherwise can for calls for participation, involvement and decentralization (Christensen et al., 2005).

The basic concept of integrated marketing communication is based on the synergy of individual instruments of marketing communication, which are mutually reinforcing and complementary, and their effect is greater in comparison with the separate use of individual instruments of marketing communication (Duncan & Everett, 1993), which in turn leads to lower cost of communications (Fill, 2001). From the practical perspective IMC attempts to combine, integrate, and synergize elements of the communications mix, as the strengths of one are used to offset the weaknesses of others. Smith (2002) suggests, for example, that publicity and advertising support each other and create greater impact in a cost-effective manner.

Across their differences, the definitions of IMC all converge around the notion of control. While Schultz et al. (1994) at Northwestern University's Integrated Marketing Communication program, for example, focus on the management of the sources of information to which customers are exposed, Duncan (1993, p. 23) talks about "controlling or influencing all messages which customers and other stakeholders use in forming an image of, and maintaining a relationship with, an organization". And while the purpose of such control measures varies from issues of sales and brand value (e.g. Keegan et al., 1992) over predictability (Proctor & Kitchen, 2002) to profitable relationships with customers and other stakeholders, the promise of IMC is to provide the overarching perspective and tool for a synchronization and coordination of all corporate messages. Although some IMC-scholars emphasize that the role of the corporate communication department is to counsel, mediate, support, and add value to the business units, not to police them (Gronstedt, 1996), IMC is first and foremost a marketing-inspired vision on inspection, regulation, and control. In fact, it may be argued, along with Cornelissen (2001), that the reason why the IMC discourse appeals to managers is because it legitimizes the organization and control of all communication functions. Since the key word here is alignment and centralised control, advertising industry volunteered to lead the movement, centralise (and control) the processes. IMC was a new paradigm (Kitchen & De Pelsmacker, 2004) and a new way to develop marketing communications. (Kliatchko, 2008). For agencies this was an attempt to consolidate the budgets by offering a "one-window" approach to outsourcing communication management services.

### **Advertising agencies as the key communication integrator**

In our opinion, by the end of 1990's IMC was mostly considered to be an approach to agency services. This idea is also reflected in the research and academic literature of the time. For example, Schultz and Kitchen (1997) in their paper on IMC acceptance emphasised the importance of "tackling not companies, but advertising agencies". They focused their research on understanding how the concept of IMC was diffusing by considering how senior advertising agency executives perceived, utilized, and developed IMC. It is symptomatic, that the first question that they asked in their paper was about the amount of time agency devoted to IMC programs on behalf of client firms, whereas the second question was about the effect of IMC on client budgets. Their research confirms our hypothesis: it was felt that the agencies were happy to implement the IMC approach, however, the agency saw the client executives as one of the main barriers to IMC.

Kitchen and Schulz (1999) replicated the study a year later across the UK, Australia and New Zealand, also focusing on advertising agency acceptance, involvement and development of IMC. Again, and the agencies' executives' perceptions of the main barriers to IMC were very similar in terms of identifying the client's staff and organisational structure as being important.

The 2008 study by Kitchen, Kim and Schultz (2008) which compared IMC implementation by practitioners in UK, US and Korea also showed that the agencies were rather willing to put together strategic campaigns but were dependent on being given that responsibility by their clients.

Analysis, conducted by Laurie and Mortimer in 2011 seems to produce similar conclusions, but with further evidence of agency disappointment in the concept, which was formulated by one of the participants in the view that "IMC is an antiquated construct and the world has moved on from the "matching luggage" connotation that it seems to have".

Kitchen et al. (2004) found that agencies would adopt an integrated approach if it was a requirement of their clients, and it was therefore necessary for the client organisations to become integrated themselves. Four years later, in a follow-up study, results indicated that agency executives were able to create strategic campaigns but were still dependent on being given that responsibility by their clients (Kitchen et al., 2008). Further support for this view was provided by an IPA industry report (IPA, 2006) entitled “Magic and Logic”. This report concludes that both clients and agencies have joint responsibility to adapt to the changing environment but that agencies cannot develop as quickly if clients are not adopting best practice.

As a result, as early as by 2009 Kitchen and Schultz (2009) suggested that too many studies have examined the role of the communication agency in the implementation of IMC while it is now accepted that the client businesses are the prime movers.

All the evidence seems to point in the same directions: academics confirm the potential of the IMC concept, the agencies are eager to provide integrated services, but the clients seem to be rather reluctant to adopt the idea.

### **Corporate scepticism about IMC agencies**

Indeed, corporate practitioners were rather slow in their adaptation of IMC, and even slower in their willingness to accept agency’s leading role in the process of integration. Even if the idea of IMC through corporate management initiative was accepted as the operational concept for companies, focus on the problems of “barriers” to implementation remained standing. It implied that the IMC project, and its underlying communication ideal, is fundamentally valid and sound – only difficult to put into practice (Christensen et al., 2008). Thus, while the literature has discussed, for example, how turf battles, ego problems, managerial parochialism, “functional silos”, and lack of horizontal communication between departments prevents the exchange of information necessary to facilitate an ongoing integration of corporate messages (Gronstedt, 1996; Smith, 2002), these problems were assumed to be remediable through changes in management practices, e.g. formal responsibilities and lines of command (Schultz, 2002).

### ***One-stop service providers***

However, IMC not only demands an integrative approach within the client organisation (which presents its challenges) but also requires a particular relationship with the agencies for the benefit of the client. As we proposed earlier, advertising agency mainly saw the concept of IMC as a means to centralise control over clients’ budgets, which would assume that an agency would execute several communication instruments within the integrated approach, and the client would use one agency to implement IMC.

This raised the question of whether the clients were willing to buy all the services from one agency. Linton and Morley (1995) advocated that IMC should be provided by the full-service agencies since this would guarantee creative consistency. This is the very approach that agencies would initially advocate, but it seemed to have limited success. “Despite grandiose one-stop shopping notions in the 80s, the “full-service” advertising agencies had begun to take erosion in one of their core competencies a good decade later” (Green, 1992). The matters were made worse by the

clients, who found it rather hard to understand why they need to entrust everything to one organisation (Schultz, 1993), with rather few taking the risk.

Another important trend, that is observed in every industry, including communication, is the continuous division of jobs and specialisation. So it was extremely hard for such a “full-service” agencies be equally competent in all disciplines (advertising, direct marketing, sales promotions and public relations) and to successfully compete with specialised boutiques or niche companies.

“A simple rule of thumb of remembering no one agency is best at everything, and nothing in life is free (like when media agencies offer ‘free’ PR or social media support,) will help clients reach the right decision”, as an agency executive is quoted to say by Mortimer and Laurie (2017). Indeed, many agencies compete for IMC budgets and put themselves forward for as much of the campaign as possible, i.e., following their own self-interest, even if that area is not necessarily where their strengths lie. This approach is understandable from a financial perspective in the short term but is annoying for both clients and specialised agencies, and is causing issues in terms of trust and collaboration.

### ***Multiple agency integration***

Many clients doubted that one agency could be equally good in all the services, and perhaps “coordinated cherry-picking” — selecting the best practitioners in each field is perhaps a better, although more time-consuming alternative (Penn, 1995). Clients apparently believed that the client must drive the integration process (Schultz & Kitchen, 1997). This created major issues for the agency which sees IMC as a way to argue for budget consolidation.

Of course the idea of one-stop shopping had the alternative — agency grouping and coordination with the clients’ interests in mind. As Mortimer and Laurie (2017) found while interviewing an advertising executive was that agencies “who try and do it all and manage to do it well are few and far between”. Indeed, a multi-agency team would be a more reliable solution, as long as the ways of working were instigated to support it.

There were two major approaches to support the multi-agency solution: clients could do this by either using the All Agency model (organise collaboration of agencies themselves) or the Lead Agency model (one agency takes responsibility for integration across all the agencies). The latter would theoretically give the “lead agency” almost the same financial benefits as the “full-service approach”, but market forces and competition tend to work against both kinds of integration.

The old competition and rivalry between PR and advertising functions for budget and control, which illustrated the old antagonism between the two, played some role in it as well, preventing agencies from organising themselves in integrated manner (Brown, 1997). As Gray quoted, “normally both PR agencies and ad agencies feel they should be the strategic guardian; so by definition, they tend to be anti what the other wants in order to gain the Strategic ascendancy” (Gray, 1994, p. 33). In fact, Ewing et al. (2000) found that clients considered agency politics as being one of the main barriers to IMC implementation, as agencies of different disciplines, e.g. advertising, public relations, may not always operate in the best interests of their clients.

Another reason why PR, direct marketing and advertising did not mix that well was mainly because of rather serious differences in culture. “Culture is deeply embedded and, as in any established industry, there are power structures which are resistant to change (Mitchell, 1993, pp. 26-27). The traditional dominance of advertising, which had the biggest share of the communication budget to spend, was also the guardian of the brand identity and communication strategy. Below the line agencies and PR agencies were focusing on more transactional relationships. There were very few people on both the clients’ and the agencies’ sides equally competent in all the disciplines, those who were truly informed and had the in-depth knowledge of all the communication disciplines to use them all successfully (Cook, 1994, pp. 23-24; Marshall, 1994, pp. 32-33). Consequently, within the IMC paradigm public relations was reduced to the activities of product publicity and sponsorship, ignoring its wider scope in communicating to employees, investors, communities, the media and government.

Finally, the charging methods were to blame too for slowing the implementation of IMC. From the early days the commission system encouraged agencies to direct their clients to an advertising-based, rather than integrated solutions (Schultz, 1993).

Either way, Child (2012) found that clients often felt let down due to lack of cooperation and collaboration across different agencies. This argument was rebutted, in the same study, by agencies, who stated that clients wanted competitive pitches between agencies at the same time as requesting cooperation between them, making integration across agencies very difficult. Both sides agreed that more trust and respect was needed for this relationship to work. (Mortimer & Laurie, 2017).

### ***Shift of power from agency to client***

Trust was exactly what seems to be lacking in the client-agency relations to make IMC more widely used. A US survey by Forbes (Dan, 2014) confirmed that clientes are increasingly bringing strategic decisions in house and perceiving agencies less as partners and more as suppliers. In the same year, a report entitled ‘The Naked Truth’, also identified an increasing lack of trust in the industry and proposed that communication between the agency and client needed to be more transparent and direct (Leake, 2014). A UK industry report (Thomas, 2015) confirmed that agencies felt less valued and excluded from important strategic discussions and were being given short-term tactical work instead with tight deadlines.

The result was that integration moved predominantly in-house, with clients managing multiple vendors (All Agency approach) — in some major markets companies have an average of 24 agencies working for them, with a quarter of them having more than 50 agencies (Caplin, 2016).

Laurie and Mortimer (2017) note that “changes in the industry have resulted in shifts in power towards the clients and led to the client/agency relationship being pulled away from the business alliance model towards the traditional agency relationship – where agencies are instructed what to produce with fewer opportunities to build relationships and show initiative” .

This is leading to a fundamental change in how marketing communications is undertaken within the client organisation, with many departments sharing behavioural data and making decisions in-

house without agency input. This has resulted in the balance of power changing between the client and the agency, with the client now not only having the power to reward and to punish but also the expert power that had previously belonged to the agency. This shift of expert power from the agencies to the clients may be one of the main reasons why agencies are being forced to step back into a more traditional agency relationship where the client is in control and the agency is seen as a supplier rather than a partner (Wang et al. 2013)

Laurie and Mortimer (2017) conclude that “at the moment, clients seem to have all the power and are pulling the client/agency relationship into the direction of a traditional agency format, where more control and monitoring is necessary to keep all the agencies in line. Agencies are losing this fight because they are unsure what their role is and they are unable to build a business alliance with their client because of a lack of trust and commitment on both sides”.

With the integrating role performed by the client, agencies are left with the implementation role, and their strategic counsel with the accompanying benefits of full-service approach with greater creative consistency appeared to be of little demand from the client. In the end for the agencies it simply means that they do not get to benefit from centralised control over clients’ integrated budget, and thus there is little to no economic incentive for them to further support the concept of IMC.

As a result, advertising agencies that offered one-stop IMC approach lost their focus of business and turned into managing and consulting services, which started to compete with their own research centres. Stripped off of their implementation functions, they were left with only one major function — coordination. But then they needed to prove that they were better in coordinating than their clients’ in-house departments and brand-management centres. Given that the brand-management was done largely in-house, the only activity that the agencies were left with was overseeing the following of brand book requirements in coordinating various messages — something very well known from the 1960’s.

### **General scepticism towards IMC**

If agencies are no longer the major force behind the IMC development, then it is the client who should support further adoption of the integrated approach. However, the clients today are not only sceptical of the agencies’ ability to provide one-stop IMC services or even “Lead Agency” services; clients are generally suspicious about the benefits of IMC approach in general.

IMC has often been criticised for the lack of measurement to the effectiveness of programs and proven financial benefits of utilising this approach. While urging that more attention should be paid on measuring “outcomes” rather than “outputs” of marketing communication activities, Schultz and Kitchen (2000) raised concerns that many marketing activities cannot be measured, and the value of communication effects and impacts are even more tenuous. Proving that IMC approach produces time and cost efficiencies was viewed as uncertain (Kitchen & Schultz 1997). In 2002 Semenik acknowledged that “measuring the complex interaction of all the promotional mix elements is very, very complicated and may be beyond the methodological tools available at this time”. (p. 545)

This scepticism is not new for both academia and industry. Scholars and practitioners have not been impervious to the limitations of integrated communications (Miller and Rose, 1994). This critical perspective of IMC is based on the view that considers IMC a management fashion, with weak theoretical foundation, not more than a collection of specific concepts traditional marketing, presented in a new form (Cornelissen, 2001; Gould, 2004).

### *The point of synergy*

When scholars of integrated communications acknowledged the difficulties of managing receiver perceptions of corporate messages, they still seemed to assume that this is essentially an issue of planning and control (Schultz, 1996; Schultz et al., 1994). The assumption is that under proper planning and efficient control integration will inevitably provide the benefits of synergy. However, one of the major questions is where the integration and the intended synergy actually happens.

From the direct marketing perspective it happens in the minds of consumers (“outside-in approach”), driven by the buyers or potential buyers of goods and services. From the perspective of PR — integration and synergy happen in the minds of brand managers, who plan communication campaigns with the idea of integration in mind (“inside-out approach”). This latter approach theoretically could be managed internally with the focus on the bundling together promotional mix elements so they in essence “speak with one voice.”

Direct marketing “outside-in” approach with its drive towards measurability is more logically consistent in insisting on the wider use of advertising for stimulating direct response and further database based relationship development. According to this view, by creating and nourishing stakeholder relationships, new customers are attracted and then interacted with to find ways to satisfy their needs and wants (Kitchen et al. 2004).

However, proponents of this approach mistakenly believed that it could be used for promoting any goods, including FMCG’s. Contrary to this belief, the whole idea of taking the consumers with personalised messages through all the stages of the decision making process was somewhat questionable. IMC advocates insisted that consumers go through a number of steps before making a purchase: 1) Problem/Need recognition, 2) Information search, 3) Evaluation of alternatives, 4) Purchase decision and 5) Post-purchase behavior. But in reality this model describes the behavior of an extremely loyal consumer - loyal to the point of the obsessional neurosis condition - these patterns are only observed in 3-5% of leading brands in capital goods product categories, and less than in 1% of FMCG’s brands (Dymshitz, 2002).

The PR idea of integrating messages from the brand-management positions seems even less logical. In the beginning, when the major focus of PR was on corporate communications, PR managers almost ignored end consumers, or at least they were not expected to significantly contribute to the products’ promotion. However, after the 1980’s success of the marketing PR concept and investor relations, there was a widely spread belief that consumers can be persuaded to buy goods just because these goods had been manufactured by a particular company. Unfortunately, using public relations techniques for marketing purposes did not prove to be a cost-effective tool for generating awareness and brand favourability. Companies quickly found out that this approach had its limitations. Techniques that worked on the stock market to convince people

to buy shares of a particular company did not work quite that well on consumer market (Dymshitz, 2002).

In reality the whole integration process happens neither in the minds of consumers nor in the minds of brand managers, but in the process of integrated marketing communication itself. For corporate managers it would mean that the concept of IMC boils down to coordinating all promotion messages and rigorously following brand-book standards in all promotion materials.

### ***Overall challenges of control***

A more recent revelation in integrated marketing communication is the change in the role of the customer within the business world. As we have mentioned previously, the main promise of IMC is greater control over different instruments of communication. But the irony of contemporary reality is that companies have less and less control over communication. It is no longer about whether it is the company or the agency who should endure consistency across all communications. Due to the fast-paced growth of technology, customers are rapidly gaining more power through online media and word of mouth; now enhanced with capabilities of reaching a much wider audience through the use of social media. The whole notion of centralised approach to communication coordination seems to be less and less appropriate.

Contemporary consumers frequently interpret and use corporate products and messages differently from their original purpose, reshape, and adapt them to personal use, and modify and sometimes pervert their meanings in ways not imagined by their creators (Cova, 1996). This can be observed in consumer networks and online “brand communities” (McAlexander et al., 2002; Muniz and O’Guinn, 2001). These consumer collectives link through activities they share temporally or through the use of communications technologies, for example, resources on the internet such as chat rooms and blogs. In these contexts, they play with, extend, replicate, and often redefine and re-signify corporate symbols and thus take an active part in the determination of brand images and identities (Elliott & Wattanasuwan, 1998; Kates, 2000). Sociologists, such as Maffesoli (1996) and Giddens (1991), use the term (neo)tribes to identify these networking consumers. Despite efforts to infiltrate them by planting some members, organizations are unlikely to be able to control the dynamic of communications among members of such consumer collectives or brand communities. This gives way to a wider trend of power shift towards consumer and growing influence on uncontrolled messages in brand communication.

Another trend is the rise of key opinion leaders and online influencers in marketing communications. Organizations try to form alliances with celebrities, and through their influence (primarily online) try to affect the way their products are perceived and talked about. But influencers often have a lot of freedom in the ways they use or converse about these products, and the conversations are further interpreted and played with by their fans and followers.

Consequently, there is more “play” between marketing messages and consumers, where each construes and “re-writes” the other’s intentions and meanings (Muggleton, 2000; Muniz & O’Guinn, 2001; Prahalad, 2004). This does not necessarily mean that marketing communications are less persuasive, just that the process of persuasion takes place at a more sophisticated level than assumed by conventional writings on integrated communications. The consumer will have to

be provoked through communications to build own persuasions, rather than communications attempting to directly persuade the consumer (Ferguson, 1999; Sweet, 1999). Thus, integrated communications efforts toward congruity of all messages that emanate from the organization may create problems for the organization in a mature market. When its drive toward clarity of voice confronts the desire and ability of savvy consumers to create their own perceptions and stories (Kozinets, 2002), the organization may become perceived as overly one-dimensional and patronizing (Holt, 2002; Thompson, 2004).

Traditional approaches to integrated communications that see a necessity of high determination of meaning and control of communications toward a coherent message miss the possibility of effective interactions with mature markets. Therefore, as markets around the globe continue to mature, traditional approaches will hurt rather than help organizations' capability to connect with their markets (Christensen et al., 2005).

Today consumers are seeking not providers but partners (Firat et al., 1995), leading to concerns such as mass-customisation (Pine, 1992), rather than mass-production. In this respect, integrated communications is analogous to mass-production; contemporary communications need a mass-customisation appeal (Peppers & Rogers, 1993). In such an environment, efforts to control and "integrate" the content and forms of communications will likely fail and be counter-productive.

Instead, communications are likely to be more successful if they seek to contribute to a culture of partnership in designing and articulating both the needs and the images and products that (re)present them. Thus, while "integration" is a noble and still more tempting ideal of communication, it is not a process that can be planned, executed and controlled by the sender. Attempts to do so anyway in the complex world of today may produce what Leitch (1999, p. 7) calls "a resource-hungry monster" unable to adapt to new situations. Accordingly, models and frameworks of integrated communications will have to account for flexibilities required in responding to or conversing with a multiplicity of players in and outside of the imagined boundaries of the organization, taking into consideration their tendencies not only at the time of an (assumed) original point in the conversation, but also as the conversation progresses over time. (Christensen et. al 2005, Cornelissen 2009)

For this reason, contemporary communication cannot adhere tightly to principles of IMC. Instead, openness towards fluidity and a certain degree of indeterminacy must be nurtured if organizations wish to cope with the postmodern world. Along with tolerance toward variety within the organization, organizations need to develop a tolerance for meanings negotiated together with consumer communities, such as brand communities, in the market. That is, consumers must not be perceived simply as targets, but as collaborators or partners in generation of meanings for the organization's offerings (Christensen et. al, 2005). This requires not so much processes of integration and control, as in IMC, as it does processes of playful engagement, networking, and negotiation.

## CONCLUSION

The above listed reasons created a situation for the next disruption in the industry - when agencies realised that IMC failed to become a competitive advantage for consolidating the budgets. Since

then the allure of the paradigm was steadily declining, and by early 2010's the term largely went out of fashion. A search at the website of the top-20 world's communication agencies revealed that only one of them (MullenLowe Group) uses the term IMC to describe their approach. Other agencies in the list may mention "integrated campaigns" as one of their services, or include them in the list of case studies, but do not emphasise it. This observation points to the fact the term IMC is not widely used by communication agencies any more as a competitive advantage or an innovative approach.

The focus has shifted to new paradigms, which include a focus on technologically determined disruptions, such as social media and Big Data. The technological and social environment in which organisations operate has changed considerably over the past two decades since the 1990's, and the demands of different stakeholders such as customers, investors, employees and NGO and activist groups have forced organisations to put considerable effort into integrating all the communication efforts.

This integration is also important when one considers the multiple stakeholder roles that any one individual may have, and the potential pitfalls that may occur when conflicting messages are sent out. Individuals may be employees of an organisation, but also at the same time its customers or members of the local community in which the organisation resides. As a result, internal communication to employees cannot be divorced from external communication, and vice versa.

New technologies and social media have also erased the dividing line between internal and external communication. Organisations are also facing increased demands for transparency about their operations. In their efforts to respond to these social expectations and to present themselves as coherent, reliable and trustworthy institutions with nothing to hide, organisations across industries and sectors still embrace measures of coordinated approach.

Therefore the value of using coordinated approach to managing organisational communication has not disappeared neither from the academic research nor from practice, and the validity of the integration remains universally recognised. The examples would be the new IMC focus on the content and content marketing, as well as relatively recent attempts to bring the concept of IMC into the era of new media (Bruhn & Schnebelen, 2017) or linking IMC to the communication-in-use concept (Finne & Grönroos, 2017).

We can conclude that contemporary approach to managing business communications still inserts the various communication disciplines into a holistic perspective, drawing from the concepts, methodologies, crafts, experiences, and artistry of all of them. This is still true for both B2B and B2C companies, but the processes of specialisation led to the situation where fewer agencies claim that they are able to provide full-service IMC approach.

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## **TRUMPS SOCIAL MEDIA – THE FIRST 100 DAYS OF HIS PRESIDENCY: A CONTENT ANALYSIS**

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### **ABSTRACT**

More than any time in history technology allows politicians to directly reach large audiences to increase interaction. Modern social media permits information to be more accessible, direct, and permanent. Politicians can address audiences more frequently and directly through mobile devices - a tactic which creates a perception of immediacy unseen in past political climates. Specifically, Twitter grants unfiltered communication with users, while bypassing established mainstream media. The use of Twitter politically was first revolutionized by Barak Obama. Donald Trump's use of Twitter has elevated this social media platform to an unheard-of level. A content analysis was conducted on President Donald Trump's Tweets from his first 100 days in office. The results indicate that the majority of these Tweets can be separated into the Burkeian categories of Identity and Division. A discussion of the substance of these Tweets, the political use of social media, and specifically President Trump's embracing of Twitter ensues.

*Keywords:* Trump, Twitter, Social Media, Content Analysis, Political, Burk

### **INTRODUCTION**

Social media was developed by American democracy in the 1700s, though not in the technological sense that we see today. This early use of social media had to be truly personal. It operated in a physical social circle employing the machinery of the time period - printing presses. Since printing presses were scarce, the physical distribution was low. For the most part social media and mass media in general relied on word of mouth.

Ben Franklin, as an established leader and politician, utilized the tech of the time in the mid-18<sup>th</sup> century. In 1754, amid the French and Indian War, he designed and published America's first political cartoon; a distinguished snake-shaped illustration as a means of creating unity among the colonies. It depicted a snake in thirteen separate pieces – each section as a representation of an individual colony – with the words “JOIN, or DIE” (Herskovits, 2013). The message was clear to the colonies, just like a snake cannot function when divided neither can the colonies. They must stand united or accept assured failure. It was a simple yet tacit image that was amply distributed and forecasted the potential influence of this medium.

By the 1920s and 30s, radio became the most powerful form of political communication. It paved the way for audiences to be influenced by the speaker's voice, inflection and delivery creating a

highly personal susceptibility to persuasion. President Franklin Roosevelt appreciated and took advantage of its influence. Rather than allowing an interviewer to pose intentionally difficult and probing questions, Roosevelt spoke directly to the American people. He gained popularity with fireside chats – an intimate series of radio broadcasts in the 1930s that addressed current issues. These chats allowed the audience to feel like conversations were specifically molded for them and elevated their sense of importance. Roosevelt was described as a speaker with a great mellifluous voice who spoke with a conversational tone and invoked warmth to the more than ninety percent of Americans who owned a radio (Roosevelt, 2009).

The evolution from radio to television as the medium of choice began in 1950's. The addition of visuals added another element to the politician's arsenal of tools. Communication had changed to include image, voice, and tone as prominent elements in people's perception. Through television, wider audiences would be able to view as well as hear politicians' speeches and judge both components at once. One of the first to demonstrate the strategic power of a television broadcast was Republican candidate for Vice President Richard Nixon in September 1952 (Soniak, 2008). He took an unprecedented step flying to Los Angeles to broadcast the infamous Checkers speech. This speech was designed to combat criticism over financial improprieties concerning campaign expenditures. Nixon dispelled allegations in a well-crafted and enticing thirty-minute address to the nation while avoiding rebuttal. Nixon established himself as a family man and connected with 60 million people to gain momentum and simultaneously eliminate criticism toward his party. As a testament that Nixon understood the power of mass communication, he and Eisenhower won 55% of the popular vote in 1952 (Hammond, Roberts & Sulfaro, 2016).

In 1959, John F. Kennedy also recognized the power of television when he wrote an article for T.V. Guide - "A Force that has Changed the Political Scene." In that article, Kennedy penned that television's "revolutionary impact" would have far-reaching and lasting consequences for politics. By the 1960s, the telegenic qualities of candidates began to matter. The political machine turned its attention to polishing candidates for television in order to showcase their personal traits.

Even with the rise of television, at this point the radio medium still had a lot of influence. In 1960 the Nixon vs. Kennedy presidential debate was broadcast both over the radio and television airwaves. The winner of this debate was determined by which media the audience consumed. Television viewers say it was a win for Kennedy, but for radio audiences Nixon took the triumph. Television viewers saw a very polished, tan and handsome John F. Kennedy stacked up next to Richard Nixon who did not have that same telegenic presence. Sporting a 5 o'clock shadow and a gray suit, Nixon did not contrast as well as Kennedy on the visual medium. Many speculated that Nixon had lost the debate because audiences perceived his perspiration as nerves – the truth was that it was a warm debate hall and he refused make-up. From this time forward television became the politician's medium of choice. The craft of setting up shots and the architecture of a politician's image for maximum effect was born (Hammond, Roberts & Sulfaro, 2016).

In the late 60s, former actor Ronald Reagan introduced the rise of celebrity personalities in politics. Essentially, Ronald Reagan was someone who traded in a very successful career selling out box offices for a presidency that was selling an idea and a point of view (Hammond, Roberts & Sulfaro, 2016). The cynicism which was suggested in Kennedy's 1959 TV Guide article (para 5) "It is in your power to perceive deception, to shut off gimmickry ...", began to infiltrate into political

productions. Campaigns now had the tactics in place to use candidates as persuasive vehicles for the political gain of their party. Thus, reducing the role of the presidency to that of a spokesperson in the digital age (Hammond, Roberts & Sulfaro, 2016)

With the rise of 24/7-cable news came a wider availability of channels. These additional channels gave the audience the opportunity to seek more diverse viewpoints. From a network perspective, the increased number of channels created more competition leading to audience fragmentation. This competitive environment seems to have exasperate the perception of bias in the media, as more and more organizations created niche programming to reach specific audiences. As audiences gravitate toward programming that matches up with their belief systems the political landscape becomes more disjointed (Mankiw, 2014). Political strategies that bring these distinct groups together are harder to enact.

The change in political strategies can be attributed to the technological shifting aspects of communication, and its never-ending endeavor to appeal to voters and gain support. Towner & Dulio, write:

One can look to the great technological innovations during the mid-1900s as a precursor to the changes that are taking place with the Internet today. When campaigns found that they could use the airwaves to spread campaign messages, the electoral landscape was changed forever. First with the radio and then television, all of a sudden, a candidate could talk to nearly all of the voters in his or her district in 30 or 60 seconds rather than having to spend all day traveling around town. (2012, p. 96)

It is important to note that these strategies did not create new goals for campaigns, but simply created a more efficient way to accomplish candidates' campaigning goals (Towner & Dulio, 2012). Campaigning became more alluring, time saving and cost effective.

## **The Rise Social Media**

Political communication continues to evolve with each election. The goal to reach the public and influence them has never been closer. With the general acceptance of social media an additional communication avenue has become available. Social media lends itself toward mobile technology allowing messages to be transmitted and received from just about every location during all hours, removing almost all pervious barriers to communication. Mobile phones with their built-in portability has become the popular conduit for the convergence of this technology. Using this delivery system, the politicians now have direct access to whole audiences that were unavailable in the past. The reach is not only much wider than it has been through traditional communication methods, but it enables campaign messages to be more personalized and targeted toward specific audiences. Giving importance to issues without seeming invasive.

## **Twitter**

Campaigns accomplish this by using highly specific advertisements on Facebook, Twitter and other social media sites. Twitter (revolutionized by Barack Obama) in particular rose to be an invaluable platform for political content since news outlets, authors, businesses, politicians and the

general public use it to share links, data and opinions (Johnson, 2012). Trump expanded on Twitter's usability by employing it as a real time message tester (Hess 2016). More than any other social media platform, Twitter enables conversations to transcend social and economic classes; suddenly anyone could be in contact with people such as celebrities and governors who were previously unreachable.

On Twitter friends, family, and coworkers communicate and stay connected through the exchange of quick, frequent messages. This unique Internet based communication channel enables users to conduct public conversations, known as 'tweets', using up to 140 characters per message (originally 140, now 280 characters). Because tweets are short and relatively easy to construct and send, this technology lends itself to near real-time response. The immediacy of tweets is particularly useful for current events where public opinion and reactions can be constantly updated (Wang et. al., 2012). Twitter provides this easily accessible mobile platform for online users not only to share information, but also to retrieve other people's opinions.

Politicians have recognized the potential of Twitter to help them become more accessible and responsive to their constituents. "Live Tweeting" has allowed conversations during large events, including debate nights and election days to occur. "People take to Twitter to debate along with the politicians. This accomplishes two things. First, it stimulates the conversation on certain issues, and second, it gives the politicians a better idea of where their followers stand. This helps them script their message" (Presidential Debates and Twitter: The New Normal, 2016).

## **REVIEW OF LITERATURE**

### **Rhetorical Analysis**

Aristotle was perhaps the world's first political scientist in the world's first democracy. His work was born from an interest in oratory, as it was the primary political medium of his day. At the core of Aristotle's rhetoric are what he called modes of proof; ethos, pathos and logos. Ethos is establishing credibility, pathos is emotional proof, and logos is logical proof. There are two divisions for each of the forms of proof: artistic and inartistic proof. Artistic proof are arguments that may be discovered through rhetorical invention such as comparisons, relationships, circumstances, and testimonies. While, inartistic proof is that which is factual and is not supplied by the writer's efforts, but existed beforehand such as witnesses, admissions, or written contracts. (Poulakos & Poulakos, 1999).

### **Burke – Identification and Division**

Where Aristotle believed that logic was at the core of persuasion, American theorist and philosopher Kenneth Burke believed that it was identification that was most significant. Asserting that the purpose of identification is persuasion, as a form of rhetoric. Burkean rhetoric says, "you persuade a man only insofar as you can talk his language by speech, gesture, tonality, order, image, attitude, idea, identifying your ways with his" (Burke, p. 55, 1950). Burke's rhetoric encompasses both traditional and nontraditional forms of discourse. He suggests that rhetoric includes three basic functions: contributes to the formation of attitudes, encourages the justification of action and it gives commands of some kind to determine actions to be taken (Burke, 1969).

Burke coined and defined identification as the quality of sharing attributes and as the key to persuasion. For Burke, identification has several functions, occurs through common goals and transpires through unconscious association. Burke used identification synonymously with consubstantiality. As we share ideas and attitudes we come to identify with others, and as we speak each other's language, we become consubstantial. The antithesis of identification is division, also called "alienation" or "dissociation". Division, or lack of identification is the natural state of separate human beings; the human experience is inherently individual, and thus divisive (Burke, 1969).

Branching from this, Burke stated that identification in rhetoric is crucial to persuasion and leads to cooperation, consensus, compromise, and action. Burke believed that the most serious human problem was to be alienated or separated, and rhetoric was to be that problem's only solution. Much of his work was based on bringing people together. "Identification is affirmed with earnestness precisely because there is division. Identification is compensatory to division" (Burke, p. 22, 1950). Rhetoric's goal, regarding identification, is to bring people together who have been separated by estrangement or opposition (Burke, 1950).

Burke maintained that each one of us has an essence that separates us from other people and that in one sense we are all the same, however this leads to a contradiction or tension that on one hand we are all the same but there are things about each one of us that can separate us. Consubstantiality then is the attempt to have us identify with one another, it is the attempt by a communicator to get their audience to see how similar we are knowing full well that we are each incredibly different from each other. Burke argued that when a speaker addressed their audience, they can either decide to demonstrate how we are unified or how we are divided (Burke, 1968).

### **Persuasive Resources - Social Media**

Throughout history, the term rhetoric has been used to name either the use of persuasive resources or the study of the use of persuasive resources. Ancient or classical rhetoric focused on rhetoric as the performance itself, the use of language to persuade others to act or change their minds about something. But rhetoric also refers to the philosophy that study's how and why people use persuasion in the first place. Burke's theory of identification and division combines an interest in the strategic use of words to perform an induction of action through the alignment or division of interests or motives (Burke, 1973).

Acquiring the skill of adaptability proves necessary in a time of disruption within a nation and in a society where change is constant. It is particularly important in an electoral climate where politicians are vying for votes and relevance. Politicians strive for self-promotion, voter interaction and mobilization through Twitter and other social media, "key battlegrounds" as termed by McCabe (2015). Compared to other social media sites, Twitter is useful for politicians showing real-time reactions or having intimate conversations with individual users. On Twitter, politicians are able to distribute their original messages and retweet others' content. Politicians can also share supporters' tweets by displaying their replies publicly using the mention aspect of Twitter. Because Twitter is a relatively new tool, there are few established norms concerning the utilization of features such as retweets and mentions. Analyzing tweets can reveal different aspects about a politician's communication style and character that are not evident on other social media platforms (Lee, E. J. & Jang, Y. (2010).

For nearly a decade, political leaders have relied on social media to mobilize support through electronic networking in an effort to win an election. Although Twitter is a relatively new method of communication in the political sphere, it is widely used today by politicians. Former U.S. President Barack Obama's 2008 presidential campaign legitimized Twitter in the political arena by showing how it could be used to generate enthusiasm (Tumasjan, Sprenger, Sandner & Welpe, 2010). By the 2016 Presidential election Donald Trump starting using Aristotle's modes of persuasion: *logos* (the appeal to logic), *ethos* (the appeal to credibility), and *pathos* (the appeal to emotion) in his tweets - to encourage enthusiasm, by the attacking and dividing his opponents (Hess 2016).

Skoler (2009) noted that today's culture emphasizes connections and relationships, which fuels social networking sites and promotes information sharing, new experiences, new knowledge and new friendships. Through this, Twitter creates an exchange of self-generated content while discovering information sources that best fit their interests (Kaplan and Haenlein, 2009). Twitter also gives a politician more control, mainly because words can be carefully crafted to promote a politician while news and information through mainstream media are more open to interpretation. Twitter can be used as a forum for entertaining political discourse, debate and offers politicians and constituents an opportunity to address a wide range of topics. Furthermore, Twitter allows politicians to bypass the press to speak directly with the public (Kalsness, 2016).

## RESEARCH GOAL

The previous literature review notes that language historically has been categorized by rhetoricians. In addition, the review also points to the rise of social media and how Twitter has become an effective tool for rhetoric. Twitter has given politicians the opportunity to bypass traditional media and control more of their campaign, as well as public image. The use of Twitter by Donald Trump in the 2016 U.S. Presidential election to disseminate information was unprecedented.

This paper focuses on one politician, Donald Trump, who engages his audience through Twitter. Trump's use of Twitter creates an opportunity to explore rhetoric on a digital platform. The communication style used by Trump is particularly suited for Twitter, as it is for the most part an unregulated platform. Keeping the previous in mind, the goal of this study is to analyze Donald Trump's Tweets for the first 100 hundred days of his presidency and to place these Tweets into an interpretive context.

## METHODOLOGY

Content analysis was utilized to study data collected from Twitter over the first one hundred days of Donald Trump's Presidency. As a method, content analysis was initially used for examining newspapers, or other written documents, in order to understand their content and to make inferences from the data about the context (Krippendorff, 1980).

Categories were built from the data extracted using identification and division to illustrate how these techniques permeated the president's tweets from January 20, 2017 through April 29<sup>th</sup>, 2017.

*Identification*: The process of linking oneself with others, (e.g., us, we, our). *Division*: The emphasis on differences between people, (e.g., they, them).

The unit analysis was a single tweet. Tweets may fall under multiple categories. Overall, 503 tweets were coded and analyzed. The platform *Twitonomy* that provides analytics and insights into tweets to capture the data was used in this study. The original data set downloaded contained nine identifying variables that included the date of the tweet, the twitter handle of the tweeter, the name of the tweeter, the body of the tweet, the URL, the platform (e.g. Twitter for iPhone), the type of tweet (e.g. new, reply, retweet), the retweet count and the favorite count. The data was cleaned leaving two of the nine identifying variables, the date of the tweet and the body of the tweet for analysis. The Twitter data was imported into NVivo and coding using a schema encompassing the two characterized elements: identification and division. NVivo enables the user to “import and code textual data, edit the text; retrieve, review and recode coded data; search for combinations of words in the text or patterns in the coding; and import from or export data to other quantitative analysis software” (Bandera, 2006). To ensure reliability the 503 tweets were coded independently, and each Tweet was analyzed in isolation from previous Tweets. One method to test reliability is internal consistency which can be achieved by applying *identification* as the presence and frequency of first-person pronouns such as “we” and “us” along with possessive pronouns such as “our” and *division* as the presence and frequency of third person pronouns such as “they” and “them” within a single tweet.

## RESULTS

503 Tweets were sent by the President Donald Trump in his first 100 days of office. These Tweets were coded and analyzed using the above described method. Of these 503 Tweets, 312 Tweets fell into the category of Identification and 262 Tweets fell into the Category of Division.

Many of Trump’s messages in the identification category are about things the public already had views on, such as fair trade and immigration. Several Tweets that fell into the category of division were framed about a rigged system that is held in place by a corrupt institution. This repetition of messages in both categories is well suited for Twitter because it allows for a message to be retransmitted over and over through retweets.

In addition, beside the standard use of pronouns – us, we, our, them, they, the analysis of these tweets reveals certain terms that in general signify one of the two categories. The term “Democrat” in the context of these Tweets usually indicates division, while the term “American” suggests identification. Following is a sample of Tweets from the data set coded in this study.

Figure 1. Sample Tweets

Identification	Division
Thank you for joining us at the Lincoln Memorial tonight-a very special evening! Together, we are going to MAKE AMERICA GREAT AGAIN!	Congratulations to @FoxNews for being number one in inauguration ratings. They were many times higher than FAKE NEWS @CNN - public is smart!
We will bring back our jobs. We will bring back our borders. We will bring back our wealth-and we will bring back our dreams!	Where was all the outrage from Democrats and the opposition party (the media) when our jobs were fleeing our country?
I promise that our administration will ALWAYS have your back. We will ALWAYS be with you!	The fake news media is going crazy with their conspiracy theories and blind hatred. @MSNBC & @CNN are unwatchable.
The American dream is back. We're going to create an environment for small business like we haven't had in many, many decades!	The spotlight has finally been put on the low-life leakers! They will be caught!
We are making tremendous progress with the V.A. There has never been so much done so quickly, and we have just started. We love our VETS!	The Democrats had to come up with a story as to why they lost the election, and so badly, so they made up a story-RUSSIA. Fake News!

## DISCUSSION

The first one hundred days of Donald Trump's Presidency provided an opportunity to observe the Twitter phenomenon in action and isolate it for further analysis. Upon examination of Twitter rhetoric, a greater understanding emerged of how the social media platform may help or hinder in understanding presidential positions and individual beliefs. Audiences can easily drown in this flood of rhetoric. Often, the message we receive is an interpretation of events. As a platform rising in prominence and influence, this will most likely not be the last time a high-profile political candidate uses this social medium to try and persuade constituents.

According to Kreiss and McGregor (2017), digital media, data and analytics are at the forefront of contemporary electoral dynamics. They argue that the last twenty years have seen a shift towards technology intensive campaigning, one where campaigns are premised on large troves of data bases, made accessible through vast technological infrastructures. Campaigns begin by using the voter data and analytics to define targets in terms of who campaigns want to reach and what they want to say. The scores of people they want to reach are then targeted with persuasive messages.

Kreiss and McGregor go on to write - people who come from outside the political demagogues can subvert that process and make direct appeals to the voters, giving rise to populism. Populism is taking place outside of standard party structures and enables candidates to work completely separate from the traditional political parties, in effect undermining them.

One of the reasons for Donald Trump's success is through his command of mass media and his ability to use Twitter without piecing together a conventional campaign organization. The question going forward - is Donald Trump an outlier or does he represent something new in terms of a blend of celebrity and populist politics, that empowers people to go entirely outside of regular institutional party structures.

Twitter in Donald Trump's campaign was not only used for targeting communication but also designed rhetorically to use broad communication to trigger action across the various audiences. Trump's communication has been described as simple and straightforward (Stewart, 2016); however, there are dimensions of complexity in this description. For example, Donald Trump's campaign enlisted the services of an analytics company (Cambridge Analytica). These types of companies use data and psychographic techniques. The result of incorporating this type of information into social media messages indicates that these Tweets are actually data driven and not as simple as originally classified.

Trump has been criticized for sowing discord in our country, when in reality, Trump's Tweets merely echo what many Americans already believe (Lurie, 2018), which is that the system is rigged against them. In the first 100 days of his presidency Trump spoke to this segment of the American public feeding an issue that has been simmering for decades.

Interpreting this movement meant taking a deep dive into the fields of political communication, campaigning, journalism and electoral research. Insights gained from this research are 1) traditional political and media institutions can be circumvented successfully; 2) a populist candidate from outside the traditional establishment can become a powerful political force; 3) politics based on hot button issues are difficult to gauge, and 4) the ability to sell something the American people seem to think they want, cannot be understated.

This study was originally conceived to interpret Donald Trump's Tweets for his first 100 hundred days in office. This could not be done in a vacuum without considering the platform of social media and by extension Twitter as a political communication tool. While earlier forms of media have not disappeared, the expansion of technology has currently made social media the most modern and interactive form of political communication. What appears to be occurring is an enormous fragmentation of how people get their news. Presidential candidates continue to advertise on television but social media platforms such as Twitter engage the population on a much higher level. Additionally, social media users seem to actively boost political campaigns while simultaneously demanding accountability from their representatives. This is a big change from a population that only three decades ago received for the most part only an image of a political candidate. As citizens become more ideological about where they get and how they handle political information, politicians are more at risk of being put in a negative or constricting spotlight by constituents who can source their data from different informants.

Based on the rhetorical tenets outlined by Burke, the use of Twitter in combination with the broadening ideological divide allows for politicians to solidify their base by feeding them messages that aid their supporter's world view and strengthens their resolve. The sense of inclusion and feeling that they belong to the larger group can be leveraged to the advantage of the candidate, depending on the circumstance. It can be used as the motivation for change or why a situation must

be “fixed”. As demonstrated through the tweets of Donald Trump, he can simultaneously unite and divide through the manipulation of the concepts of identification and division, often times combining both concepts into his string of messages sent through the platform.

The alienation from political life that Donald Trump displays on Twitter speaks to his followers who have a past distrust for career politicians. They have learned to exude the behavior of the political establishment. Trump has managed to generate followers that for the most part only concentrate on the elevated interaction aspect, that Twitter affords. There may be only two categories of candidates for such voters – politicians and common people. Because many constituents have failed to see personal or direct changes to their situations (jobs, income, lifestyles) there might be a tendency to accept and believe in the idea that a non-traditional candidate with a different career background will bring about the transformation they want to see. This theme fits into another strategy that is prevalent within the analyzed Tweets – blame. In the case of these Tweets, blame is a way to focus upon the things that get in the way of obtaining the desired outcomes. Without these things / obstacles the ideal situation would occur. Thus, leading to a main nostalgic theme of the better days of the past.

Beyond his differing professional record, Donald Trump’s raw and unmannered approach to social media and politics makes him the epitome of an anti-establishment candidate. While others mock Trump’s incoherent grammar, his supporters see a “real” person who has not adopted the cadence and polish that comes from being a lifelong politician and embrace the humanizing quality of his errors (Graves, 2017).

Donald Trump made his supporters viable by representing them in areas where they felt they had been overlooked and supporting the idea that something was being taken away from them. Leading to the verbiage “Take the Country Back”. What was taken away can only be speculated as that and the “Make American Great Again” slogan have never been defined. This terminology has been used to create an invisible and shifting enemy by overgeneralizing problems so that more people could identify with the campaign. The vagueness of the message allows followers to believe that many support the same ideas and therefore gives the illusion of complete unity within a community of supporters – pointing back to the identification strategy.

Trump’s ability to convey authenticity, his willingness to be unconventional and his spontaneity are central to why he has resonated so strongly with significant portions of the American public. Pew Research found that 46% of people support him either because he is a political outsider or because he “tells it like it is” (Steger, 2017). Despite being a member of the elite, Trump has been positioning himself as part of the working class his whole career. His tweets show how he managed to appear integrated into the very class which makes up his followers.

Authenticity and the ability to simulate it has become an incredible asset in the social media age. Alienated American voters and the political class in the past have often been divided. Making career politicians seemly inaccessible to the rest of the population. Social media interaction between representatives and their constituents creates an illusion that helps overcome the rift by giving voters a sense that most politicians are real people with lives not so different from their own. To his supporters, Donald Trump displays a genuineness not seen in this political climate. However, his critics would assert that he lacks the discipline that should go with this realness.

## CONCLUSION

Reflections of Trump's first 100 days in the office of the President of the United States vary. Speculators from all walks of life - communication experts, to the dining room discussions across America, to the morning news show debates, all scrutinize his messages. There is, however, an important distinction to be made between conjecture and explanations. In particular, it is possible to explain the ultra-use of social media (Twitter) and understand it, even if we are unable to discern its real value.

This research project is a case study on the growing use of social media in political communication, specifically Donald Trump's utilization of Twitter. One of the themes that emerged from this study suggests that a candidate with an agenda that is fixated on the past draws a strong voter following. Trump's slogans about making America great again drives the point home. This strategy appears to mirror history as well as fiction.

That, ladies and gentlemen, is how you win elections. You gather a group of middle age, middle class, middle income voters who remember with longing an easier time, and you talk to them about family, and American values and character (The American President, 1995).

The term "again" seems to be used as a nostalgic trigger word. Trump's catchphrases "great again", "safe again" and "wealthy again" give rise to reminiscence among his supporters. It appears as if as if Trump's tweets are less about moving forward and more about recovering something lost. The success of Trump's campaign will most likely serve as a basis for a blue print to bypass traditional media channels, removing the check and balance function.

Donald Trump's presidency has taken a page from history and conducted a campaign that tends to focus on doom and despair (Johnson, 2016). Politicians of all stripes have long invoked what they see as the glorious aspects of their countries' histories to bolster visions of the future. The difference is that most previous politicians typically use the past as inspiration- not prescription. What is clear from this presidency is a profound shift in the political landscape, a transformation of electorates losing faith in the idea of the future as we know it. This is something that for the U.S. is distinct from the past and the present alike. Traditional establishment politicians have been all but paralyzed by this development, while insurgent populists are eagerly fueling it.

The use of Twitter in this case also allows for the user to define the context for themselves. By providing messages that are vague, it lets the individual "fill in the blanks" providing self-defined context and meaning into the slogans and musings. Context may also form through the perceived affiliation developed by those who respond to the messages, hardening points of view through confirmation bias. The concepts employed through social media essentially remain unchanged since the early 1700's: news is defined by one's social circle. The advantage of social media is that it can create the illusion of the physical social circle without requiring the restrictions of physical proximity. It provides reinforcement of concepts and ideas, validates concerns, and motivates both for and against ideas. This by extension supports the candidates position of "with us or against us". This context is something that can only be derived through print media (of which social media is part of). While the use of television and radio easily convey context to the receiver, the use of

social media demands that individuals gain context elsewhere, in this case from multiple sources that generally are supportive of the viewpoint of the individual. It is only after the context has been defined through the medium that the messaging is carried out in the public forum.

Trump's Twitter pulpit includes insults of political rivals, competitors, private citizens, the intelligence community, the media and a rigged electoral system, all within the divisive category. His rhetoric also includes messages of unity, the forgotten, and support – bolstering the identity grouping. Trump's mastery of the Twitter platform and its 140-character limit has allowed sensationalized messages with little substance to divert the attention of both supporters and non-supporters. It also allows the self-defined context to solidify and manifest itself as truth. In modern political times this use of rhetoric combined with mobile technology is unprecedented. Thus, fortifying the power of social media and persuasion in this relatively new non-traditional communication tool.

### **LIMITATIONS**

No matter what we do when it comes to social media (or any media), how the electorate is analytically receptive to the information they receive is important in evaluating the impact of the message. Knowing how the constituency evaluate the biases of media sources is critical to understanding citizen empowerment and eliminating further alienation.

Great care must be taken to accurately interpret the tweets while eliminating bias. It can be easy to be drawn in and fall prey to the very division that is being created by the candidate. What is clear is that content analysis cannot be done in a vacuum, so steps must be taken to mitigate the bias to successfully reduce the opportunity for skewed analysis that may impact the overall integrity of a study.

When it comes to data collection from social media, it is difficult to distinguish between the trustworthy and the untrustworthy sources. Future research should focus on bots that generate automated messages. Bots are chunks of code that are written to automate the interaction between a user account and a human. The more human curation an automated account has, the tougher it is to distinguish from a human tweeting passionately about politics. Bot accounts tweet, interacts and generate followers and likes. What is unclear is how big of a role bots play as a political strategy and what specific groups are funding them. Do they have an impact on political discourse, do they generate support that a human account would not have and what impact do bots have on information distribution?

### **AVENUES FOR FUTURE RESEARCH**

An opportunity for future study would be to examine the tweets within a cultural context. It is easy to assume that the messages sent through social media are purposeful and motivated to suggest a change. To view the messages through a rhetorical lens in combination with cultural context would be valuable. As discussed, there is greater complexity to the messages other than examining simple content. The messages examined in the context of what is occurring may shed greater light on the intent or purpose of the writer.

It may also be valuable to examine a larger pool of Donald Trump's offerings in social media. Although the purpose of this paper was to examine the tweets of the first 100 days, the specific goals of the candidate could be seen as a furtherance of what he believed was successful in getting him elected. It would be interesting to see if tactics changed during the course of his presidency or if there was simply a continuation of the same.

Another useful approach may be to examine the messaging of this president in a historical context. Certainly, much could be said of the division of Jefferson and Adams, who often would use pseudonyms to further their political positions when writing editorials for newspapers and pamphlets while simultaneously eviscerating their opponents. There appears to be resemblance in the messaging, in creating distance through divisiveness. Eloquence aside, on the surface there are similarities in approach and purpose of the writing. There can be much to be gleaned by looking at the messaging in the context of history.

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## **CORPORATE GOVERNANCE, INCOME GROWTH, AND INCENTIVES TO REPORT IMPAIRMENT LOSS – CHINA PUBLICLY LISTED COMPANIES**

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### **ABSTRACT**

This study analyzes whether impairment recognition is associated with company's desire to manage earnings and to boost income growth in following years. Corporate governance, including ownership structure can also affect impairment recognition decision. We document the decision to recognize impairment loss is associated with earnings management behavior although the magnitude of it is not. Impairment recognition amount is in general higher with improved corporate governance. But institutional ownership, viewed by many studies as a corporate governance measure, reduces both impairment loss and impairment loss reversal amount.

*Keywords:* Impairment; Corporate governance; Earnings management.

### **INTRODUCTION**

The advent of SFAS 142 and IAS 36 regarding handling of asset impairment has spawned research into how these standards are being implemented. When a company records an impairment loss, the loss reduces net income on the financial statements, but the loss is not deductible for tax purposes. This creates a deferred tax asset. Our research has to do with how Chinese companies are handling the asset impairment standards. We start with a brief discussion of deferred tax items in China. Deferred tax items in China have three major components: tax and financial reporting of temporary differences in depreciation; impairment losses; and previous losses, which can be carried forward for five years. While the temporary differences in depreciation typically create deferred tax liabilities (DTLs) that defer taxes to a future period, impairment losses and previous losses create deferred tax assets (DTAs). A deferred tax asset is created when a firm has overpaid its taxes and is due some form of tax relief. DTAs are viewed as less desirable than DTLs since DTLs result in lower taxable income in the current period, while DTAs cause taxable income, and income tax actually paid, to be higher in the current period and lower in some future period. Of course, it is more desirable to delay paying taxes. In our previous research (Wang et al., 2016), we documented that the median GAAP effective income tax rate for publicly listed Chinese companies is 13%, while the median cash effective income tax rate is 26%. This is less than optimal from a cash flow management standpoint. Many factors contribute to this result. In this research, we investigate some of the incentives of companies reporting impairment losses and thus creating deferred tax assets, which lower accounting net income and do not necessarily lower the taxable income.

Specifically, we attempt to determine whether impairment loss recognition is motivated by earnings management, and/or big bath behavior, and/or is a reflection of improved corporate governance. Earnings management is generally understood to mean attempts by company insiders to protect their positions and benefits by manipulating the financial information provided to outsiders. The big bath refers to firms that take big losses in one period to avoid a steady stream of annual losses or decreased earnings. Our process includes examination of many variables that could impact impairment loss decisions, including firm size, asset mix, leverage, ownership percentages of top shareholders, Board of Director and Board of Supervisor size and composition, duality of CEO and BOD Chair, income growth, previous year loss, and industry. We include all companies listed on the Shenzhen and Shanghai stock exchanges for the period 2011-2016. Our study greatly expands current research on impairment, which typically has been limited to addressing only goodwill impairment. Our study analyzes impairment as a whole, instead of focusing only on goodwill impairment.

Chinese Accounting Standard No. 8 (CAS No. 8) prohibits the reversal of long-lived asset impairments to constrain managerial opportunism with respect to previously recognized impairment loss. CAS No. 8 forbids the reversal of long-lived asset impairment losses only, while allowing the reversal of short-term asset impairment losses. Our analysis shows the influence of this differential treatment on firm impairment loss taking behavior.

## LITERATURE REVIEW

Extensive research has been done regarding corporate governance and earnings management. Whether earnings management and/or goodwill impairment reflect big bath behavior forms another stream of study.

### **Corporate Governance and Earnings Management**

Large investors as a mechanism of corporate governance has been documented by many, while disproved by others. Gillan and Starks (2003) studied the role and impact of institutional investors on corporate governance. Institutional investors may influence management's activities directly through their ownership, and indirectly by trading their shares, and sometimes more significantly by acting as a group. The specific ownership structures and governance characteristics vary by market and country. Based on their research, Gillan and Starks (2003) believed that institutional investors tend to increase the liquidity, volatility, and price informativeness of the markets in which they invest. The increased information generated by institutional investors should result in better monitoring of corporations and in better corporate governance structures. Li (2010) concluded that the primary governance mechanism in China was the state and informal networks. Sueyoshi, Goto and Omi (2010) concluded that stable shareholding was an important aspect of traditional Japanese corporate governance, although stable shareholding enhanced operational performance only when the ratio of shares held by stable shareholders was more than 61.21%. Chung, Firth and Kim (2002) found that managers who had an incentive to increase or decrease reported profit used income-increasing or decreasing accruals. They also found that institutional investors with large shareholdings inhibited managers from using these discretionary accounting accruals opportunistically. However, Leuz, Nanda, and Wysocki (2003) found that earnings management appeared to be lower in economies with large stock markets, dispersed ownership,

strong investor rights, and strong legal enforcement. Schmid and Zimmermann (2008) found strong evidence supporting the hypothesis that corporate governance index was positively related to firm value and neither the presence of a controlling shareholder nor large outside block-holders had a significant valuation impact. Leuz et al. (2003) and Schmid and Zimmermann (2008) contradicted Gillan and Starks (2003), Li (2010), Sueyoshi et al. (2010), and Chung et al. (2002) finding that large/state shareholding was an important governance mechanism.

Shlifer and Vishny (1989) believed that there was ample evidence to support the notion that entrenched managers made specific investments to increase their value to shareholders, to reduce the probability of being replaced, to extract higher wages and larger perquisites from shareholders and to obtain greater latitude in determining corporate strategy.

Elyasiani and Zhang (2015) investigated the relationship between corporate liquidity [(- cash + LCs)/assets] (lines of credit LC) and CEO entrenchment and found that corporate liquidity, including lines of credit, was positively related to management entrenchment. They believed that CEOs preferred greater than necessary liquidity (which is costly to shareholders) because it made their jobs less stressful and they could lobby more effectively for luxury personal perks.

Davidson, Goodwin-Stewart, and Kent (2005) found a significant positive relationship between having a board of directors comprised of a majority of non-executive directors and minimizing the amount of earnings management. They defined a non-executive director as a director who was not employed in the company's business activities and whose role was to provide an outsider's contribution and oversight to the board of directors. Their findings also supported an association between an audit committee comprising a majority of non-executives and a reduction in earnings management.

Extensive research has been done on the impact of board size and outside directors. Beasley (1996) studied 150 firms, 75 with no instances of fraud and 75 with fraud. He found that no-fraud firms had significantly higher percentages of outside members on their boards. He also found that as outside director ownership interest in the firm and outside director tenure increased, the likelihood of financial statement fraud decreased. Xie, Davidson, and DaDalt (2003) studied 110 S & P 500 firms for years 1992, 1994 and 1996. They found that earnings management was less likely to occur or occurred less often in companies whose boards included both more independent outside directors and directors with corporate experience. They also found that the composition of the audit committee (and to a lesser extent the executive committee) was associated with the level of earnings management. Musteen, Datta, and Kemmerer (2010) found that firms with a greater proportion of outside directors and those with larger boards exhibited better reputations than those with smaller boards and a higher proportion of insiders using 2000 Fortune List of America's Most Admired Corporations. Alves (2013) also found less earnings management when board size was large. Duchin, Matsusaka, and Ozbas (2010) concluded that the effectiveness of outside directors depends on the cost of acquiring information about the firm. When the cost of information acquisition was low, performance increased when outsiders were added to the board. When the information acquisition cost was high, performance worsened when outsiders were added to the board. As we discuss later, AbuGhazaleh, Al-Hares, and Roberts (2011) found that goodwill impairments were strongly associated with effective governance mechanisms.

Smaili and Labelle (2016) studied the extent to which corporate governance acts as an efficient means of protecting investors in Canadian companies against accounting irregularities. They found that level of noncompliance with financial reporting regulations was indeed, higher when firms: (1) had fewer independent and financial expert directors on their boards and audit committees and no block holders or individuals owning a significant portion of company shares; (2) had recently changed auditors; and (3) had a CEO who was also the Chair of the Board of Directors. These firms also appear to fulfill their financing requirements through private placements rather than public funds, which was consistent with the fact that firms with accounting irregularities, were less likely to be in a position to go to the public market to fulfill financing needs.

### **Earnings Management, Impairment, and Big Bath Behavior**

The big bath or cookie jar approach refers to firms that take big losses in one period to avoid a steady stream of annual losses or decreased earnings. Using a sample of 33 Portuguese nonfinancial firms from the Euro next Lisbon stock exchange, Alves (2013) found that the goodwill impairment amount was significantly positively related to earnings management, suggesting that IAS 36 under IFRS provides managers with discretion for goodwill write-offs. Alves also found less earnings management when board size was large and cash flows were high and more earnings management when firms were highly leveraged and political costs were high.

Giner and Pardo (2015) studied Spanish firms to analyze the ethical behavior of managers who make decisions on recognizing impairment of goodwill. They found that managers decisions about whether or not to impair goodwill and about the magnitude of the impairment were influenced by big bath and smoothing strategies. Firm size and macroeconomic environment influence appeared significant in the analysis.

Duh, Lee and Lin (2009) studied Taiwanese companies subject to the IAS 36, which allows reversal of asset impairment losses. They matched 55 reversal firms with 55 similar non-reversal firms. They found that firms recognizing more impairment losses were more likely to reverse impairment losses when reversal would avoid an earnings decline in a subsequent period, which was consistent with big bath approach. They also found that this behavior was more pronounced for firms with higher debt ratios and consistent with earnings management being used to avoid violation of debt covenants.

Lee, Lev and Yeo (2015) studied the connection between big bath accounting and recognition of impairment losses in the telecommunication industry in Europe. They found a co-occurrence of goodwill impairments and big bath indicators and believe it showed a pattern of earnings management.

Hassine and Jilani (2017) studied how reporting incentives influence firms' accounting choices under IAS 36 to account for goodwill impairment. They examined whether earnings management motives were associated with the decision to record asset impairment and the magnitude of annual goodwill impairment losses reported. The study included a sample of 720 observations from 134 French firms. They found that firms that had a change in CEO were significantly more likely to record goodwill impairment losses and that managers overstated annual goodwill impairment

losses in order to meet earnings management incentives related not only to CEO change and financial crisis but also to earnings smoothing and big bath accounting.

Cheng, Peterson and Sherrill (2017) studied US firms to examine investor reaction to impairment write-offs. Previous studies found a negative stock price reaction after goodwill impairment write-offs both in the short term and in the long term. In 2002, the Financial Accounting Standards Board rules for accounting for goodwill changed. Cheng et al. (2017) examined data from after the rule change requiring goodwill to be reviewed for impairment and found that investors continued to perceive goodwill write-offs as negative events in the short term, but contrary to previous studies, that investors perceived goodwill write-offs as positive news in the long term. They also found that firms tend to incorporate all foreseeable future non-recurring charges into the goodwill impairment. Decreased non-recurring charges in the years subsequent to the write-off resulted in improvement in overall firm performance after the write-off. However, firm operating performance improved only slightly.

Watts (2003a, 2003b) and Beatty and Weber (2006) both concluded that managerial incentives did affect accounting choices including decisions to accelerate or delay expense recognition. Ramanna and Watts (2009) investigated how managers were implementing SFAS 142 that requires annual unverifiable fair-value estimates of value of goodwill and other intangible assets with indefinite useful lives. Their results were consistent with the contention that managers were exploiting unverifiable fair value based discretion in SFAS 142 to avoid timely goodwill write-offs in circumstances where they had motives to do so as predicted by Watts (2003). The results did not confirm standard setters' arguments that unverifiable fair-value-based discretion in SFAS 142 would be used to convey more helpful private information on future cash flows.

Giacomino and Akers (2009) stated that the findings of several research studies, along with their own findings showed that goodwill write-offs increased during 2008 and were likely continue into 2009. Giacomino and Akers (2009) questioned whether goodwill write-offs provided the financial statement users with useful information for analyzing investments as the FASB intended. They noted that many firms carried substantial amounts of goodwill on their 2008 balance sheets. Because of the uncertainty of the economy and the financial markets, they believed the potential for big bath earnings management through the use of goodwill impairments existed for 2009 and that these goodwill impairments would significantly impact the quality of earnings.

Caruso, Ferrari, and Pisano (2016) studied goodwill impairments by Italian firms. The authors found income smoothing cases, as well as income maximization and big baths, almost equally distributed. It seemed that every firm pursued its own "strategy", and even those who seemed not to have a clear strategy could be enticed by the chance of a big bath under certain conditions. Overall, this study indicated that managerial behavior regarding goodwill impairment in Italian firms very likely included efforts to manage earnings due to the discretion offered by IAS 36 and IFRS accounting standards. The authors ended by questioning whether it was still appropriate to rely on financial reports as the main document of corporate communication to stakeholders.

Filp, Jeanjean and Paugam (2015) studied US firms and found that the recognition of impairment loss was associated with big bath accounting among firms that recorded impairments of goodwill that exhibited large and negative (income-decreasing) abnormal accruals (excluding the

impairment loss) during the year of impairment. They showed that firms that did not record impairments even though they were likely to carry impaired goodwill, had lower future stock returns and tended to exhibit smaller change in future operating performance than impairers.

AbuGhazaleh et al. (2011) studied managers' use of discretion in determining goodwill impairment losses in the top 500 UK firms during 2005 and 2006 following the mandatory adoption of IFRS 3 "Business Combinations," and whether this discretion reflected opportunistic reporting by managers or the provision of their private information. IFRS 3 has been criticized because of the managerial discretion inherent in impairment testing. The authors found that managers were exercising discretion in the reporting of goodwill impairments following the adoption of IFRS 3. Goodwill impairments were more likely to be associated with recent CEO changes, income smoothing and big bath reporting behaviors. However, the results also indicated that goodwill impairments were strongly associated with effective governance mechanisms which suggested that managers might be exercising their accounting discretion to convey their private information about the underlying performance of the firm rather than acting opportunistically. Given these results, the authors believed that IFRS 3 had provided managers with a framework to reliably convey their private information about future cash flows consistent with the IASB's objectives in developing the impairment standard.

Zang (2008) examined managers' behavior and market reaction to initial impairment losses recorded by US firms after adoption of SFAS No. 142. Zang found that managers did use discretion in determining the transitional goodwill impairment loss in a strategic manner. He also found that firms that had recent management changes reported greater impairment charges, which supports the idea that new managers may take a big bath so that they can report higher earnings in the future.

Sevin and Schroeder (2005) used a random sample of US firms. The results suggested that SFAS No. 142 adoption did allow companies to engage in earnings management. Findings indicated that small firms experienced a significantly greater negative impact and were much more likely than large firms to take big bath losses.

Zhou and Habib (2013) cited previous research, which documented that managers used impairment losses strategically to manage company earnings. They found that managers used fewer current asset write-downs and more reversals in the post CAS No. 8 period, but that these practices did not seem to be motivated by the desire to avoid losses or to report big bath losses. The international standard IAS No. 36 allows for the reversal of impairment losses on long-term assets if the asset value recovers.

Stenheim and Madsen (2016) studied the extent to which goodwill impairment losses reported under IFRS were associated with proxies of economic impairment, earnings management incentives and corporate governance. The findings suggested that goodwill impairment losses did seem to reflect economic impairment. The evidence of associations between proxies for earnings management incentives and impairment losses were weaker, but there were associations consistent with big bath proxies and impairment losses. Firms paying CFO cash-bonus payments were found to be more likely to report fewer and smaller impairment losses. Corporate governance mechanisms did not seem to play a significant role in the accounting for impairment losses in goodwill. However, in firms where the COB and CEO positions were held by the same individual

there were generally fewer and smaller impairment losses. There were also some indications that firms with more audit committee meetings report more and larger impairment losses.

## **METHODOLOGY**

### **Hypothesis Development**

Impairment loss recognition has long been associated with earnings management (Stenheim & Madsen, 2016; Giner & Pardo, 2015; Duh et al., 2009). Reversal of impairment loss to avoid earnings decline is documented by Duh et al. (2009). Earnings management is generally understood to mean attempts by company insiders to protect their positions and benefits by manipulating the financial information provided to outsiders. This often takes the form of income smoothing or income manipulation. We use the method defined by Leuz et al. (2003) to quantify earnings management. Recognizing an impairment loss can be an effective income manipulation technique, known as big bath, which results in lower net income in the current period, but higher net income in the following years (Sevin & Schroeder, 2005). Chinese Accounting Standard No. 8 (CAS No. 8) prohibits the reversal of long-lived asset impairments in order to constrain managerial opportunism with respect to previously recognized impairment loss. CAS No. 8 forbids the reversal of long-lived asset impairment losses only, while allowing the reversal of short-term asset impairment losses. Zhou and Habib (2013) find that Chinese managers do use short-term asset impairment reversals, but do not find strong evidence that such behavior is motivated by managerial propensity to avoid losses and/or engage in big bath accounting. Although previous research is not in consensus on this issue, we hypothesize that impairment loss recognition is positively associated with earnings management and following year income growth.

There are various related studies. Some show that institutional owners can improve corporate governance (Gillan & Starks, 2003; Cervantes, 1999; Li, 2010; Sueyoshi et al., 2010; Chung et al. 2002) while others disagree (Leuz et al., 2003; Schmid & Zimmermann, 2008). Empirical evidence on the impact of managerial entrenchment on financial reporting is mixed (Beasley, Carcello, Hermanson and Lapides, 2000; Beasley, 1996; Shlifer & Vishny, 1989; Elyasiani & Zhang, 2015; Stenheim & Madsen, 2016). We hypothesize that improved corporate governance will encourage proper impairment loss taking. Bigger BOD and BOS sizes, higher percentage of independent BOD members, and higher percentage of institutional ownership are all indicators of improved corporate governance. Management entrenchment is an indicator of compromised corporate governance, and we hypothesize that it will inhibit timely impairment loss taking. Since impairment loss can be reversed in later years, we exclude companies that have impairment loss reversals for this analysis.

H1: *Ceteris paribus*, there is a positive association between impairment loss and earnings management.

H2: *Ceteris paribus*, there is a positive association between impairment loss and the following year's net income growth.

H3: *Ceteris paribus*, there is a positive association between impairment loss and improved corporate governance.

H4: *Ceteris paribus*, there is a negative association between impairment loss and management entrenchment.

Model 1:  $\text{Impairment} = \beta_0 + \beta_1 \text{TopShareholderOwnership\%} + \beta_2 \text{Top}_{2-10} \text{ShareholderOwnership\%} + \beta_3 \text{DualityCEOBODChair} + \beta_4 \text{BODSize} + \beta_5 \text{IndependentBOD\%} + \beta_6 \text{BOSSize} + \beta_7 \text{IncomeGrowth} + \beta_8 \text{IncomeGrowth}_{(t+1)} + \beta_9 \text{EarningsManagement} + \beta_{10} \text{Financial} + \beta_{11} \text{Utilities} + \beta_{12} \text{RealEstate} + \beta_{13} \text{Wholesale\&Retail} + \beta_{14} \text{Size} + \beta_{15} \text{AssetMix} + \beta_{16} \text{Leverage} + \beta_{17} \text{PreviousYearLoss} + \varepsilon$

Where:

Impairment is the natural log of impairment loss if impairment loss is taken, 0 otherwise.

TopShareholderOwnership% is the top shareholder's ownership percentage.

Top<sub>2-10</sub>ShareholderOwnership% is the total of the top 2 to 10 shareholders' ownership percentage.

DualityCEOBODChair is 1 if CEO also serves as BOD chair and 0 otherwise.

BODSize=BOD size scaled by log of sales.

IndependentBOD%=Percentage of independent BOD members.

BOSSize=Board of Supervisors size scaled by natural log of sales.

IncomeGrowth is the income growth percentage the year impairment loss is taken.

IncomeGrowth<sub>(t+1)</sub> is the income growth percentage the year following impairment loss being taken.

EarningsManagement is the earnings management measure quantified using Leuz et al. (2003) method. Please refer to appendix 1 for details.

Financial, Utilities, RealEstate, and Wholesale&Retail are different industries. The baseline are manufacturing and complex industries.

Size is the natural log of sales.

AssetMix is capital asset scaled by total asset.

Leverage=beginning total debt/ beginning total asset

Previous year loss=1 if previous year has a loss, 0 otherwise.

Data are separated into two groups, companies that have no impairment loss and companies who took impairment loss are in one group. Companies that reversed their impairment losses are separately analyzed. In Table 1, only companies without impairment loss reversals are included.

## RESULTS

As shown in Table 1, top shareholder median ownership percentage for companies without impairment loss is 49.63%, which is significantly higher than companies with impairment loss (33.33%). While we do not find statistically significant support that impairment loss improves companies' performance in the following year, median income growth in the following year for companies with impairment loss is 3.5% versus a negative 2% for companies without impairment loss. In addition, although we do not find impairment loss recognition significantly lowers current year's income growth in comparison with companies that do not take impairment loss, a higher amount of impairment loss is associated with lower income growth in the current year as shown in Table 2. We do find support that companies with impairment loss are engaged in earnings management behavior, which supports hypothesis 1. Companies with impairment loss have a median earnings management indicator of 0.76 vs. 0.50 for companies without impairment loss. Companies with impairment loss only have 39% in capital asset, which is significantly lower than companies without impairment loss (71%). As previously mentioned, Chinese Accounting Standard No. 8 (CAS No. 8) prohibits the reversal of long-lived asset impairments in order to constrain managerial opportunism with respect to previously recognized impairment loss. CAS

No. 8 forbids the reversal of long-lived asset impairment losses only, while allowing the reversal of short-term asset impairment losses. We speculate that companies with a high percentage of capital assets are less likely to record impairments of these assets because reversals are not permitted. This is consistent with Change and Yen (2015) study that listed firms decrease the provision of long-term asset impairments while increase the provision of current asset impairments and reversals following the implementation of new asset impairment regulations.

Table 1. Descriptive Statistics\*

	Companies with impairment loss		Companies without impairment loss		T-test	Kruskal-Wallis Test
	Mean	Median	Mean	Median	Mean	Median
TopShareholder Ownership%	35.1529	33.3300	47.1311	49.6250	<0.0001	<0.0001
Top2-10Shareholder Ownership%	24.8097	23.7950	25.0072	21.4900	0.9435	0.6050
IncomeGrowth	-0.8301	0.1095	0.0358	0.1131	0.0254	0.8809
IncomeGrowth <sub>(t+1)</sub>	-0.0840	0.0351	-12.8030	-0.0215	0.0876	0.2781
Earnings Management	3.4374	0.7617	3.7111	0.5032	0.9278	0.0147
Sales**	8,292,122	1,411,001	4,912,282	1,797,185	0.0367	0.9296
AssetMix	0.4104	0.3936	0.5567	0.7120	0.0153	0.0023
Leverage	0.4428	0.3910	0.4612	0.4737	0.6550	0.2084

\*This table does not include companies with impairment loss reversals.

\*\*Sales are in RMB.

\*\*\*In thousands

As presented in Table 2, we do not find any support for our hypotheses 2, and 4. Earnings management is not associated with impairment loss quantity. However, as shown in Table 1 earlier, companies that do take impairment loss have significantly higher earnings management indicator than companies that do not. We speculate that the decision to take impairment loss is associated with earnings management behavior although the quantity of impairment loss is not. Our hypothesis 1 is partially supported. Impairment loss does not increase next year's income growth. CEO functions as BOD chair does not affect impairment loss, hypothesis 4 is not supported. We do find strong support of the association of corporate governance and impairment loss. Improved corporate governance, including bigger BOD size and bigger independent BOD percentage, encourage higher impairment loss taking, which is consistent with hypothesis 3. This is consistent with AbuGhazaleh et al. (2011) conclusion that goodwill impairments are strongly associated with effective governance mechanisms. Concentrated institutional ownership significantly decreases impairment loss taking amount. We cannot assume institutional ownership improves corporate governance in China since previous research on this issue is not in consensus. We can only conclude that improved corporate governance in general encourages higher impairment loss taking. While institutional ownership, which could potentially improve corporate governance, decreases impairment loss taking quantity. Higher impairment loss significantly lowers the income growth in the current year, which is expected. Other factors that affect impairment loss taking are industry, size, asset mix, and previous year has loss. The industry that has highest impairment loss

is the financial industry. We wonder if this is related to bad debt write offs. A breakdown of impairment loss in the financial industry will reveal more information. We are unable to secure breakdown data of impairment loss for the financial industry. The base industries are manufacturing and complex industries. Firms with higher sales and with previous year losses have significantly higher impairment loss. Firms with higher capital concentration have lower impairment loss. We speculate that this could be because impairment of long-term assets is not reversible under CAS No. 8.

Table 2. Impact of Selected Variables on Impairment Loss for Companies Without Impairment Loss Reversal  
 Overall Model:  $p < 0.0001$ ; Adjusted  $R^2 = 0.3216$   
 Dependent Variable:  $\text{Impairment} = \ln(\text{impairment loss})$ , if impairment loss  $> 0$ , 0 otherwise.

Variable	Parameter	Standard	t Value	Pr >  t	Variance
Intercept	0.6268	0.4032	1.55	0.1201	0
TopShareholderOwnership%	-0.0186	0.0016	-12.02	<.0001	1.3076
Top2-10ShareholderOwnership%	-0.0141	0.0018	-7.97	<.0001	1.2835
DualityCEOBODChair	-0.0480	0.0491	-0.98	0.3283	1.0914
BODSize	1.0013	0.3155	3.17	0.0015	1.4927
IndependentBOD%	2.2485	0.4261	5.28	<.0001	1.2856
BOSSize	0.5170	0.4343	1.19	0.2340	1.2305
IncomeGrowth	-0.0036	0.0006	-5.81	<.0001	1.0092
IncomeGrowth <sub>(t+1)</sub>	-0.0031	0.0024	-1.30	0.1948	1.0057
EarningsManagement	-0.0000	0.0003	-0.03	0.9784	1.0012
Financial	1.6143	0.1502	10.75	<.0001	1.2447
Utilities	-0.3583	0.0568	-6.30	<.0001	1.0560
RealEstate	-0.3366	0.0993	-3.39	0.0007	1.0845
Wholesale&Retail	-1.1448	0.1020	-11.22	<.0001	1.0434
Size	0.7297	0.0145	50.37	<.0001	1.2075
AssetMix	-0.7590	0.1037	-7.32	<.0001	1.1678
Leverage	0.0353	0.0223	1.59	0.1128	1.0411
PreviousYearLoss	1.2706	0.0862	14.74	<.0001	1.0803

\*Companies with impairment loss reversal are excluded.

Since China is under IFRS standards, firms can reverse their impairment loss in the future. We perform further analysis for companies with impairment loss reversal. As illustrated in Table 3, for firms that do reverse impairment loss, the deciding factors for the magnitude of reversal are institutional ownership, size, industry, and previous year loss. While institutional ownership significantly reduces the size of impairment loss taking, it also significantly decreases the size of impairment loss reversal. Wholesale and retail industry has lower impairment loss reversal. Firms with higher sales and with previous year losses have higher impairment loss reversal.

Table 3: Impairment Loss Reversal Analysis  
 Overall Model:  $p < 0.0001$ ; Adjusted  $R^2 = 0.1250$   
 Dependent Variable:  $\text{Impairment} = \ln(-\text{impairment loss})$

Variable	Parameter	Standard	t Value	Pr >  t	Variance
Intercept	5.5085	1.4553	3.79	0.0002	0
TopShareholderOwnership%	-0.0202	0.0052	-3.87	0.0001	1.3847
Top2-10ShareholderOwnership%	-0.0227	0.0059	-3.81	0.0001	1.2799
DualityCEOBODChair	-0.1580	0.1840	-0.86	0.3908	1.0882
BODSize	-0.0000	1.0688	-0.00	1.0000	1.5644
IndependentBOD%	0.6865	1.6029	0.43	0.6686	1.2896
BOSSize	0.5906	1.4177	0.42	0.6771	1.3134
IncomeGrowth	-0.0003	0.0013	-0.22	0.8234	1.0231
IncomeGrowth <sub>(t+1)</sub>	-0.0273	0.0233	-1.17	0.2425	1.0196
EarningsManagement	0.0017	0.0009	1.86	0.0626	1.0105
Financial	0.7484	0.6025	1.24	0.2145	1.2107
Utilities	-0.0391	0.1837	-0.21	0.8316	1.1597
RealEstate	0.2973	0.2605	1.14	0.2541	1.2260
Wholesale&Retail	-0.7338	0.2882	-2.55	0.0111	1.0844
Size	0.4655	0.0501	9.29	<.0001	1.3529
AssetMix	-0.4613	0.3250	-1.42	0.1561	1.2919
Leverage	-0.0524	0.0573	-0.91	0.3611	1.1074
PreviousYearLoss	0.9364	0.2617	3.58	0.0004	1.1433

\*Only samples with impairment loss reversals are included.

## CONCLUSION

We do not find support that impairment loss taking is associated with big bath behavior. Although the magnitude of impairment loss is not significantly associated with earnings management, the decision to take impairment loss is associated with earnings management behavior. Impairment loss amount is higher with improved corporate governance, such as bigger BOD and bigger independent BOD percentage. Institutional ownership, if viewed as an improvement of corporate governance, functions differently from other corporate governance measures. It reduces both impairment loss and impairment loss reversal amount.

As we have concluded, the decision to take impairment loss is significantly associated with earnings management. Future research focusing on the decision making process will help investors detect signs of earnings management. Many factors can contribute to the process, including income history, ownership composition, change in BOD, BOS composition, change in executives, executive compensation package, change in stock price.

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### Appendix 1

We use the method defined by Leuz et al. (2003) to quantify earnings management. We first introduce accruals and cash flow.

The operational definition of accruals is:

$$Accruals = (\Delta CA - \Delta Cash) - (\Delta CL - \Delta STD - \Delta TP) - Dep \quad \text{Equation (1)}$$

Where:

$\Delta CA$  = change in total current asset;

$\Delta Cash$  = change in cash/cash equivalents;

$\Delta CL$  = change in total current liabilities;

$\Delta STD$  = change in short-term debt included in current liabilities;

$\Delta TP$  = change in income taxes payable;

Dep = depreciation and amortization expense.

We then calculate cash flow from operations:

$$Cash\ flow\ from\ operations = Operating\ earnings - Accruals \quad \text{Equation (2)}$$

$$Earnings\ Management = |Accruals| / |Cash\ flow\ from\ operations| \quad \text{Equation (3)}$$

The larger Earnings Management is indicative of large-scale use of discretion to manipulate reported accounting earnings.

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## **IMPACT OF INDUSTRY AND TEACHING EXPERIENCE, COURSE LEVEL, AND DEPARTMENT ON STUDENT EVALUATIONS**

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### **ABSTRACT**

While it can be argued that having industry experience seems a logical requirement for a college professor, the actual impact of having industry experience in the classroom has rarely been explored. Faculty are evaluated on teaching, research, and service. One of the primary feedback measures we have in academia to measure our success in the classroom are the student evaluations. The purpose of this study is to identify the impact of having industry experience on one's student evaluations of teaching in relation to the level of course and the department of the course. Often new faculty are assigned the lower level "service" courses in a department. However, these courses often get lower ratings for many reasons we address in this paper. In addition, it can be argued that the more experience one has in industry might make these faculty better at relating to students and they should have higher student evaluations. But, are we setting them up for success or failure? Does it depend on what they are teaching? Using 355 sets of student evaluations of teaching (SET) along with demographic information of the instructors, this study seeks to determine if either years of industry experience or years of teaching experience significantly impact the SET in relation to the level of the course or the subject area of the course across five dimensions of evaluation: objectives, preparedness, communication, encouragement, and availability.

*Keywords:* evaluation, business college, experience, faculty qualification, course level

### **INTRODUCTION**

**"We learn from failure, not from success." ~ Bram Stoker in *Dracula***

Just as today's marketplace has undergone a transformation, so too has the manner in which students are educated and trained to enter that marketplace. While once students of business found themselves learning the principles of economics from faculty waring over "practical" verses "classical" approaches (Van Fleet & Wren, 2005), today's students find themselves in state of the art classrooms being led by some of the bastions of industry...or at least someone who left industry to teach. While requiring years of industry experience has quickly become a staple of the faculty hiring process, the actual impact of that industry experience on teaching ability has gone unexplored. Using student evaluations of teaching, this study investigates the impact of one's ability to teach in the business college classroom in relation to their years of industry or teaching experience. Specifically, this study looks to confirm the impact of industry or teaching experience as it relates to the level of the course and the department of the course.

## REVIEW OF LITERATURE

### Evolution

While attempts to formalize colleges of business, and the faculty who should teach in them, date as far back to 1881 at The University of Pennsylvania (Van Fleet & Wren, 2005), the modern debate over who is best suited for the business classroom can be found in the formation of the American Assembly of Collegiate Schools of Business (today known as The Association to Advance Collegiate Schools of Business or AACSB) in 1916. During this time, and even to today, it was questioned if business school was even necessary for one seeking to run a business (Clark, 2005). At the same time the newly formed Association of University Professors (AAUP) was extolling the need to keep higher education away from becoming a business venture by employing individuals of the:

highest ability, of sound learning, and of strong and independent character. This is the more essential because the pecuniary emoluments of the profession are not, and doubtless never will be, equal to those open to the more successful members of other professions. (AAUP, 1915, p. 21)

The AACSB set forth that academics should be those who make scientific contributions to their field (Geiger, 1992). It was not until some 70 years later that the first definitive qualifications for business faculty were established, which included a doctorate or substantial coursework in their field with little mention of professional qualifications (Gitlow, 1995), a sentiment echoed 20 years later when AACSB stated that there was no need for those interested in becoming professors to have business work experience (AACSB, 2007).

### Practice vs. Theory

Despite the apparent lack of a direct call for business academics to have industry experience, the debate between practice and theory continues. Some feel that having this “real-world” experience allows the professor to help the students solve real-world problems (Gootzeit, 2014) and to bring the theories of business to life in the classroom (Sull, 2016). Although some evidence does suggest that industry experience does enhance one’s teaching ability (Burns, 2012), most research on the topic lends itself to the idea that those with an industry background are not likely to know what it is that students actually need to know (Patrick, 1969), and that a one-sided focus may be present due to the experiences in industry (Bledlow, Carette, Kuhnel, & Blister, 2017; Collinson & Tourish, 2015). As the experiences of the professional are now clearly in the past, the relevance of those experiences is also questionable (Lipinski & Kosicek, 2016).

Along with the lack of proven support for industry experience, accreditation standards do not lend themselves to the hiring of faculty with industry experience. Though some would say accreditation standards have caused the industry experience trend with a call for both academic and professional preparation, actual standards for faculty do not call for significant industry experience in either the preparation for nor maintenance of academic qualifications (AACSB, 2017). Though differing models are used, accreditation standards do call for the hiring of individuals who will maintain Scholarly Academic status (AACSB categorization) which would place greater emphasis on

preparation for continuing a scholarly research agenda. Still, some 38% of all job postings in the area of business have been found to have some requirement for industry level experience (Finch, Deephouse, O'Reilly, Massie, & Hillenbrand, 2016).

### **Executives in Residence**

One caveat to this theory vs. practice discussion is the role of the Executive in Residence. While the exact origins of this role in the college of business are not known, the idea of having one member of the college be an experienced person of business to guide the students through specific problems has been held as an important role (*Industrial Management Review*, 1965). Though the significance of this individual is important to the business college (Johnston, 2014), the individual still needs to hold the appropriate academic credentials and teaching skills to fit well within the college (Achenreiner & Hein, 2010). Though important, Executives in Residence are usually only employed by the college for no more than five years and are not included in the tenure system (AACSB, 1995).

### **Student Evaluations of Teaching**

Though this research does aim to contribute to the literature and ongoing debate over student evaluation of teaching (SET), as the data for the independent variables are drawn from such evaluations, some discussion is warranted. In general, research on SET has been pursued from either the viewpoint of problems with SET or outcomes of SET. SET were first used at Purdue University during the mid-1920's as a way to scientifically quantify the qualities of a good teacher (Calkins & Micari, 2010). Though there are a plethora of methods by which these evaluations are carried out (Marzano, Frontier, & Livingston, 2011), the basic motivation for SET is to determine the effectiveness of professors with some categorical variables. Issues with revenge, disinterest, bias, and discrimination have been found to riddle SET thus causing more of an evaluation of the professor/student relationship rather than actual teaching effectiveness (Stark & Freishtat, 2014).

When considering SET, the question arises of what SET actually measures. While it is argued that SET are intended to measure teacher effectiveness, a clear definition of what effectiveness actually is has not been found (eg: Adams, 1997; Kulik, 2001). A strong argument can be made that it is the student/teacher relationship which is actually being measured rather than the actual teaching. While it has been proven that developing relationships (in a mentoring type fashion) with students can be highly beneficial to learning (Anderson, Dey, Gray, & Thomas, 1995; Wallace, Abel, & Ropers-Huilman, 2000), the potential for a negative impact is high when relationships are either not formed or go awry (Komarraju, Musulkin, & Bhattacharaya, 2010; Pearson, 2012; Wolf-Wendel, Ward & Kinzie 2009). Furthermore, as colleges view students more as consumers, lecturers are more motivated to provide a pleasing product and therefore motivated to seek popularity rather than effectiveness (Emery, Kramer, & Tian, 2003). As colleges expect faculty to be more and more involved in student retention efforts, graduation rates, and funding, the potential for impact on SET also grows.

Focusing on the outcomes of SET, research has shown that SET are significantly affected by the years of teaching experience of the professor (Feldman, 1983; McPherson, 2006); however, much of that significance is reflected in lower teaching evaluations the longer a professor teaches

(Zabaleta, 2007) although being tenure-track offsets this lower rating for a time (Isely & Singh, 2007). Even though the “credibility” of the professor has been found a significant factor in SET (Fandt & Stevens, 1991), the prior experiences of the professor has only been found to significantly impact lower division or service courses and to not have importance for upper diversion or major related courses (McPherson, 2006).

While a plethora of literature has been offered regarding SET, very little has been investigated in regard to the business college. One of the earliest found studies investigated pre-vocational business teachers in which it was found that neither years of teaching experience nor years of work experience had an effect on SET (Brown, 1971). In a longitudinal study of students who reevaluated their professors one year after entering the work force, it was found that the industry experiences of the students as well had little impact on their views of the teaching ability of the professors (Firth, 1979). Research by Barth (2008) revealed that the main factors within SET were quality of instruction, with features such as course objectives, relevance of material, preparation, and clarity of instruction, and that the enthusiasm shown by the professor can offset the perceived difficulty of the professor. When viewed in relationship to the various colleges across campus, business courses tend to receive the lowest evaluations along with Math, Engineering, Economics, Computer Science, and Physical Science (Cashin, 1990).

### **Course Level**

Within the study of SET, the level of the course has historically been found to be correlated to the evaluations by the students. Generally speaking, the higher the course level (ie: 1000, 4000 level) the more likely the instructor is to receive higher SET (Cashin, & Downey, 1992; Johnson, Narayanan, & Sawaya, 2013; Neumann, 2000; Seldin, 1993). Graduate courses tend to receive the highest SETs (Tracy, Shane & Jenkins, 2007; Whitworth, Price & Randall, 2002;) while Freshman courses received the lowest scores (Stewart, Goodson, Miertschin, & Faulkenberry, 2007). Freshman and Junior level courses have been found to receive lower levels of SETs than Sophomore and Senior level courses (Badri, Abdulla, Kamali, & Dodeen, 2006), although some research indicates that students tend to provide their lowest evaluations during their Freshman year and rate progressively higher as they progress through their education (Aleamoni, 1989). Ironically, the level of the student (ie: Freshman, Senior) has historically not been found to impact evaluations (McKeachie, 1979) and that the longer a student is in college, the less likely they are to even complete SETs (Macfadyen, Dawson, Prest, & Gašević, 2016).

### **Department**

Much less has been researched as to the effect of the course department on SET, partly due to the challenges of comparing vastly different subject matters across the campus. None the less, the idea of course subject affecting SET is of concern within the research (Stapleton & Murkinson, 2001). A study by Hippensteel and Martin (2005) did find biases against geoscience instructors when evaluated by non-science major students. Incidentally, this same study found that placing junior faculty in introductory level courses may place these untenured faculty at risk for receiving career damaging evaluations. Faculty teaching quantitatively based courses face increased risk of lower teaching evaluations when standardized evaluation questions are used (Uttl & Smibert, 2017).

Evidence also exists which shows that elective courses are evaluated more favorably than are required courses (Miles & House, 2015; Ronald, Chathapuram, & Rosegrant, 1998).

Within the college of business, research indicates that Finance professors tend to receive the lowest levels of evaluations regardless of the major or the student (Constand & Pace, 2014). When considering the specific major of the student, Accounting majors tend to offer the highest rating of courses while Business Administration students offer the lowest (Badri, Abdulla, Kamali, & Dodeen, 2006) also being more likely to recommend their instructors to other students than in the areas of Economics and Statistics (Diette & Kester, 2015). Course topic has also been shown to greatly affect overall perceptions of learning within business students SETs (Whitworth, Price, & Randall, 2002).

## **METHODOLOGY**

### **Data Collection**

This study utilized student evaluation data taken from three universities in the Southwest United States. The data is representative of business courses in AACSB accredited programs, with an R1, R2, and R3 institution represented, and was publicly available through their respective offices of the provost or institutional research. The available data included quantitative summaries of each course (means, weighted means, student response rates) but did not include individual student responses nor qualitative data. This did restrict our research into individual courses; however, due to the relatively large sample of courses taught, we were able to analyze data using our primary focus of length of industry experience, length of teaching, course level, and course department. Although all three institutions are part of the same university system, all operate as independent institutions. The data utilized in this study was taken from student evaluations of business courses during the Spring and Fall of 2014 and all courses listed as being in the business college were used.

### **Student Evaluation of Teachers (SET) data**

Within the current data set, as each institution utilized slightly varied evaluations, only the five questions which were common to all three intuitions were utilized (Table 1). The first three of these SET questions were mentioned by Barth (2008) as main factors than can offset a professor's perceived difficulty. Being that universities use these evaluations as a reflection of faculty in the faculty's review and promotion purposes, we also chose to use them to help uncover potential differences based on our variables as differences based on these variables may need to be considered in many administrative aspects of the university process, not limited to annual evaluations and promotions. This study does not intend to support or defend the idea that these evaluations accurately report on one's ability to teach.

Table 1. SET Questions Utilized

Q1	The instructor clearly defined and explained the course objectives and expectations.
Q2	The instructor was prepared for each instructional activity.
Q3	The instructor communicated information effectively.
Q4	The instructor encouraged me to take an active role in my own learning.
Q5	The instructor was available to students either electronically or in person.

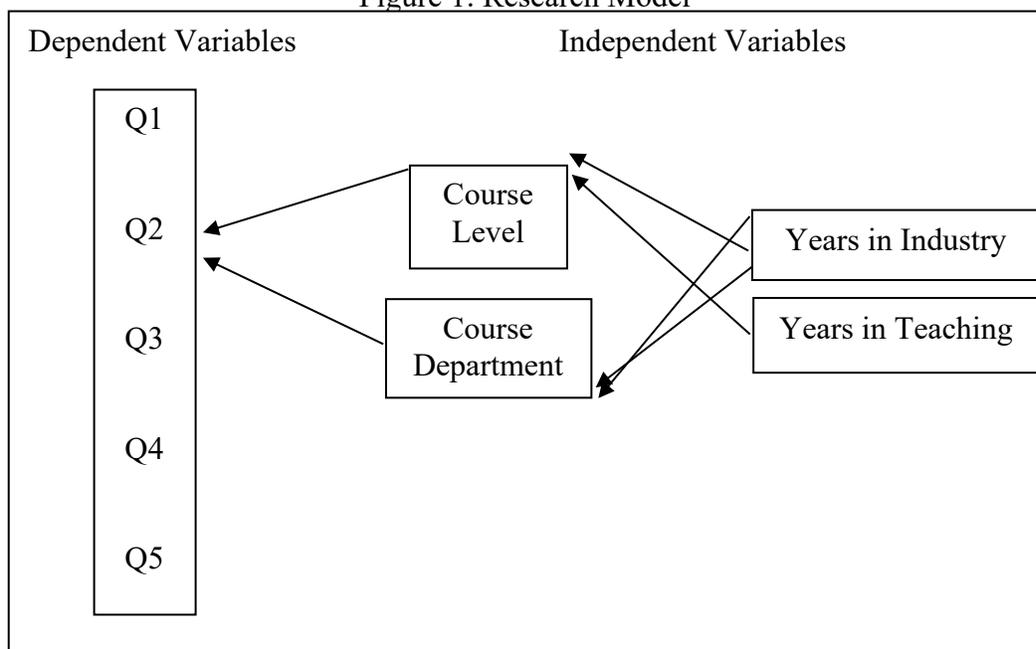
The evaluations all utilized a Likert scale which ranged from 1 (strongly disagree) to 5 (strongly agree). All evaluations were administered electronically at the end of the semester with the means (actual student responses were not available) for each of the five SET questions and the number of respondents collected for each course section. While 355 evaluations were collected representing 355 different course sections, the data represents 107 unique instructors. The five SET questions are not the entire SET instrument each university administered, but are just the five questions they had in common. In as such, we do not purport to state that these can be combined for a single score in assessing teaching effectiveness or abilities; we chose to analyze these five questions individually. If one wanted to replicate Barth's (2008) study, the first three could be combined. However, we chose to treat each independently to look at the impact into the different topics for each SET question. Subsequently, these five questions became five different dependent variables.

**Independent variables.** For information on the respective faculty members who were evaluated, we quantified information from the instructor's CV's as made public on their respective institution's websites. We recognize that some of these CVs may not be complete and may have left out information pertaining to their industry experience. Using 2014 as the cut-off date, the researchers quantified available data such as years of industry experience (if any), years of teaching (zero if this was their first semester teaching) for our two numerical independent variables. The SET data provided us with the level course taught (Freshman, Sophomore, Junior, Senior, Masters 1 and Masters 2), and the department in which the course was taught (Accounting, Finance, Management, Management Information Systems, and Marketing) for our categorical independent variables. To attempt to reduce some multicollinearity concerns, we added dummy variables for the categorical independent variables (course level and department) and created multiplicative interaction numerical independent variables (time in industry and years teaching) to use in regression.

## Model and Hypotheses

The focus and purpose of this study was to investigate the impact of different variables on the SET. To accomplish this, we utilized different combinations of our independent variables to create a large number of hypotheses; however, these hypotheses were easily managed by grouping them into two organized sets. Figure 1 depicts the model we used which lead to the development of our numerous hypotheses. For most of these hypotheses, we were able to use published research for the basis of our hypotheses. Where published research was lacking, we supplemented this with our own experience. As will be shown later, we were able to support some of the hypotheses, but not all.

Figure 1: Research Model



Once we set the direction of our hypothesis for each of the different independent variables, we assume this relationship to be true for all five of the SET questions. For this analysis we ran an ANOVA and *t*-tests assuming unequal variances for our modeling.

**1. Industry Experience.** Prior research and practice over time is not consistent with whether industry experience has a positive influence on teaching evaluations. However, due to the number of faculty job advertisements noting that industry experience is valued, we chose to hypothesize that there is a positive correlation in the SET scores and length of industry experience.

**2. Teaching Experience.** Prior research shows that the SET may in fact be lower the longer one teaches. Although this would seem contrary to retaining faculty indefinitely (post tenure), we will use this as the basis for our hypothesis and state that there is a negative correlation in the SET scores and length of teaching experience.

**3. Course level.** As previously stated, many studies have shown that higher SET scores are seen the higher the course level, including graduate courses. Thus, we hypothesize this to be true with our data as well, that there is a positive correlation with the SET scores and the course level.

**4. Course department.** Determining our hypothesis for the course department was more difficult as there are scant studies discussing the business department courses. We were able to find a study showing that Finance professors score lower on the SET and thus hypothesize this to be true. Other studies discuss students from the different departments, but business students take courses from many different departments and our data does not allow us to identify any specific student (only averages by course section). There was a study that noted quantitatively based courses have lower evaluations. We took this as our basis to hypothesize that courses in Accounting, Finance, and Management Information Systems would score lower than those in Marketing and Management.

5. **Combined independent variables.** In our final analysis, the five SET questions remained as our dependent variables, but the length of industry or teaching experience (numerical independent variable) was used along with the categorical variables of course level and course department (categorical independent variable) to create our combined variables. This was done using a multiplicative function of a binary code for the categorical independent variable with the numerical independent variable. This modeling technique is further explained in our results.

**a. Industry and course level.** This hypothesis was easily obtained as both industry and course level hypotheses were defined as a positive correlation with the dependent SET variables; thus, we hypothesize that when combined they will also have a positive correlation with the dependent SET variables.

**b. Industry and department.** As we defined the quantitatively based departments (Accounting, Finance, and Management Information Systems) to have a lower SET score than the other departments (Management and Marketing), we also hypothesize this to be true when combined with the years in industry. We did this due to the positively hypothesized relationship of the years in industry. We felt that there would be no change in the relationship of SET scores by department with the added influence of years in industry.

**c. Teaching and course level.** With the negative relationship of the hypothesis of years of teaching on the SET, this became more complicated. We have a negative relationship hypothesis (teaching) and a positive relationship hypothesis (course level). We had to pre-suppose which would be the stronger influence. With more consistent research on the positive relationship of course level, we chose to hypothesize that this would be the dominant factor and that this combined variable would have a positive relationship on the SETs.

**d. Teaching and department.** This was the most complex analysis to hypothesize. In both dependent variables had little prior research off which to base our hypotheses. However, for consistency, we chose to again hypothesize that the dominant factor would not be the years of teaching, but the department. We again hypothesize that courses in Accounting, Finance, and Information Systems would score lower than those in Marketing and Management.

### Hypothesis Numbering

The hypotheses are listed with their independent variable letter followed by their dependent variable SET question number (1 through 5). For the combined independent variables, both letters corresponding to the dependent variables modeled are listed: industry experience (I), teaching experience (T), course level (L), and department (D). When modeling if the:

- I.# length of industry experience has a positive impact on the SET (Q1-Q5).
- T.# length of teaching experience has a negative impact on the SET (Q1-Q5).
- L.# course level has a positive impact on the SET (Q1-Q5).
- D.# course department has an impact on the SET (Q1-Q5).
- I.L.# length of industry experience and course level have a positive impact on the SET (Q1-Q5).
- I.D.# length of industry experience and course department has an impact on the SET (Q1-Q5).
- T.L.# length of teaching experience and course level has a positive impact on the SET (Q1-Q5).
- T.D.# length of teaching experience and course department has an impact on the SET (Q1-Q5).

For example, our first hypothesis was concerning the years in industry. We list it here with all five SET. The same process was done with the T, L, D, IL, ID, TL, and TD hypotheses.

- I.1 The length of industry experience has a positive impact on the SET question “instructor clearly defined and explained the course objectives.”
- I.2 The length of industry experience has a positive impact on the SET question “instructor was prepared for each instructional activity.”
- I.3 The length of industry experience has a positive impact on the SET question “instructor communicated information effectively.”
- I.4 The length of industry experience has a positive impact on the SET question “instructor encouraged me to take an active role in my own learning.”
- I.5 The length of industry experience has a positive impact on the SET question “instructor was available to students either electronically or in person.”

### Preliminary Variable Analysis

Throughout the analysis we will be comparing variations from the mean SET results. Thus, it is important to view these dependent variable results apart from the impacts of the independent variables. The scale was a five point Likert scale (strongly disagree to strongly agree) with five being the strongest evaluation. As noted in Table 2, the scores were high reflecting positive evaluations of the teachers. All of the questions were slightly skewed left, yet passed the assumptions for Normality allowing us to run *t*-tests, ANVOA, and regression on them.

Table 2. SET Central Tendency Results

	Mean	StDev	Range	Skewness
<b>1. Course Objectives</b>	4.36	0.36	2.15	-0.94
<b>2. Prepared</b>	4.44	0.33	1.79	-0.9
<b>3. Communicated</b>	4.28	0.44	2.79	-0.97
<b>4. Encouraged</b>	4.38	0.31	1.91	-0.5
<b>5. Available</b>	4.42	0.33	2.76	-1.53

The independent numerical variables were the length of time spent in industry and time teaching (Table 3). The range was from 0 to 50 for industry and 0 (indicating first year teaching) to 40 for teaching experience. There were two instructors with no teaching or industry experience – they were both recently minted with their Ph.D.s. A vastly larger number of instructors who had no industry experience (72) was present opposed to those who had no teaching experience (3). Both of these variables were skewed right, yet passed the assumptions for Normality allowing us to run *t*-tests, ANVOA, and regression on them.

Table 3. Independent Variables

	Mean	StDev	Range	Skewness
<b>Years Teaching</b>	12.36	8.62	40	0.907
<b>Industry Experience</b>	11.56	11.55	50	0.95

Our other independent variables were our categorical variables (Table 4). We chose to display them in a multi-variate table to allow the reader to best understand the relationships. The majority (mode) of classes taught were for Junior level classes and in Management. The small number of classes taught for Freshmen fails the Normality assumption ( $n > 5$ ) preventing us from conducting analysis on this variable. (Casual research into the institutions represented indicated that only one institution had a business course in the curriculum, Introduction to Business, at the Freshman level.)

Table 4. Categorical Independent Variables

	ACCT	FIN	MGMT	MIS	MKTG	Total
<b>Freshman</b>	0	0	4	0	0	<b>4</b>
<b>Sophomore</b>	14	0	0	0	0	<b>14</b>
<b>Junior</b>	31	35	76	13	38	<b>193</b>
<b>Senior</b>	14	10	49	3	18	<b>94</b>
<b>Masters1</b>	8	5	20	0	7	<b>40</b>
<b>Masters2</b>	0	0	10	0	0	<b>10</b>
<b>Total</b>	<b>67</b>	<b>50</b>	<b>159</b>	<b>16</b>	<b>63</b>	<b>355</b>

## RESULTS

We present the results of our analysis in the same order as the hypotheses and independent variables as previously presented. Within each section we will present some descriptive statistics followed by the prescriptive statistical results.

### Industry Experience

Prior to modeling, we looked at the relationship of years in industry with our dependent variables. We were encouraged by the positive correlations as seen in the first column of Table 5, although only the last one indicated a significant correlation. What was also of note was the significant correlations of the SET with each other.

Table 5. Correlations with Years in Industry

	Industry	1. Objectives	2. Prepared	3. Communicated	4. Encouraged	5. Available
Industry	1					
1. Objectives	0.0872	1				
2. Prepared	0.0792	0.8598 **	1			
3. Communicated	0.0736	0.9145 **	0.8417 **	1		
4. Encouraged	0.0797	0.7920 **	0.7900 **	0.826 **	1	
5. Available	0.1060 *	0.7739 **	0.7880 **	0.776 **	0.776 **	1

\*  $p \leq 0.05$ ; \*\*  $p \leq 0.01$

However, the failure of any but SET 5 to have a statistically significant correlation with the real world experience also meant that we could not get a significance in our ANOVA and regression analysis for any of them except with the years of industry experience and SET 5. This means we were unable to statistically support our hypothesis except for the relationship between the years of industry experience and the instructor being available. The longer one has spent in industry the more likely the student was to report on the SET that the instructor was available. As noted in equation (1), the influence on SET 5 is mainly from the constant and not from the years in industry. The resulting regression formula was:

$$(1) y_5 = 4.39 + 0.003 * I + \varepsilon$$

### Years Teaching

Prior to modeling, we looked at the relationship of years teaching with our dependent variables. We were encouraged by the negative correlations as seen in the first column of Table 6. We were additionally encouraged in seeing that there were significant relationships noted with SET 1, 3, and 5.

Table 6. Correlations with Years Teaching

	Years	1. Objectives	2. Prepared	3. Communicated	4. Encouraged	5. Available
Years	1					
1. Objectives	0.1596 <sup>-**</sup>	1				
2. Prepared	0.0762 <sup>-</sup>	0.8598 <sup>**</sup>	1			
3. Communicated	0.1573 <sup>-**</sup>	0.9145 <sup>**</sup>	0.8417 <sup>**</sup>	1		
4. Encouraged	0.0800 <sup>-</sup>	0.7920 <sup>**</sup>	0.7900 <sup>**</sup>	0.826 <sup>**</sup>	1	
5. Available	0.1159 <sup>-*</sup>	0.7739 <sup>**</sup>	0.7880 <sup>**</sup>	0.776 <sup>**</sup>	0.776 <sup>**</sup>	1

\*  $p \leq 0.05$ ; \*\*  $p \leq 0.01$

The significant correlations between years in industry and the SET 1, 3, and 5 mean that we are able to build regression models that contain years teaching with these three SET. The negative correlations mean that we are able to support our hypotheses for these three SET. As is noted in equations (2), (3), and (4), the primary influence on the SET is the constant and not years teaching, however there is a negative impact the longer one teaches on these three SET.

$$(2) y_1 = 4.44 - 0.007 * T + \varepsilon$$

$$(3) y_3 = 4.38 - 0.008 * T + \varepsilon$$

$$(4) y_5 = 4.48 - 0.004 * T + \varepsilon$$

## Course Level

Freshmen SET results are shown here for completeness; however, they are not used in the analysis due to the small sample size. Generally, the SET means that all five of the SET increase as the course level also increases as seen in Table 7. But this is only true if one discounts the results from the small Freshmen representation. One anomaly that occurs is that as students progress from Freshmen to Seniors, they do not necessarily immediately progress to the graduate courses; thus, we must then re-evaluate the increasing SET from Masters 1 to Masters 2.

Table 7. Course Level Mean SET

Level	Means				
	SET 1	SET 2	SET 3	SET 4	SET 5
<i>Freshmen</i>	4.383	4.435	4.283	4.120	4.438
<b>Sophomore</b>	4.244	4.304	4.083	4.316	4.303
<b>Junior</b>	4.263	4.393	4.180	4.307	4.384
<b>Senior</b>	4.472	4.560	4.421	4.517	4.554
<b>Msters1</b>	4.248	4.310	4.056	4.331	4.383
<b>Msters2</b>	4.686	4.714	4.708	4.738	4.758

We used SPSS to run GLM Univariate ANOVA and pairwise comparisons for the five SET for each of the course level (see Table 8). The two course levels and relationship are shown in the first columns. Then the SETs are listed with the level of significance or non-significance (ns). As our hypotheses indicated, the higher the course, the higher the SET. The one exception was for the SET rating for Senior level courses being higher than Masters 1 for SET 1, 2, and 3.

Table 8. GLM Significant Results for Course Level

			SET 1	SET 2	SET 3	SET 4	SET 5
<b>Freshmen</b>	<	<b>Masters 2</b>	ns	ns	ns	0.005	ns
<b>Sophomore</b>	<	<b>Masters 2</b>	0.036	0.032	0.005	0.008	0.009
<b>Junior</b>	<	<b>Senior</b>	0.009	0.042	0.015	0.001	0.030
<b>Junior</b>	<	<b>Masters 2</b>	0.004	0.036	0.002	0.000	0.005
<b>Senior</b>	>	<b>Masters 1</b>	0.096	0.015	0.004	ns	ns
<b>Masters 1</b>	<	<b>Masters 2</b>	0.010	0.010	0.000	0.003	0.020

Although not all pairwise relationships showed a statistically significant relationship, those that did supported our hypotheses, with the one exception being Senior and Masters 1.

## Course Department

When looking at the department in which the courses were taught, the mean SET results initially supported the research that SET scores in Accounting, Finance, and Management Information Systems were lower than those in Management or Marketing (Table 9). This research tested to see if any of these differences were significant.

Table 9. SET Means for Departments

Department	Means				
	SET 1	SET 2	SET 3	SET 4	SET 5
MIS	4.081	4.396	4.085	4.368	4.430
ACCT	4.252	4.339	4.095	4.277	4.323
FIN	4.309	4.383	4.159	4.274	4.388
MGMT	4.427	4.473	4.374	4.423	4.441
MKTG	4.423	4.500	4.370	4.466	4.516

We used SPSS to run GLM Univariate ANOVA and pairwise comparisons for the five SET for each of the departments (see Table 10). Although not all departments showed significant results, for those that did, they followed our hypotheses. We were able to show that there were significant differences for both Accounting and Finance having lower SET scores than those from Management and Marketing departments in at least some of the SET. The only comparative relationship that showed significance in all SET was that Accounting SET scores were less than Management.

Table 10. GLM Significant Results for Department

			SET 1	SET 2	SET 3	SET 4	SET 5
ACCT	<	MGMT	0.011	0.037	0.000	0.069	0.047
ACCT	<	MKTG	ns	ns	0.037	0.002	0.013
FIN	<	MGMT	ns	ns	0.048	ns	ns
FIN	<	MKTG	ns	ns	ns	0.046	ns

### Industry and Course Level

This analysis used regression modeling to predict the SET means. We used the numerical independent variable for years in industry to make a new combined numerical variables using a binary indicator for the categorical variable course in a multiplicative process. An excerpt from the results is shown in Table 11. When running the regression, the original time in industry numerical independent variable was not included with the combined variables due to the high multicollinearity between this variable and the combined variables. The single variable linear regression was presented earlier in this manuscript. This same process was done for all combined regression analysis.

Table 11. Combined Variables Industry and Course Level

<b>Years Industry</b>	<b>Sophomore</b>	<b>Junior</b>	<b>Senior</b>	<b>Masters 1</b>	<b>Masters 2</b>
32	0	32	0	0	0
32	0	0	32	0	0
13	0	13	0	0	0
5	0	5	0	0	0
16	16	0	0	0	0
16	16	0	0	0	0
16	16	0	0	0	0
23	0	23	0	0	0
36	0	36	0	0	0
35	0	0	35	0	0
35	0	0	35	0	0
...	...	...	...	...	...

For all five of the SET we were able to find a statistically significant regression model as shown in equations (5) through (9). The resulting model contained only one combined variable. This means all other levels of courses taught, when combined with the years that faculty member had spent in industry, did not significantly influence the SET. The most interesting aspect of these models was that the only course level that did impact the SET was courses taught at the Masters 2 level. As hypothesized, this was a positive relationship.

$$(5) y_1 = 4.35 + 0.013 * M2 * Industry + \epsilon$$

$$(6) y_2 = 4.43 + 0.004 * M2 * Industry + \epsilon$$

$$(7) y_3 = 4.24 + 0.003 * M2 * Industry + \epsilon$$

$$(8) y_4 = 4.37 + 0.014 * M2 * Industry + \epsilon$$

$$(9) y_5 = 4.42 + 0.012 * M2 * Industry + \epsilon$$

### Industry and Course Department

New combined variables were created for this analysis just as they were for the previous section. The resulting regression formulas were found significant for all five of the SET with two departments indicating they contribute to the SET. In all cases Marketing had a positive contribution and Accounting had a negative contribution when combined with years in industry. This supported our hypotheses for these two departments. The regression formulas are shown in equations (10) through (14).

$$(10) y_1 = 4.36 - 0.008 * Acct * I + 0.008 * Mktg * I + \epsilon$$

$$(11) y_2 = 4.44 - 0.007 * Acct * I + 0.005 * Mktg * I + \epsilon$$

$$(12) y_3 = 4.28 - 0.014 * Acct * I + 0.011 * Mktg * I + \epsilon$$

$$(13) y_4 = 4.38 - 0.007 * Acct * I + 0.008 * Mktg * I + \epsilon$$

$$(14) y_5 = 4.42 - 0.006 * Acct * I + 0.008 * Mktg * I + \epsilon$$

## Years Teaching and Course Level

Initially we were unsure of how to pre-suppose this combined hypothesis due to the conflicting research with negative relationships with years teaching and SET and positive relationships with the higher the course. We chose to hypothesize higher SET ratings with the higher level courses. The results with this combined variable that takes years of teaching into consideration with the level of the course supports these hypotheses.

Although the variables remaining in this teaching model are not as consistent as with the industry model, there was one variable that was in all the models. Masters 2 was always a positive contributor to the SET with longer years teaching; however, in two of the models a lower level course was a detractor in the model. As the amount of the positive contribution of the Masters 2 was greater than the negative detraction of the other courses, we suppose that our hypotheses are supported. Each of the five SET regression models are shown in equations (15) through (19) below.

$$(15) y_1 = 4.35 + 0.031 * M2 * T + \varepsilon$$

$$(16) y_2 = 4.43 + 0.024 * M2 * T + \varepsilon$$

$$(17) y_3 = 4.24 - 0.008 * M1 * T + 0.036 * M2 * T + \varepsilon$$

$$(18) y_4 = 4.37 - 0.005 * J * T + 0.029 * M2 * T + \varepsilon$$

$$(19) y_5 = 4.417 + 0.028 * M2 * T + \varepsilon$$

## Years Teaching and Course Department

This was the most complex of our research to set our hypotheses, but we chose to follow the same pattern and pre-suppose that the course department would outweigh the years of teaching. As is shown in the regression equations (20) – (24), these hypotheses were supported for those we supposed would have a negative impact on SET. In all models both Accounting and Finance had a negative impact and in two of the models MIS also had a negative impact on SET; however, neither Marketing or Management (those we supposed would have a positive impact on SET) were significant in any of our regression models for the five SET.

$$(10) y_1 = 4.43 - 0.011 * Acct * T - 0.016 * FIN * T - 0.022 * MIS * T + \varepsilon$$

$$(11) y_2 = 4.47 - 0.007 * Acct * T - 0.011 * FIN * T + \varepsilon$$

$$(12) y_3 = 4.37 - 0.018 * Acct * T - 0.022 * FIN * T - 0.019 * MIS * T + \varepsilon$$

$$(13) y_4 = 4.42 - 0.007 * Acct * T - 0.016 * FIN * T + \varepsilon$$

$$(14) y_5 = 4.46 - 0.009 * Acct * T - 0.010 * FIN * T + \varepsilon$$

## Summary

In general, the results of this study did not indicate statistical evidence which negated any of the hypothesis; many of our hypothesis were statistically supported. Results indicated a positive correlation between the length of industry experience and higher SET in relation to one's availability to students and to work effectively with Graduate students as well as that the longer one teaches the lower SET will be in regards to one's ability to effectively communicate, define course objectives, and be available to students. The level of the course was found to impact SET in that lower level courses tend to receive lower SET; the department of the course was found also to impact SET in that courses in Accounting, Finance, and Management Information Systems were found to have across the board lower SETs than courses in Marketing and Management. Finally,

we found that when combined with years of industry experience or years of teaching experience, the patterns related to course level and department held thus indicating that experience is not as important to SET as is the course level or department.

## CONCLUSION

We begin by acknowledging that this study was limited by the available information not only of the SET but also the qualification of professional experience. Future research would benefit from the use of individual student evaluations to allow structured equation modeling (SEM) of variance in the data. Research would also benefit by being able to verify the length and type of industry experience held by the instructor as well as the type of teaching experience of the instructor, such as time spent in a different type of institution than the current one of evaluations. Despite these limitations, our study does make a significant contribution in this area as it is the first to discuss, to our knowledge, the impact of industry experience on one's SET along with being one of relatively few that utilized years of teaching experience as a variable. This study is also significant in that it adds to the very small amount of literature that is focused on the business college. Along with this, we noted in our study preparations that a preponderance of studies discussing SET do not use the actual evaluations administered by the institution but rather utilized independent instruments administered by the researchers. Though sometimes difficult to obtain, future research would benefit greatly from using the original, institutionally administered SET from additional universities, both domestic and international, at all levels, to validate the results of this study.

While it might be tempting to add the findings of this study to the body of literature that argues the invalidity, or at least the disconnect, of SET to actual teaching quality, a better use of the findings is that one standardized set of evaluations used across campus places some faculty more directly in line to fail. As this study confirmed prior research (Uttl & Smibert, 2017) that those teaching quantitative based courses receive the lowest levels of SET, institutions should explore the use of more tailored SET, or at least a scaled version of SET, for those teaching in quantitative courses as well as those teaching in more theory-based courses as to remove potential biases and to allow evaluation of instructors based on their actual subject matter rather than a generic instrument. This is a particularly important factor when one considers the tenure and promotion system and that while within the business college, the SET numbers can be interpreted per class, once the promotion decision reaches the institutional level, the trend of lower SET in quantitatively based classes may not be understood.

The finding that industry experience is positively correlated only to availability to students brings up an important question for business colleges: why is it that we want our faculty to have more industry experience? Being a college professor is in itself a profession, one that requires years of training and experience to achieve. With an already lengthy educational process needed to begin an academic career, the addition of industry experience, and the time and necessary career change added by that experience, might serve to only discourage otherwise qualified candidates for the profession from pursuing it. Future research needs to investigate not only why someone would want to leave industry to pursue an academic career but also why colleges would specifically seek someone who did this. Specific to the findings of this study, research needs to further investigate exactly what impact being available to students actually brings to the campus (eg: involvement, retention, satisfaction) and the development of the students.

The results indicating lower SET correlated to the longer one teaches should be of particular concern. Not only does the institution need to be concerned about the potential decline of work performance over time but also the potential impact that long serving faculty might have on the retention and graduation rates of students. Future research would benefit from the exploration of the continuance rates of students in the areas of retention in relation to their experiences with long serving faculty. A particular study of interest might be the impact of long serving faculty on a student's decision to change their major.

The positive correlation between SET with teaching Marketing and with the SET at the Graduate 2 level also lends itself well to future research. Of the course departments studied, the field of Marketing would be considered the most dynamic and the most susceptible to change (Kotler, 1997). Future research would benefit from deeper investigation into what specific characteristics of those teaching Marketing make them appealing to students along with what aspects of their industry experience allow them to make a positive impact in Graduate courses that is not present when considering undergraduate courses.

Finally, but of equal importance within this study is the impact of course level on faculty SET. As stated by Hippensteel and Martin (2005), often junior faculty, those just entering the tenure system, are placed in lower level introductory or service courses. Given that lower SET are seen in lower level courses, this practice may be unintentionally sabotaging the potential advancement of junior faculty who depend on SET in promotion and tenure decisions. Additional research is certainly appropriate into the potential impact on career progression when evaluated teaching lower level courses.

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## **PREDICTING BITCOIN RETURN AND VOLATILITY USING GOLD AND THE STOCK MARKET**

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### **ABSTRACT**

There is significant interest in the growth and development of cryptocurrencies, the most notable being Bitcoin. Interest in such currencies is global, the price movements is said to be highly speculative and “bubble-like”. Since these cryptocurrencies trade like stocks, provide alternative to gold, and appreciate during uncertain times, it can be hypothesized that their prices are partly determined by the stock index, gold prices, and the fear gauge (VIX). In this paper, we test this hypothesis by conducting time-series analysis of the returns and volatilities of Bitcoin price, Stock market (S&P 500 index), and gold price. We use the Autoregressive-moving-average model with exogenous inputs model (ARMAX), Generalized Autoregressive conditionally heteroscedastic (GARCH) model, Vector autoregression (VAR) model, and Granger causality tests to determine linkages between the S&P500, gold, Bitcoin prices, and their respective returns, and volatilities. We find that Bitcoin’s volatility (a proxy for risk) is easier to forecast compared to the return, physical gold returns can influence Bitcoin returns, and Bitcoin is an uncorrelated asset class to stocks and gold.

JEL classification: G11, G17

*Keywords:* asset management; alternative investments; digital currency; crypto currency; bitcoin

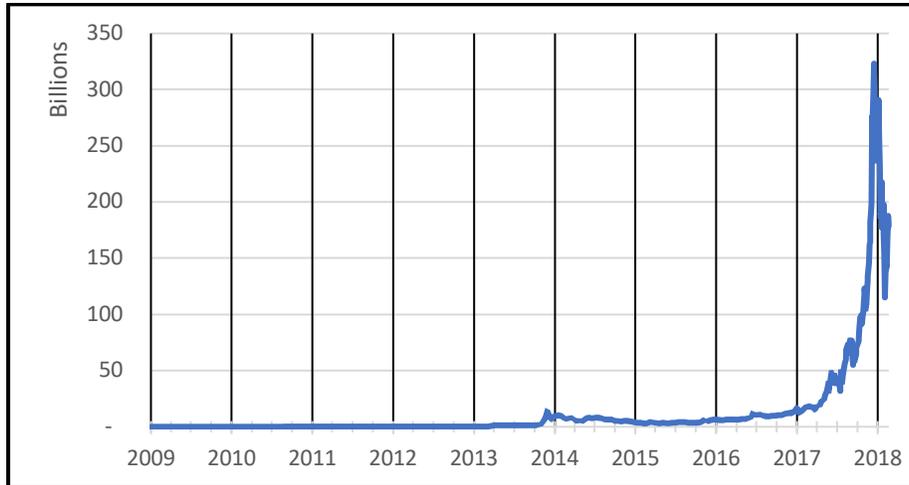
### **INTRODUCTION**

Bitcoin is a consensus network that enables a new payment system and is considered a completely “digital currency.” It is the first decentralized peer-to-peer payment network that is powered by its users with no central authority or middlemen (bitcoin.org [2019]). Bitcoin has had an astounding rise in popularity in recent times. Many believe that it is the currency of the future, and the rise in its price has been attributed to its limited supply. Nakamoto (2008) is said to be the pioneer behind this cryptocurrency. New transactions are announced on a computer network by Bitcoin users connected via internet, and these transactions are verified by network nodes. The transactions are then recorded in a public distributed ledger called the Blockchain. Bitcoins are awarded to miners or users who offer their computing power to verify and record transactions into the blockchain.

As of February 2018, more than 100 million transactions from 23 million digital wallets based in 140 countries are processed by the Blockchain (blockchain.com [2018]). As shown in Figure (1), since Bitcoin’s introduction in 2009, the Bitcoin market capitalization grew rapidly from less than

a billion USD in 2013 to more than \$323 billion in December 2017, after contracting to \$177 billion in February 2018 (coinmarketcap.com [2018]). Blockchain transactions have increased from a negligible amount in the year 2010 to \$3 Billion USD in February 2018 (blockchain.info [2018]). Bitcoins are exchangeable into other currencies, products, and services. Bitcoin has the largest market capitalization among all cryptocurrencies, but its market capitalization is still a small fraction of all other currencies in circulation. As an example, more than \$1.6 Trillion USD are in circulation at the end of 2017 (FRED [2018]).

Figure 1. Market capitalization of Bitcoin in billion \$USD



Many studies have been conducted on the volatility of Bitcoin and have concluded that Bitcoin prices tend to be more volatile than those of standard, non-crypto currencies. In this study, we investigate if equity prices or gold prices influence Bitcoin prices (considered by some as digital gold). Specifically, we want to investigate the linkages between the S&P500 index, gold, Bitcoin prices, and their respective returns and volatilities. The relationship between volatility, a measure of fear and uncertainty in the economy, and Bitcoin prices is of particular interest in this study.

We find that Bitcoin volatility can be modeled accurately using the GARCH model, gold returns explain Bitcoin returns, and Bitcoin is an uncorrelated asset to stocks and gold. Our models developed in this paper forecast the direction of returns accurately but miss the magnitude. However, our models forecast the direction as well as the magnitude of volatility accurately.

In section 2, we conduct a Bitcoin literature overview. Section 3 explains description of data and methodology used in this study. Results are discussed in Section 4. Section 5 contains conclusions and directions for future research.

### **LITERATURE ON THE FACTORS INFLUENCING BITCOIN RETURNS AND VOLATILITIES**

Recently, many studies have been conducted to understand the factors influencing Bitcoin returns and volatilities. Financial asset return predictability is of great interest in the financial literature as summarized by Golez and Koudijs (2016). Empirical evidence suggests that stock returns are

indeed partially predictable (Campbell and Shiller 1988; Fama and French 1988; Cochrane, 2008; Binsbergen and Koijen 2010). With the advent of Bitcoin, researchers have extended the investment asset universe by adding Bitcoin. For an introduction to the role of money and artificial currencies, see Noga (2018).

### **Factors Influencing Bitcoin returns**

There are few studies on Bitcoin prices, and how those prices move. The most recent study on Bitcoin prices was conducted by Cheah et al (2018). They model cross-market Bitcoin prices as long-memory processes and dynamic inter-dependence in a fractionally cointegrated VAR framework. Their findings suggest that there is long-memory in both individual market and five-market systems indicating non-homogeneous informational inefficiency and a cointegration relationship with slow adjustment of shocks.

Other studies, namely Cheah and Fry (2015) and Katsiampa (2017) report that the recent volatility in Bitcoin prices is an outcome of market sentiments, where the latter can be associated with significant “memory.” According to those studies, the “memory” of shocks of Bitcoin prices are semi-important determinants of Bitcoin prices. Dyhrberg (2016a) found that Bitcoin can be an ideal tool for risk-averse investors as a buffer against negative shocks to the market, whereas Dyhrberg (2016b) found that Bitcoin can serve as a hedge against market specific risk.

Van Wijk (2013) found that most of the Bitcoin price influencing variables are related to the U.S. economy. Using daily and weekly data within a DCC model (Engle, 2002), Bouri, et al (2017) showed that Bitcoin can serve as an effective diversifier for most of the cases. Ciaian, et al (2016) found that market forces of Bitcoin supply and demand, arrival of additional information (trust), and speculators are three key drivers of Bitcoin prices. In addition, they did not support previous findings that the global macro-financial development might be driving Bitcoin price.

In this paper, we extend the existing literature by adding the influence of fear and uncertainty in the markets, as measured by the VIX index and physical gold spot prices on Bitcoin prices.

### **Factors Influencing Bitcoin volatilities**

Using the GARCH analysis, Dyhrberg (2016a) found that Bitcoin can combine some of the advantages of both commodities and currencies. Guo and Fantulin (2018) investigate the volatility of Bitcoin and try to predict short-term prices using volatility and trade order book data. Catania et al (2018) tried to predict the conditional volatility of four major cryptocurrencies (Bitcoin, Ripple, Ethereum, and Litecoin). Estrada (2017) found that there exists a bidirectional Granger-causality relationship between Bitcoin realized volatility and the VIX at the 5% significance level.

We take this approach further by incorporating VIX, gold realized volatility (GVOL), and Bitcoin realized volatility (BVOL) as computed by BitMEX (BitMEX [2018]). Kambouroudis and McMillan (2016) found that adding exogenous variables to forecast volatility improves forecast power. We contend that Bitcoin volatility is both exogenous and endogenous. Reason for this belief is that Bitcoin is an artificially derived product created through a computer intensive process. Investors believe that supply of Bitcoins is limited to 21 million out of which 16.8 million are mined as of 01/2018 (Redman [2018]). Since the supply of Bitcoins is potentially fixed, the entire

price movement is primarily determined by the demand. Since Bitcoin is considered a ‘digital gold’, BVOL contains exogenous factors (that can be explained by GVOL) and endogenous (i.e. Bitcoin’s demand-side unsystematic risk).

## DATA AND METHODOLOGY

### Data

We collected daily data on Bitcoin prices in USD from Coindesk (coindesk.com [2018]), VIX closing prices from CBOE (Cboe [2018]), and Gold prices in USD from World Gold Council (GOLDHUB [2018]). The window of analysis is from July 19, 2010 (earliest Bitcoin price available on Coindesk) to February 16, 2018 (most recent). We captured the VIX jump that occurred between February 6<sup>th</sup> and 12<sup>th</sup>, 2018. We could have used other alternative digital currencies (such as Ripple, Ethereum, and Litecoin), but decided against it deliberately for two reasons; a) to have a wider data window since some of these digital currencies were released after 2015; and b) others are less significant (i.e. Bitcoin market cap is greater than that of the next 100 combined).

### Methodology

Bitcoin prices are available on all seven days of the week. However, gold prices and VIX data are available on US working days. So, VIX dates (from CBOE trading days) are used as a baseline and data for other dates are removed from the dataset. As a result, we have 1,911 observations of prices between 7/19/2010 and 2/16/2018. Daily returns are computed using  $\ln(P_1/P_0)$  formula where  $P_1$  is today’s closing price and  $P_0$  is previous trading day’s closing price. Bitcoin volatility is computed using the annualized realized volatility approach of the BitMex (BitMEX [2018]). We computed the 30-day historical volatility index (referred to as the BVOL Index). The Index is a rolling 30 day annualized (365-day) volatility of the daily (11:30 UTC to 12:00 UTC) Time Weighted Average Price (TWAP) of Bitcoin in USD. To be consistent in the implied volatility computations, we used the same BVOL approach to compute gold volatility (GVOL). Due to 30-day rolling average calculations, the sample size of volatilities is 1,884. Summary statistics and historical overview of Bitcoin, Gold, and S&P500 returns and volatilities are provided below in Figures (2) and (3), and Tables (1) and (2). Bitcoin returns are very volatile compared to those of gold and stock market. In addition, BVOL jumps do not coincide with those of GVOL and VIX.

Table 1. Summary Statistics of Bitcoin, Gold, and S&P500 returns and volatilities from 07/19/2010 to 02/16/2018

	BITCOIN_R	GOLD_R	SP500_R	BVOL	GVOL	VIX
<b>Mean</b>	0.64%	0.01%	0.05%	105.39%	18.87%	16.48
<b>Median</b>	0.22%	0.00%	0.06%	91.15%	17.15%	15.10
<b>Maximum</b>	49.97%	4.84%	4.63%	320.16%	46.98%	48.00
<b>Minimum</b>	-44.38%	-9.60%	-6.90%	0.00%	6.98%	9.14
<b>Std. Dev.</b>	6.57%	1.05%	0.90%	64.49%	6.87%	5.62
<b>Skewness</b>	0.14	(0.56)	(0.57)	1.12	1.42	1.92
<b>Kurtosis</b>	11.22	9.62	8.43	3.81	5.13	7.75
<b>Jarque-Bera</b>	5,305	3,539	2,416	446	985	2,929
<b>Observations</b>	1884	1884	1884	1884	1884	1884

Table 2: Correlogram of Bitcoin, Gold, and S&P500 returns and volatilities from 07/19/2010 to 02/16/2018

	BITCOIN_R	GOLD_R	SP500_R		BVOL	GVOL	VIX
<b>BITCOIN_R</b>	1	0.05	0.06	<b>BVOL</b>	1	0.34	0.29
<b>GOLD_R</b>	0.05	1	-0.02	<b>GVOL</b>	0.34	1	0.45
<b>SP500_R</b>	0.06	-0.02	1	<b>VIX</b>	0.29	0.45	1

Figure 2. Historical returns of Bitcoin, Gold, and S&P500 from 07/19/2010 to 02/16/2018

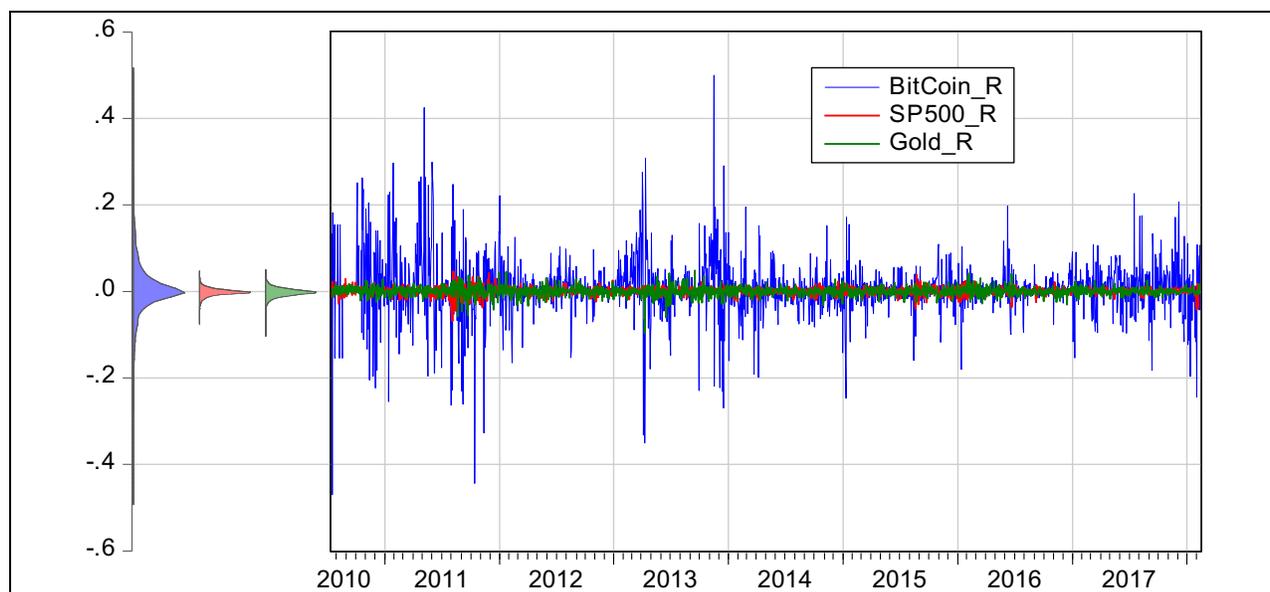
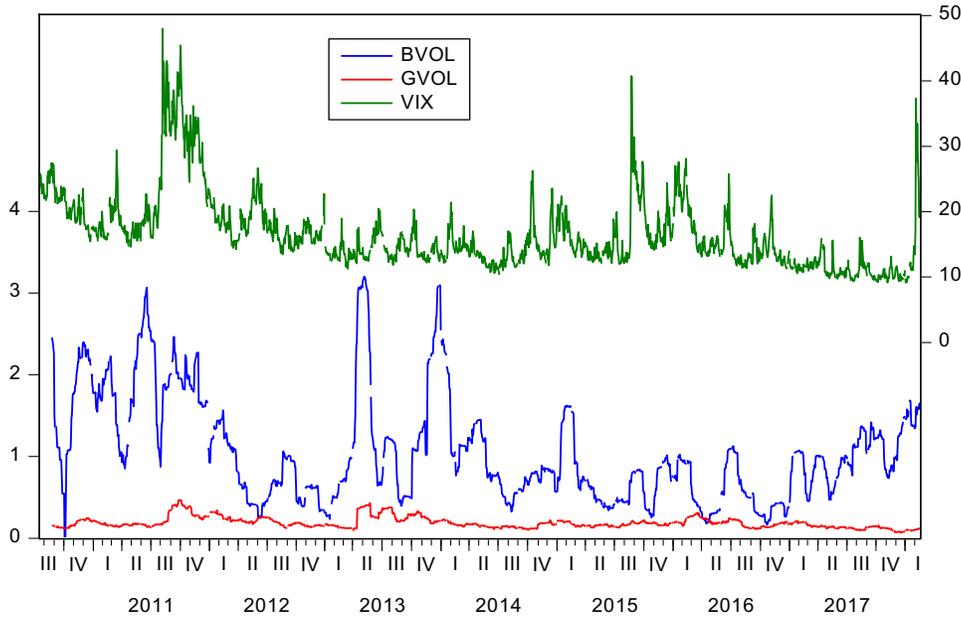


Figure 3. Historical volatility of Bitcoin, Gold, and S&P500 from 07/19/2010 to 02/16/2018. (BVOL and GVOL on the left axis and VIX on the right axis)



First, we use a basic multiple regression to determine if Bitcoin daily returns can be explained by the daily returns of the S&P500 and gold using Equation (1). We then test for serial correlation in Bitcoin returns and use the ARMAX (p, q, b) model from Baillie (1980) to explain Bitcoin returns using Equation (2), where p is autoregressive term, q is moving average term and b is exogenous inputs term.

$$Bitcoin\_R_t = C_t + SP500\_R_t + Gold\_R_t \quad - \text{Eq. (1)}$$

$$Y_t(p, q, b) = \sum_{i=1}^p \phi_i Y_{t-i} + \sum_{i=1}^q \theta_i v_{t-i} + v_t + \sum_{i=1}^b \beta_i X_{it}$$

where  $Y_t$ , or  $Bitcoin\_R_t$ , is a stationary time series, - Eq. (2)

$v_t$  is a white noise process with  $E(v_t) = 0; E(v_t^2) = \sigma^2; E(v_t v_s) = 0, t \neq s$  and  $X_t$  is an exogenous variable.

Second, we switch our focus from Bitcoin returns to Bitcoin volatilities (BVOL) to determine if BVOL can be explained by the volatilities of the S&P500 (VIX) and gold (GVOL) using a GARCH (p, q), model as developed by Engle (1982) and Bollerslev (1986) using Equation (3).

$$\sigma_{BVOL(t)}^2 = \alpha_0 + \sum_{i=1}^p \beta_i \sigma_{BVOL(t-i)}^2 + \sum_{j=1}^q \alpha_j \mu_{t-j}^2 \quad - \text{Eq. (3)}$$

where  $\sigma_{BVOL(t)}^2$  is the conditional variance of  $\mu_t$  since it is one period ahead estimate based on past information, and  $\mu_t \sim N(0, \sigma_{BVOL(t)}^2)$ .  $\alpha_j$  and  $\beta_i$  are positive to ensure that conditional variance is

positive. When  $q=0$ , the GARCH model reduces to the ARCH model.  $Y_t = C + \mu_t$  where  $C$  is the mean of  $Y_t$ , and  $\mu_t$  is i.i.d. with mean zero. To allow for conditional heteroscedasticity,  $Var_{t-1}[\mu_t] = \sigma_t^2$ .

Third, Vector Autoregression (VAR), a stochastic process model, is used to capture the linear interdependencies among multiple time series (returns of Bitcoin, S&P 500, and Gold). Given any two-stationary series ( $y_1$ ) and ( $y_2$ ), we can test if ( $y_1$ ) causes ( $y_2$ ) by checking how much of the current ( $y_2$ ) can be explained by past values of ( $y_2$ ) and then checking to see whether addition of lagged values of ( $y_1$ ) can help improve the explanation. In other words, if the coefficients on the lagged ( $y_1$ )'s are statistically significant, ( $y_2$ ) is said to be Granger caused by ( $y_1$ ). According to Sims (1980), if there is simultaneity among a number of variables, then all these variables should be treated in the same way. In other words, there should be no distinction between endogenous and exogenous variables. Therefore, once this distinction is abandoned, all variables are treated as endogenous. This means that in its general reduced form, each equation has the same set of regressors, which leads to the development of VAR models. The VAR model approach has some desirable characteristics as outlined in Asteriou (2011). VAR models generalize the univariate AR model by allowing for more than one evolving variable. All variables in a VAR enter the model in the same way: each variable has an equation explaining its evolution based on its own lagged values, the lagged values of the other variables, and an error term. VAR model does not require as much knowledge about the forces influencing a variable as do structural models with simultaneous equations. The only prior knowledge required is a list of variables which can be hypothesized to affect each other intertemporally. We use a  $P^{\text{th}}$  order VAR, denoted by VAR(p) or  $Y_t$ , as shown in Equation (4).

$$Y_t = C + \Pi_1 Y_{t-1} + \Pi_2 Y_{t-2} + \dots + \Pi_p Y_{t-p} + \mu_t, \quad t = 1, \dots, T$$

where  $Y_t = (Y_{1,t}, Y_{2,t}, \dots, Y_{n,t})'$  is a  $k \times 1$  vector of time series variables,  $\Pi_i$  are  $k \times k$  matrices of coefficients,  $C$  is a  $k \times 1$  vector of constants, and  $\mu_t$  is a  $k \times 1$  unobservable white noise vector process.  $E(\mu_t) = 0, E(\mu_t \mu_{t-k}') = 0$  for any non-zero  $k$ . - Eq. (4)

Bitcoin return in a VAR(p) model is treated as being contemporaneously exogenous matrix  $Y_t$ , as shown in Equation (5).

$$Y_t = \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix} \begin{pmatrix} \text{BitCoin\_R} \\ \text{SP500\_R} \\ \text{Gold\_R} \end{pmatrix} \quad \text{- Eq. (5)}$$

Finally, we test for Granger causality among our variables. Granger causality (1969) has been used extensively to test the direction of causality between two variables. Before conducting any tests on Granger causality, it is important to study the time series properties of our variables. Granger and Newbold (1974) posit that spurious regression problems occur if there is non-stationarity in data, and this leads to unreliable correlations within regression analysis. We determine if our data is stationary and cointegrated by testing for unit roots in the data using Augmented Dickey-Fuller

Tests. Based on the results of unit roots tests, we then test for cointegration using Johansen's (1991) methodology.

## RESULTS

In this section, we summarize the results based on the methodology described in Section 3. We focus on forecast accuracy of returns, volatilities, and causality. We show in the next three subsections that Bitcoin returns are difficult to predict, Bitcoin volatility can be estimated using a GARCH model, and gold returns have "Granger caused" Bitcoin returns.

### Bitcoin return

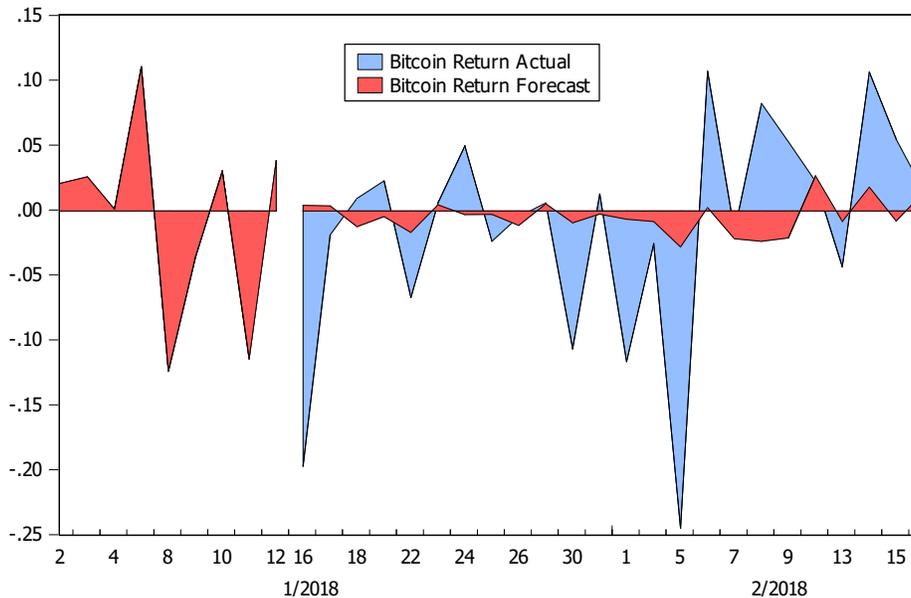
As expected, prices are non-stationary for all three asset classes (i.e. Bitcoin, S&P500, and Gold) used in this study. However, returns are stationary at the 5% significance level for all of them. Consequently, we used an ARMAX model to forecast returns. ARMAX models contain autoregressive (AR), moving average (MA), and additional explanatory variables (ex: gold) guided by economic theory. Compared to a multiple regression model (which does not account for AR and MA components), we found that ARMAX (4,4,2) model best describes Bitcoin returns using in-sample and out-of-sample analysis. Bitcoin returns are clustered as shown in Table (3), and we notice strong auto correlation and moving average coefficients for four days in the forecast. Forecasting Bitcoin returns, a highly volatile series with a standard deviation 10 times higher than mean,  $\sigma_t = 10 \times \mu_t$ , is challenging.

We used out-of-sample forecasting method and split the available data (from 7/19/2010 to 2/16/2018) into two groups. Data from 7/19/2010 to 1/16/2018 are used for model estimation and from 1/16/2018 to 2/16/2018 are used for model forecasts. Actual and forecasted value of bitcoin returns are shown in Figure (4). It is quite evident that the model forecasts direction of returns accurately but misses the magnitude. It appears that Bitcoin return predictability is not an easy job. Our finding is in line with Welch and Goyal (2008) who found that by and large, predictors of the equity premium models have predicted poorly both in-sample (IS) and out-of-sample (OOS) over a thirty-year period until 2008. Our findings are also consistent with the findings of Bariviera (2017, p. 7) who found that Bitcoin daily return after 2014 "seems to be compatible with a white noise". Finally, another similar finding is reported in Balcilar, Bouri, Gupta, and Roubaud (2017, p. 19) who stated that "when the market is performing well or poorly, all that matters for predicting future returns is past values, and thus information about volume is irrelevant." Since Bitcoin prices as shown in Figure (1) illustrate abnormal price hikes and crashes, even adding volume as a predictor will not help in forecasting Bitcoin returns. Our method goes beyond the bivariate method used by Balcilar et al (2017, p. 20) in that we use multivariate approach and check the robustness of results using out-of-sample forecast.

Table 3. Bitcoin Return forecast based on the ARMAX (4,4,2) model from 07/19/2010 to 01/16/2018. Dependent Variable: BITCOIN\_R, Method: ARMA Maximum Likelihood (OPG - BHHH), observations: 1887, Convergence achieved after 111 iterations

Variable	Coefficient	Std. Error	t-Statistic	Prob.
<b>C</b>	0.0059	0.0027	2.1708	0.0301
<b>SP500_R</b>	0.3119	0.1317	2.3684	0.0180
<b>GOLD_R</b>	0.3628	0.1147	3.1631	0.0016
<b>AR (1)</b>	(0.3777)	0.0927	(4.0723)	0.0001
<b>AR (2)</b>	0.1825	0.0971	1.8793	0.0604
<b>AR (3)</b>	0.2632	0.0868	3.0308	0.0025
<b>AR (4)</b>	0.6369	0.0918	6.9366	0.0001
<b>MA (1)</b>	0.3861	0.0986	3.9181	0.0001
<b>MA (2)</b>	(0.1705)	0.1041	(1.6381)	0.1016
<b>MA (3)</b>	(0.2019)	0.0908	(2.2227)	0.0264
<b>MA (4)</b>	(0.5269)	0.0960	(5.4897)	0.0001
<b>SIGMASQ</b>	0.0043	0.0001	65.6094	0.0001
<b>Log likelihood</b>	2,458.37	<b>Prob(F-statistic)</b>	0.0001	
<b>F-statistic</b>	5.5555	<b>Durbin-Watson stat</b>	1.9488	

Figure 4. Realized and estimated Bitcoin returns from 1/16/18 to 2/16/18



As described in detail by Brownlees, et al (2011), realized volatility models often demonstrate excellent forecasting performance. So, we turn our attention to forecasting volatilities in the next subsection.

## Bitcoin volatility

Return volatility is central to financial economics. Andersen et al (2006) provide a comprehensive theoretical overview on volatility forecasting. Volatility is inherently unobserved, or latent, and evolves stochastically through time. Not only is there nontrivial uncertainty to deal with in financial markets, but the level of uncertainty is latent. The current interest in volatility modeling and forecasting was spurred by Engle’s (1982) ARCH paper, which set out the basic idea of modeling and forecasting volatility as a time-varying function of current information. The GARCH class of models, of which the GARCH (1,1) remains the workhorse, were subsequently introduced by Bollerslev (1986), and discussed independently by Taylor (1986). We compute Bitcoin realized volatilities as described in Section 3.B using both the GARCH (1,1) and ARMAX (3,1,2) models. To be consistent, we use the same methodology to compute volatility on gold prices and use VIX as a proxy for stock volatility. Results of the GARCH (1,1) and ARMAX (3,1,2) models are shown in Tables (4) and (5).

Table 4. Bitcoin volatility forecast based on the GARCH (1,1) model from 07/19/2010 to 01/16/2018. Method: ML ARCH, normal distribution (BFGS/Marquardt)  
 Included observations: 1910 after adjustments, Convergence achieved after 22 iterations  
 $GARCH = C (1) + C (2) *RESID (-1) ^2 + C (3) *GARCH (-1)$

Variance Equation	Coefficient	Std. Error	z-Statistic	Prob.
<b>C</b>	0.0001	0.0000	7.5371	0.0000
<b>RESID (-1) ^2</b>	0.1669	0.0100	6.7337	0.0000
<b>GARCH (-1)</b>	0.8289	0.0067	23.0956	0.0000
<b>Log likelihood</b>	2,880			
<b>Durbin-Watson stat</b>	1.908			

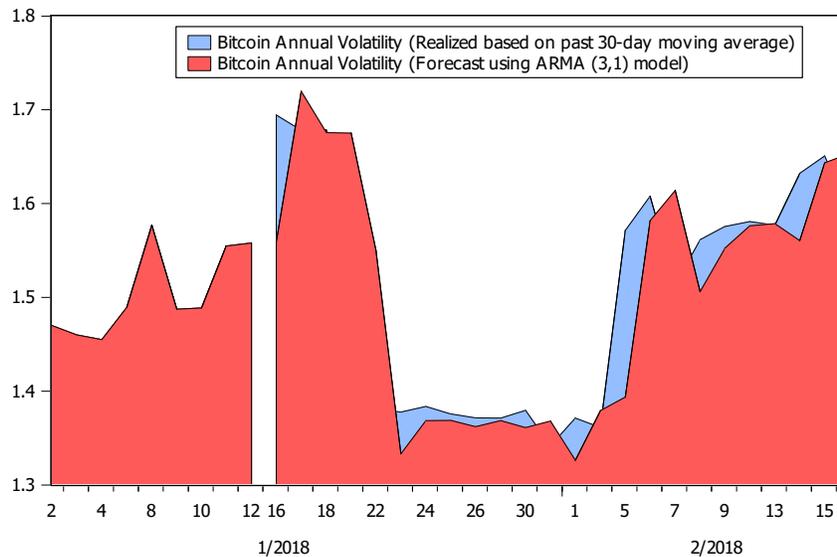
GARCH coefficient of 0.8289 indicates Bitcoin volatility clustering, or large values of  $\sigma_{BVOL(t-1)}^2$  are followed by large values of  $\sigma_{BVOL(t)}^2$  and small values of  $\sigma_{BVOL(t-1)}^2$  are followed by small values of  $\sigma_{BVOL(t)}^2$ . A further analysis using T-GARCH (1,1,1) model (results not shown here, but available from authors) shows that threshold term is negative, indicating that negative shocks (good news) decrease the volatility or positive shocks (bad news) increase the volatility. The impact of positive shocks (bad news) is more severe and therefore causes more volatility. As shown in Table (2), correlation between BVOL and GVOL is 0.34 and between BVOL and VIX is 0.29. It implies that a significant part of Bitcoin volatility is unrelated to those factors that cause stock price volatility or gold volatility. Since Bitcoin is considered a ‘digital gold’, any BVOL that can’t be explained by GVOL must be originating from Bitcoin’s demand-side unsystematic risk.

Table 5. Bitcoin volatility forecast based on the ARMAX (3,1,2) model from 07/19/2010 to 01/16/2018. Method: ML ARCH, normal distribution (BFGS/Marquardt)  
 Included observations: 1910 after adjustments, Convergence achieved after 22 iterations  
 $BVOL = C + C(2)*VIX + C(3)*GVOL + [AR(1)=C(4),AR(2)=C(5),AR(3)=C(6),MA(1)=C(7)]$

Variable	Coefficient	Std. Error	t-Statistic	Prob.
<b>C</b>	0.9544	0.1463	6.5223	0.0001
<b>VIX</b>	0.0022	0.0008	2.7792	0.0055
<b>GVOL</b>	0.5455	0.0919	5.9348	0.0000
<b>AR (1)</b>	2.0626	0.0494	41.7832	0.0000
<b>AR (2)</b>	(1.2035)	0.0746	(16.1372)	0.0000
<b>AR (3)</b>	0.1388	0.0267	5.1979	0.0000
<b>MA (1)</b>	(0.8529)	0.0443	(19.2362)	0.0000
<b>SIGMASQ</b>	0.0056	0.0001	101.9265	0.0000
<b>Log likelihood</b>	2,186	<b>Hannan-Quinn criter.</b>	(2.3317)	
<b>Probability of F-stat.</b>	0.0000	<b>Durbin-Watson stat</b>	2.0002	

Next, we use out-of-sample forecasting method with training data from 7/19/2010 to 1/16/2018 and forecast BVOL from 1/16/2018 to 2/16/2018. Actual and forecasted values of are shown in Figure (5). It is evident that the model forecasts both the direction and the magnitude of volatility. Forecasting Bitcoin volatility is more precise compared to its returns.

Figure 5. Realized and estimated Bitcoin volatility from 1/16/18 to 2/16/18



### VAR and Granger Causality Tests

The VAR model approach has some desirable characteristics as outlined in Asteriou (2011). First, it is very simple. The econometrician does not have to worry about which variables are endogenous or exogenous. Second, estimation is also very simple, in the sense that each equation can be estimated separately with the usual OLS method. Third, forecasts obtained from VAR models are

in most cases better than those obtained from the far more complex simultaneous equation models. Results of the VAR model as specified in Equation (5) are shown in Table (6) below.

Table 6. VAR model estimation of linkages between Bitcoin, S&P 500 and Gold from 07/19/2010 to 02/16/2018. Included observations: 1908 after adjustments  
Standard errors in () & t-statistics in []

	<b>BITCOIN R</b>	<b>SP500 R</b>	<b>GOLD R</b>
<b>BITCOIN R (-1)</b>	0.0338	0.0021	0.0032
	(0.0230)	(0.0031)	(0.0036)
	[ 1.4738]	[ 0.6623]	[ 0.8860]
<b>BITCOIN R (-2)</b>	0.0289	(0.0008)	(0.0030)
	(0.0229)	(0.0031)	(0.0036)
	[ 1.2627]	[-0.2609]	[-0.8376]
<b>SP500 R (-1)</b>	0.0822	(0.0488)	0.0291
	(0.1694)	(0.0230)	(0.0266)
	[ 0.4849]	[-2.1278]	[ 1.0942]
<b>SP500 R (-2)</b>	(0.1324)	0.0240	0.0143
	(0.1695)	(0.0230)	(0.0266)
	[-0.7810]	[ 1.0472]	[ 0.5393]
<b>GOLD R (-1)</b>	0.3825	(0.0028)	(0.0236)
	(0.1464)	(0.0198)	(0.0230)
	[ 2.6129]	[-0.1418]	[-1.0293]
<b>GOLD R (-2)</b>	0.0606	0.0250	(0.0340)
	(0.1466)	(0.0199)	(0.0230)
	[ 0.4135]	[ 1.2605]	[-1.4789]
<b>C</b>	0.0058	0.0005	0.0000
	(0.0015)	(0.0002)	(0.0002)
	[ 3.7340]	[ 2.3622]	[ 0.1936]

We highlight three points from the results. First, only the past gold returns have a statistically significant impact on the Bitcoin returns. One might say that Bitcoin return tracks physical gold return. Second, Bitcoin return does not appear to be influenced by the stock market. One might conclude that investors are not rushing to buy Bitcoins when the stock market turns volatile. Finally, as one would expect, Bitcoin return has no impact on the Stock market return. Bitcoin is still a small fraction of the market cap of the S&P 500 to have any influence on it.

Some researchers such as Blau (2017) tried to discover those factors that influence Bitcoin price boom and bust patterns. As an example, in their study they observed that "Bitcoin remained well below \$20 from September 2010 to the beginning of 2013. In 2013, the value of Bitcoin was as low as \$13 and as high as \$1,132. In the months that followed the spike in Bitcoin's value, the digital currency lost approximately 60% of its value." They tested the assumption that speculative trading was behind the Bitcoin price gyrations. However, they stated that "finding that speculative trading is not driving the presence of excess volatility in Bitcoin is puzzling and suggests that something other than speculation is responsible for the observed bubble in Bitcoin and its

volatility." To shed light on these factors behind Bitcoin returns, we conduct Granger causality tests and show the results in Table (7) below. Results support the previous claim that only gold returns have a statistically significant (at 95% confidence interval) impact on Bitcoin returns. We do not find any other causality effect in either direction. Consequently, we conclude that as shown in Table (6), previous-day gold returns can explain 38.25% of the Bitcoin's current-day returns. The factors behind gold returns (such as a hedge, a safe haven for stocks, not safe haven for bonds, etc.) are explained by other researchers such as Baur and Lucey (2010) and Baur and McDermott (2017). It means that there are additional factors (beyond the stock market, physical gold, speculative trading, and safe haven for stocks) driving Bitcoin returns. Discovering these other factors that drive Bitcoin returns can be a future research topic.

Table 7. VAR model estimation of linkages between Bitcoin, S&P 500 and Gold from 07/19/2010 to 02/16/2018. Included observations: 1908 after adjustments  
VAR Granger Causality/Block Exogeneity Wald Tests

	Chi-square	df	Prob.
<b>Dependent variable: BITCOIN R</b>			
SP500 R	0.8864	2	0.6420
GOLD R	6.9473	2	0.0310
<b>Dependent variable: SP500 R</b>			
BITCOIN R	0.4966	2	0.7801
GOLD R	1.6193	2	0.4450
<b>Dependent variable: GOLD R</b>			
BITCOIN R	1.4420	2	0.4863
SP500 R	1.4313	2	0.4889

## CONCLUSION

In this paper, we conduct time-series analysis of the returns and volatilities of Bitcoin price, Stock market (S&P 500 index), and gold price. We use the Autoregressive-moving-average model with exogenous inputs model (ARMAX), Generalized Autoregressive conditionally heteroscedastic (GARCH) model, Vector autoregression (VAR) model, and Granger causality tests to determine linkages between the S&P500, gold, Bitcoin prices, and their respective returns, and volatilities. Our models developed in this paper forecast the direction of returns accurately but miss the magnitude. However, our models forecast the direction as well as the magnitude of volatility accurately. We also find that Bitcoin volatility is clustered, negative shocks (good news) decrease the volatility, and positive shocks (bad news) increase the volatility. In terms of causality, we find that only past gold returns have a statistically significant impact on the Bitcoin returns and Bitcoin return has no impact on the Stock market return.

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