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# **ADOPTION OF THE BALANCED SCORECARD BY MUNICIPAL GOVERNMENTS: EVIDENCE FROM CANADA**

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## **ABSTRACT**

*This paper examines the evolving adoption of the Balanced Scorecard (BSC) in municipal governments. We conduct a study of the use of BSCs in municipal governments across Canada. Senior administrators are surveyed regarding the use of performance measures and the results are compared to a similar study conducted in 2004. The results show that municipal governments continue to focus primarily on financial metrics. Adopters recognize the value of a BSC and most no longer see the BSC as a fad or as a set of ad-hoc measures. They recognize the BSC is a valuable tool that links the municipality's mission and strategy to objective measures. This paper extends the literature on the BSC by identifying a growing desire to improve performance measurement within Canadian municipalities. In addition, understanding the needs, concerns, and reasons for not implementing a BSC will provide practitioners with the necessary information to develop BSC tools that work for a municipal government.*

**JEL:** M490, H70

**KEYWORDS:** Balanced Scorecard, Public Sector, Performance Measurement

## **INTRODUCTION**

The study of performance measurement systems in the public sector has grown in the last decade with some arguing that measuring performance in the public sector merely commoditizes public services (Goh, 2012; Sanger, 2008; Proper and Wilson, 2003; Smith, 1995) while others argue it is an imperative in today's world of increased transparency and accountability (Brusca and Montesinos, 2016; Goh, Elliott and Richards, 2015; Sharma and Gadenne, 2011). As this dialogue continues to unfold, the reality is the use of performance management systems continues to grow indicating that they are here to stay and therefore worthy of continued study. In the early 1990s, a new strategic performance measurement system, the Balanced Scorecard (BSC) was developed with the intent of moving private sector companies away from strictly financial measures of performance (Kaplan and Norton, 1992). Not surprisingly, within a decade, the BSC expanded to include the public sector (Kaplan and Bower, 1999; Niven, 2003) and it has continued to grow in popularity and acceptance ever since. When the BSC was introduced over 20 years ago, the motivation for its development was to help organizations to better align management activities with strategy. Within the public sector and more specifically municipal governments, the desire to demonstrate alignment between strategy and outcomes continues to grow and thus, the purpose of this study was to determine whether the BSC has gained a foothold within municipal government operations or whether there remains a void between desire and reality.

In this paper we conduct a longitudinal study that compares results from a 2004 study on the use of the BSC (Chan, 2004) to our own survey in 2016. Using the 2004 paper as a starting point we created a survey using the same categories from 2004 and solicit responses from senior administrators across

Canada. The results show marked changes in the perception and use of the BSC from 2004 and will help guide practitioners toward the development of tools to improve performance measurement as well as identifying opportunities for further research in the area of municipal government scorecards. The remainder of the paper is organized as follows: The next section is a review of the literature surrounding performance management in the public sector, BSCs in public sector organizations, and finally BSCs in municipal governments. Next, we discuss our data and the methodology used in this longitudinal study. This discussion is followed by the results obtained. The paper finishes with concluding remarks that include any limitations of this research.

## LITERATURE REVIEW

### Performance Measurement in the Public Sector

In the context of public sector organizations (PSOs) there has been a greater emphasis put on accountability to stakeholders, transparency and decision-making through performance measurement and reporting (Brusca and Montesinos, 2016; Goh, Elliott and Richards, 2015; Sharma and Gadenne, 2011). Taxpayers and other stakeholders are taking a greater interest in municipal programs and the degree to which they are achieving their goals and objectives (Sharma and Gadenne, 2011). While, the public has been demanding greater transparency and accountability, the economy has also been performing rather poorly with interest rates remaining at all-time lows for the much of the past decade. It has been found that during economic and political crises, performance management adoption is accelerated (Mary et al. 2012). Finally, Melitski and Manoharan (2014) found that incorporating performance measurement into budget reports builds public trust.

Notwithstanding the continuous support for performance management, others decry the use of ‘for profit’ methods for determining the value of government. One common complaint is that performance measures can be ‘gamed’ (Goh, 2012; Sanger, 2008; Propper and Wilson, 2003; Smith, 1995). A list of unintended consequences of using performance measures includes: tunnel vision, myopia, measure fixation, sub-optimization, misrepresentation, and misinterpretation (Smith, 1995). Disclosure of performance information has also been found to be a cause for gaming, suppression of information, and manipulation of the data (Sanger, 2008). These concerns, while relevant to the general discussion on performance measurement, are not unique to performance measurement in the public sector. In a recent paper on the implementation of performance reporting in local governments in 17 Western countries it was found that performance reporting is being adopted for three reasons: (1) external pressure in the form of legislation; (2) imitation; and (3) normative considerations by those desiring to adopt a successful model. In addition, the study found that in jurisdictions where specific performance measures are legislated there could be reduced executive and stakeholder buy-in. (Brusca and Montesinos, 2016).

Moullin (2017) summarizes the overall situation extremely well by noting there are numerous papers that discuss the pitfalls and concerns of public sector performance management but none offer any solutions. He then goes on to note that public sector scorecards are an effective means of improving performance in the public sector when the proper management culture is in place. Thus, despite the detractions, the increased interest in the affairs of the public sector, the demand for more information about public spending, and the calls for accountability and transparency indicate that tools for performance measurement within the public sector are a necessity. It has been shown that a leading indicator of future problems and program failure is poor performance management system design and implementation (Sharma and Gadenne, 2011). To combat these sorts of issues, the BSC was identified as being useful in dealing with uncertainty and as tool for risk management (Costa Oliveira, 2014). Thus, it is not surprising to see the BSC as the dominant performance measurement system for the public sector.

The Balanced Scorecard in Public Sector Organizations

Kaplan and Norton first developed the BSC in 1992 as a means of moving beyond using strictly financial measures to measure performance (Kaplan and Norton, 1992). The BSC is a measurement tool that can help an organization effectively incorporate non-financial measures in its performance measurement thereby facilitating the link between the organization's activities and its strategy. Within five years, Kaplan and Norton noted that the BSC was much more than a mere performance measurement system, it was the means through which an organization could translate strategy into action, a theme that helped to develop the BSC into a strategic performance management system (Kaplan and Norton, 1996), a theme that has endured (Kaplan and Norton, 2008, 2007, 2006, 2001).

In the late 1990s, it was noted that the BSC framework was also suitable for public sector performance measurement (Niven, 2003; Kaplan, 2001; Kaplan and Bower, 1999). Since then, the BSC as a public-sector performance management framework has been studied regularly (Adams et al., 2014; Goh, 2012; Northcott and Taulapapa, 2012; Sharma and Gadenne, 2011, Greatbanks and Tapp, 2007, Perera et al. 2007, Chan, 2004). Practitioner acceptance is also noted by the Chartered Professional Accountants (CPA) of Canada publishing a Management Accounting Guideline (MAG) titled Performance Measurement for Not For Profits – The Balanced Scorecard as an approach (Scholey and Schobel, 2016). The CPA MAG details the steps for practitioners to follow to successfully implement a BSC in a not for profit organization (a term that includes government entities).

The public sector BSC differs from the traditional BSC in a number of key ways. The first difference relates to the customer perspective. In the public sector, the customer perspective is typically replaced with a stakeholder perspective. Second, the order of the perspectives is rearranged in the strategy map such that the financial perspective is often found at the bottom of the strategy map rather than the top (Scholey and Schobel, 2016). In the public sector, financial measures play an enabling (through tax revenues), or constraining (through expenditures), role and are not considered the primary objective (Kaplan and Bower, 1999; Schobel and Scholey, 2012). A beneficial attribute of a BSC implementation in the public sector is that it necessitates a clear definition of the organization's strategy and its themes and they propose combining BSC perspectives into strategic themes that help in achieving the mission and creating value (Kaplan and Bower, 1999).

Balanced Scorecards in Municipal Government

While the use of the BSC in the broader public service has been reviewed rather extensively, the use of the BSC by municipalities has not. Chan (2004) conducted one of the first studies of the use of the BSC in municipal governments within the United States and Canada. In a Google Scholar search, this paper has been cited over 300 times including a number of examples of case studies within municipal governments around the world. In Amman, the BSC was determined to have a significant impact on strategic performance (Al-haj Ahmad and Atieh, 2016). In Portugal, while many public-sector organizations, including municipal governments, are reportedly aware of the BSC, its use is still rather limited (Rodrigues Quesado et al., 2014). In Greece, the use of a BSC for a local government sports team increased the perception of quality of the program and is seen as a significant tool for future sustainability of the program (Dimitropoulos et al., 2017). These three examples are but a few of the many uses of the BSC in municipal government and they speak to the growing acceptance of the BSC within municipal performance measurement. Subsequent to the Chan (2004) study, a number of other researchers have looked at performance measurement within municipal governments. Of note, Pollanen (2005) noted a desire by municipal governments for more effectiveness measures relative to efficiency measures but on examination found more efficiency measures than effectiveness one. Abdel-Maksoud et al. (2015) noted that non-financial measures and operational efficiency measures are important for both strategy implementation and assessment purposes. Looking at the Dutch public sector, Spekle and Verbeeten

(2014, p. 143) found that “the exploratory use of performance measures enhances performance”.

Despite clear advocacy for the BSC, Chan (2004) found that all Canadian municipalities indicate limited financial, information system, management and time availability as factors adversely impacting success. Other studies came to similar conclusions with resource allocation issues featuring prominently as a reason for unsuccessful implementation (Northcott and Taulapapa, 2012; Perera et al., 2007). These findings are countered in a study that noted the costs of implementing performance management and measurement systems in smaller municipalities need not be costly with the use of existing tools such as the BSC (Dawe, 2007). The political climate cannot be ignored when discussing the use of the BSC. Political considerations may have adverse consequences on the success of a BSC implementation because those considerations are typically limited to a term of officer whereas the BSC’s stated focus is on long-term outcomes (Chan, 2004). A BSC implementation necessitates targets that can easily be perceived as being punitive for the municipal labour force (Dawe, 2007) which in turn are not considered politically expedient (Perera et al. 2007). In addition, there is a tendency after elections to discard efforts of previous administrations (Gomes and Lirio, 2014). Bursca and Montesinos (2016) also found that the use and effectiveness of performance measures is curtailed by political interference in organizations that fail to incorporate and systematize them as part of routine business. All this to say, the ups and downs of municipal politics may have a direct impact on successful implementation of a BSC.

Other challenges for municipal government include the identification of performance indicators. This process is a particularly challenging and time intensive exercise and many municipalities struggle to even identify appropriate objectives along each of the perspectives (Northcott and Taulapapa, 2012). One means to address this BSC implementation concern is by researching case studies and best practices, attending seminars and training sessions, and engaging subject matter experts (Northcott and Taulapapa, 2012; Dawe, 2007). Ultimately, the finding is that training and education for municipal staff and leaders can enhance understanding of the BSC and reduce resource requirements, including the amount of time and effort required to affect successful implementation.

According to Padovani et al. (2010), four key characteristics are instrumental in the success of a performance management system within municipalities. The first is an incremental path towards improvement so as not to unnecessarily disrupt established structures and in the process, overwhelm users with too much change; second, is the engagement of enablers with technical backgrounds in developing and implementing performance management systems; third, participation in performance measurement initiatives; and lastly, a shift from management or task control to strategy formulation or in other words, a greater focus on the long-term. In a separate study, the level of executive sponsorship as well as top-management employee buy-in is also seen as critical to successful BSC implementations (Chan, 2004). Similar findings were reported in many other studies exploring the use of performance management and the BSC in government organizations (Brusca and Montesinos, 2016; Dawe, 2007; Gomes and Lirio, 2014; Northcott and Taulapapa, 2012; Perera et al., 2007). The common finding points from these papers is that any project that has not secured management and employee buy-in is going to have a hard time gaining traction or being successful. Culture also plays an important role. A flexible organizational culture is a key component of successful implementations (Chavan, 2009; Deem et al., 2010). In a number of studies this requirement is something that in the context of municipalities is largely absent (Chan, 2004; Perera et al., 2007). Finally, administrative culture appears to be a key in influencing the speed with which performance measurements are adopted in PSOs (Mary et al., 2012).

The use of the BSC within municipal government is an important topic and by gauging how perception and value have changed over time we may be able to identify whether the BSC is an appropriate tool for municipal government performance measurement. Accordingly, we felt the Chan (2004) study was worth a second look to determine whether the use of performance measurement systems and/or the perceptions and use of the Balanced Scorecard have changed in the 12 years since the study was conducted.

**DATA AND METHODOOGY**

This study was designed to replicate the Chan (2004) study on performance measurement and the adoption of the BSC in municipal governments. We did not have access to the original survey and chose to reconstruct our survey based on the results tables that were provided in the paper by Chan (2004). Our survey was administered in July of 2016. We conducted a random sample of 376 Canadian municipalities with populations of 10,000 and above. An online questionnaire consisting of 52 questions was sent to Administration Officers/City Managers of Canadian of these municipalities. In total 68 (18%) of city administrators responded to the survey with 62 (91%) indicating a desire to receive the results once the survey was complete, a clear indication that performance measurement is important. A total of 68 surveys were started, representing a response rate of 18 percent, a significant increase from the 11.1 percent that Chan had in 2004. Of note, where Chan had to do multiple mailings, we received a good number of responses on the first round of emails that were sent out and did not resort to a second call for respondents. Not all respondents completed all 52 questions. Of the 18 respondents who did not complete the survey 17 of them indicated that they have not implemented the BSC. We conclude from this that they most likely discontinued the survey or skipped questions after answering the question about whether they had implemented a BSC. In the early questions, where administrators responded to general questions about their performance management system, the number of respondents varies and thus all statistics report the number of respondents for each question. All the data reported in the tables indicates the number of respondents for that group of questions. For questions relating to perception, a 5-point Likert scale was used. When comparing results between the 2004 and 2016 studies, a 20% variance was used as representing a significant change. The changes from 2004 to 2016 are always reported as a relative change (from value A to value B) not a nominal change (value B – value A).

Sample Characteristics

Respondents to this study are primarily municipal Chief Administrative Officers (60%) with others including Directors, Auditors, Strategists, and Performance Measurement directors with more than half being in their respective position for a minimum of five years and 99% having at least a bachelor’s degree. These respondents are mostly from small cities with populations of less than 100,000 which is in sharp contrast to Chan’s study (Table 1).

Table 1: Population by Municipality (% per Category)

Population	2004	2016
< 100,000	30.2	72.7
100,001 – 200,000	23.1	16.1
200,001 – 500,000	19.8	4.8
500,001 – 1,000,000	15.9	4.8
> 1,000,000	11.0	1.6

*This table categorizes the population size of the 2016 respondent municipalities and compares them to the respondents from 2004*

It should be noted that the 2004 study merged Canadian and American respondents and that the 2004 study reported twice as many small (<100,000) respondents as being Canadian and the majority of the municipalities over 1,000,000 were American. A total of 41 of the 62 respondents (66%) indicated they had implemented a performance management tool and 10 of those 41 (24%) have implemented the BSC. While an n of 10 might seem small, the Chan (2004) only had an n of 14 and that number included both Canadian and USA municipalities. Given that in the Chan study only 4 of the 14 municipalities were Canadian, we believe that the total having 10 municipalities report as having implemented the BSC in our 2016 survey is significant and represents a reliable comparator to the Canadian results from 2004.

In 2004, only 17% of the respondents had implemented the BSC. Thus, even with a small n, the implementation of the BSC can be seen as increasing. Additionally, out of the 10 respondents seven have populations under 100,000, one a population of 200,001 and 500,000 and two with populations between 500,001 and 1,000,000. This is significant because Chan (2004) surmised that relatively large municipalities were more likely to adopt new management tools such as the BSC. This new trend appears to indicate an increasing rate of adoption among smaller municipalities in direct contrast to the 2004 results.

**RESULTS AND DISCUSSION**

The Chan (2004) study specifically looked at: 1.) The types of performance measures used, 2.) Perceived value, quality, and uses of performance measures, 3.) Perception about the organization’s current performance measurement system, 4.) Administrators’ perception of the Balanced Scorecard, and 5.) Reasons for unsuccessful or non-implementation of Balanced Scorecard. The results from this study will be denoted as 2016 and compared to the Chan study, which is denoted as 2004. The results in Table 2 show that respondents have developed measures across all of the performance perspectives and like the 2004, the innovation and change perspective is the least developed.

Table 2: Percentage of Respondent Municipal Governments That Have Developed Output and Outcome Measures on Various Performance Perspectives

Performance Perspectives	Performance Measures Developed		Output Measures Developed		Outcome Measures Developed	
	2004	2016	2004	2016	2004	2016
Financial performance	75.5	81.5	63.9	65.4	62.2	58.0
Operating efficiency	57.1	59.2	68.6	57.7	53.6	40.0
Customer satisfaction	57.1	50.0	40.0	38.5	45.7	36.0
Employee performance	65.3	68.5	53.8	50.0	48.6	34.0
Innovation and Change	16.7	13.0	13.9	13.5	20.6	8.0

*This table shows the percentage of respondent municipal governments that have developed output and outcome measures across five key performance perspectives of the BSC and compares the percentages from 2016 to 2004.*

Of note, there was a 12% decline in the development of performance measures for customer satisfaction and a 22% decline with respect to innovation and change. Financial performance was featured prominently with the highest rate of development at 82 percent, an 8% increase from 2004. In terms of output measures used, most of the performance perspectives remained like 2004 with the exception of operating efficiency, which saw a decline of 16%. This was surprising given that output measures are relatively easily quantified in the context of operating efficiency. For outcome measures, there was an across the board decline in the use of these measures with all but the financial perspective showing a greater than 20% decline. This is very significant and demonstrates the challenge that municipal governments face when they try to develop outcome based measures. The 2004 study suggested that the low rate of development was because this perspective was relatively new and suggested it should increase as time progresses. Our results indicate that progress has not happened but rather there has been significant decline.

Perceived Value, Quality, and Uses of Performance Measures

In each of the performance perspectives at least 60% valued information in each of the financial perspectives (Table 3). Financial performance remained the highest valued at 90% (a 14% increase). While information from all of the other perspectives were still seen as valued, each saw a decline in their



perceived value with the largest decline occurring in customer satisfaction.

Table 3: Perceived Value, Quality, and Uses of Performance Measures by Respondent Administrators (Percentage of Respondent Administrators Agreeing with the Statement)

	Financial Performance		Customer Satisfaction		Operating Efficiency		Employee Performance		Innovation and Change	
	2004	2016	2004	2016	2004	2016	2004	2016	2004	2016
Information is highlight valued	79	90	74	60	71	63	66	58	31	29
Measures are clearly defined in each performance area	71	70	37	34	44	40	51	48	9	10
Willing to bet job on quality of the information	47	53	37	22	18	13	24	22	7	7
Measures are reported for external users	78	86	50	41	53	45	26	13	24	10
Measures are used for program management and monitoring	74	78	53	40	56	50	42	44	16	12
Measures are used for strategic planning	65	74	52	54	51	41	43	30	33	24
Measures are used for regular management reviews	62	66	47	30	44	50	67	58	23	14
Measures are used for resource allocation	61	60	47	24	44	48	39	17	23	10
Measures are used to drive organizational change	53	61	50	35	50	55	47	33	26	20
Measures are linked to compensation	8	13	6	6	8	15	25	46	0	11

*This table shows how respondent administrators perceive the value, quality, and uses of performance measures. For each statement respondents were asked to select all BSC perspectives that apply. The percentages from 2016 are then compared to 2004*

Information related to customer satisfaction was valued by 60% of respondents, representing a 19% decline from 2004. Customer satisfaction related information saw a decline in almost all areas with a very significant decline in its use in resource allocation decisions. Information use for management reviews, organizational change, program management, and monitoring also saw a greater than 20% decline in their quality and use. In this same category only 22% (a decline of 41% from 2004) would bet their job on the quality of information related to customer satisfaction. Engagement has been closely linked to customer satisfaction and plays an important role in the upward flow of information (Brusca and Montesinos, 2016; Dawe, 2007). Poor quality of information could impede the development of measures that in turn would decrease perception of quality and value as well as use which itself would lead to some further decreases in development. Operating efficiency information was valued by 61% of respondents (an 11% decline from 2004). Of note, only 13% (a decline of 28%) of respondents were willing to bet their job on the quality of information related to operating efficiency; however, there was a 88% significant increase in the use of operating efficiency information being linked to compensation (up from 8% to 15%). The fact that quality of information is being challenged at the same time the information is seeing an increase in use for compensation is noteworthy.

Employee performance information was valued by 58% of respondents (a 12% decline). Like operating efficiency, employee performance information saw a significant increase (84%) in its linking to employee compensation. However, its use for reporting to external users and resource allocations saw 50% declines and a 30% decline in use for strategic planning and driving organizational change. While the relative change percentages would indicate a significant usage change for employee performance information, the increase in linkage with compensation remains at only 15% of respondents but is encouraging all the same. Finally, innovation and change related information remained valued by only 30% of respondents

compared to over 60% for the other perspectives. This result is essentially the same as the 2004 study. In addition to its value being low, there was either no or limited change or significant decline in perceived quality and use. The one exception being the linkage to employee compensation. Despite low perceived value in general, the linking of innovation and change to employee compensation went from 0% in 2004 to 11% in 2016. To summarize financial performance remains the dominant perspective for municipal performance and there has been a dramatic increase in the linking of information from the performance perspectives with employee compensation. This finding lends support to previous research that noted an individually tailored BSC provides motivation to employees (Greatbanks and Tapp, 2007).

Perception About the Organization’s Current Performance Measurement System

Examining administrator’s perception of their current performance management system, we found some interesting findings (Table 4). Previously the majority of administrators felt their systems relied too heavily on financial measures whereas in 2016, the majority does not. Also, the majority felt that their performance measures have been used effectively in integrating and executing the details of corporate strategy. The two categories saw changes of -20% and 14% respectively.

Table 4: Perceptions of Administrators of Municipal Governments on Their Organization’s Performance Management System

	Municipal Governments (N=50)	
	2004	2016
Traditional financial measures are necessary but not sufficient for performance evaluation	3.61	3.94
More non-financial measures describing your organization’s current and potential effectiveness in achieving set objectives should be included	3.98	4.27
Financial measures describe past/current performance on operating efficiency and do not necessarily reflect your municipalities effectiveness and potential in achieving set objectives	3.82	3.98
It is an ad hoc collection of financial and non-financial measures	3.00	3.20
The performance measures have been used effectively in integrating and executing the details of corporate strategy	2.66	3.04
It relies too heavily on financial measures	3.74	2.98

*This table shows the mean response of municipal governments that completed the questionnaire. The higher the response, the higher the administrator’s agreement with the statement. (response scale 1 to 5 where 1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; and 5 = strongly agree)*

While not as significant, most administrators tended to agree that financial measures are necessary but not sufficient with a score of 3.94. Similarly, most felt that more non-financial measures describing your organization’s current and potential effectiveness in achieving set objectives should be included, with a score of 4.27. The most interesting finding from Table 3 does not come from the comparison between 2004 and 2016 but rather when you consider the changes relative to Table 2. In Table 3 administrators signal that their performance measurement systems rely less heavily on financial metrics yet, from 2004 to 2016 we have seen a marked increase in the use of financial metrics. This clearly shows that the stated desire for greater incorporation of non-financial measures does not reflect what the respondents are doing.

Administrators’ Perception of the Balanced Scorecard

For those who had heard of the BSC, there was little change (less than 10%) in the perception of the BSC relative to the original study (Table 5). In no instance did respondents move from one side of the neutral response to the other, which would signify a change in perception. However, when looking at those that had implemented versus those that had not implemented a BSC, there were significant changes.

Table 5: Administrators Perception of Balanced Scorecard

	Municipal Governments That Have Heard of the BSC (N=50)		Municipal Governments That Have Not Implemented the BSC (N=40)		Municipal Governments That Have Implemented the BSC (N=10)	
	2004	2016	2004	2016	2004	2016
Balanced scorecard is a fad	2.40	2.48	2.32	2.54	3.00	2.22
Balanced scorecard is a performance measurement system	4.12	3.85	4.18	3.77	3.67	4.22
Balanced scorecard is a strategic management system	3.92	3.87	3.95	3.84	3.67	4.00
Balanced scorecard is an ad hoc collection of financial and non-financial measures	2.36	2.58	2.18	2.64	3.67	2.33
Balanced scorecard complements the financial measures of past performance with operational measures that drive future performance and growth	3.92	3.82	4.00	3.76	3.33	4.13
Balanced scorecard links an organization’s mission and strategy with objective measures	3.64	3.96	3.73	3.90	3.00	4.22
The benefits will outweigh the costs if the balanced scorecard were implemented successfully	3.60	3.79	3.55	3.74	4.00	4.00

*This table shows administrators’ perception of the BSC. The higher the response, the higher the administrator’s concurrence with the statement (response scale 1 to 5 where 1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; and 5 = strongly agree). The mean response for each group is reported. Not all responders in each group responded with some indicating N/A. At least 80% of respondent administrators answered each question in this section of the survey.*

For those that had not implemented the BSC, there was a 20% increase in the number of administrators who saw perceived the BSC was an ad-hoc collection of financial and non-financial measures. This change is attributed to the fact that roughly 25% of the respondents were neutral on the response. Thus, while the overall perception is still a disagreement that the BSC is an ad-hoc collection of indicators, the perception of non-implementers is moving toward disagreement with the statement. The most dramatic shifts in perception occurred with those who had implemented a BSC. Four of the seven questions changed by more than 20% from the original study. First, there was a 26% decrease in the number of administrators who saw the BSC as a fad. In the original study, this group was neutral on the topic whereas now they clearly disagree that the BSC is a fad in 2016. Second, there was a 37% decline in the perception of the BSC as an ad-hoc selection of financial and non-financial measures. In the original study, the majority of municipalities that had implemented the BSC perceived the measures to ad-hoc; now, the opposite is true. Third, there was 24% increase in those who perceived that the BSC complements the financial measures of past performance with operational measures that drive future performance and growth and fourth, there was a 41% increase in those who felt the BSC links an organization’s mission and strategy with objective measures. These latter two changes in perception indicate a clear recognition of the purpose and value of the BSC for municipal governments.

Reasons for Unsuccessful or Non-Implementation of Balanced Scorecard

The final component of this study looked at the reasons behind why municipal governments either unsuccessfully or simply did not implement a BSC (Table 6). In 2004, the top 5 reasons were: 1.) Lack of highly-developed information system to support balanced scorecard, 2.) Management is too busy solving short-term problems, 3.) Inadequate executive sponsorship, 4.) Too time consuming in developing balanced scorecards, and 5.) Lack of skills and know-how.

Table 6: Reasons for Unsuccessful or Non-Implementation of Balanced Scorecard

	Municipal Governments That Have Heard of the BSC (N=50)		Municipal Governments That Have not Implemented the BSC (N=40)		Municipal Governments That Have Implemented the BSC (N=10)	
	2004	2016	2004	2016	2004	2016
Management is too busy solving short-term problems	3.86	3.60	3.84	3.71	4.00	3.00
Inadequate executive sponsorship	3.80	3.34	3.88	3.28	3.33	3.67
Lack of highly-developed information system to support balanced scorecard	4.00	3.63	3.89	3.61	4.67	3.71
Lack of linkage of balanced scorecard to employees' rewards	3.33	3.67	3.22	3.55	4.00	4.14
Too time consuming in developing balanced scorecards	3.71	3.43	3.72	3.43	3.67	3.43
Lack of skills and know-how	3.71	3.7	3.77	3.61	3.33	4.14
The short-term vision associated with politics	3.50	3.6	3.58	3.69	3.00	3.14
Case for changes is neither clear nor compelling	3.00	3.19	2.83	3.17	4.00	3.29
Lack of buy-in from staff	3.00	3.33	2.95	3.28	3.33	3.57
Too difficult to evaluate relative importance of measures	3.48	3.12	3.39	3.03	4.00	3.57
Too many measures dilute overall impact	3.14	3.52	2.94	3.51	4.33	3.57
Too difficult in defining and measuring outcome measures	3.24	3.16	3.23	3.17	3.33	3.14
Organizational resistance to change	2.90	3.29	2.83	3.21	3.33	3.71
Too difficult to decompose goals for lower levels in organization	3.05	3.19	2.84	3.20	4.33	3.14
Too costly/revenue constraints	3.10	3.33	3.01	3.03	3.68	2.86

*This table shows possible reasons for unsuccessful BSC implementation. The higher the response, the higher the administrator's agreement with the statement in describing the reasons for not implementing the BSC (response scale 1 to 5 where 1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; and 5 = strongly agree). The mean response for each group is reported. Not all responders in each group responded with some indicating N/A. At least 80% of respondent administrators answered each question in this section of the survey*

In 2016, 3 of the top five remained but lack of skills moved to the top of the list, the linkage between the BSC and employee rewards jumped into the list while inadequate executive sponsorship dropped off. Too time consuming was replaced by management is too busy solving short-term problems. In 2016, the top 5 reasons were: 1.) Lack of skills and know-how, 2.) Lack of linkage of balanced scorecard to employees' rewards, 3.) Lack of highly-developed information system to support balanced scorecard, 4.) Management is too busy solving short-term problems, and 5.) The short-term vision associated with politics. For municipal governments that have not implemented the BSC, the most significant change was related to the number of measures. In 2004, the majority disagreed that too many measures dilute the overall impact whereas in 2016, the majority now agreed with the statement, a 19% change in opinion. For municipalities that had implemented the BSC, the 2004 respondents felt that management was too busy solving short term problems while in 2016, they were neutral, a 25% reduction. In 2016, this group resoundingly (24% increase) felt that unsuccessful or non-implementation was related to a lack of skills and know-how. There was also a 27% decline in the feeling that it was too

difficult to decompose goals for lower levels in organization. Finally, there was a 22% decline in those that felt it was too costly or had revenue constraints which supports the idea that the actual cost of BSC implementation has decreased Dawe (2007).

## CONCLUDING COMMENTS

The purpose of this study was to determine whether the BSC had gained a foothold within municipal government operations or whether there remains a void between desire to demonstrate alignment between strategy and outcomes and reality. This study was designed to replicate the Chan (2004) study on performance measurement and the adoption of the BSC in municipal governments to determine whether there were any significant changes over the past 12 years. We compared our results against the 2004 results looking at the relative change in percentages and means for each question. A longitudinal study such as this permits researchers to observe trends over time and also highlights some interesting phenomena as it demonstrates changes in attitude. The increased response rate for Canadian municipalities in this study combined with an increase in the number of municipalities that reported having adopted the BSC are positive developments as they indicate increased awareness and interest in performance management and the BSC. One of the most interesting findings had to do with the use and perception of financial measures. Respondents were comfortable relying on traditional financial measures. This trend was accompanied by a general decrease in the use of non-financial measures in many areas along the stakeholder satisfaction, innovation and change, employee performance and to some degree operating efficiency perspectives. This is important because administrators overwhelmingly felt that traditional financial measures are necessary but not sufficient for performance evaluation indicating – a clear indication that reality and perception are not aligned.

The second set of important findings came from looking at the perceptions of those who had actually implemented a balanced scorecard. They felt very strongly that the BSC is neither a fad, nor an ad-hoc set of metrics; conversely, they felt their BSC complements financial measures and links the organization's strategy and mission to objective measures. These significant increases demonstrate a greater understanding of the intended use of the BSC and that the value is really only realized once it has been implemented. The third set of findings that are noteworthy are related to the reasons why a BSC has not been implemented. Lack of skills and know how moved from number five in 2004 to the top of the list in 2016 indicating an opportunity for practitioners to develop training and education packages for a group that has shown a clear desire for the BSC. The concern over the quality of information is also noteworthy as it is a good indicator that municipalities need to improve their information systems capabilities in response to the demands for more accountability. Finally, the increased linkage between BSCs and employee rewards is promising although there remains more opportunity to improve.

As with most survey-based research, there are some limitations. First the generalizability of the research can be questioned. While Chan (2004) looked at both Canada and the United States, we specifically limited this study to Canadian municipalities. This study also identified opportunities for future research. We observed that BSC implementation has increased along with a correspondent emphasis on the use and development of financial measures. The trends regarding the use of financial metrics warrant additional study as certain elements run counter to key tenets of having balanced metrics within the BSC and is counter to the desires of the administrators. Future research looking at specific municipalities could be used to gain deeper insight into why financial measures remain so prevalent despite a desire for more non-financial metrics.

## REFERENCES

- Abdel-Maksoud, A., Elbanna, S., Mahama, H., Pollanen, R. (2015) "The use of performance information in strategic decision making in public organizations", *International Journal of Public Sector Management*, Vol. 28 No. 7, pp. 528-549.
- Adams, C. A., Muir, S., and Hoque, Z. (2014). "Measurement of sustainability performance in the public Sector". *Sustainability Accounting, Management and Policy Journal*, Vol. 5 No. 1, pp.46-67.
- Al-haj Ahmad, F.B. and Atieh, S.H. (2016). "Updating Balanced Scorecard Model for The Evaluation of The Strategic Performance in Greater Amman Municipality". *European Scientific Journal*, Vol. 12 No. 31, pp. 307-329.
- Brusca, I., and Montesinos, V. (2016). "Implementing Performance Reporting in Local Government: a Cross-Countries Comparison". *Public Performance and Management Review*, Vol. 39 No. 3, pp. 506-534.
- Chan, Y. L. (2004). "Performance measurement and adoption of balanced scorecards: A survey of municipal governments in the USA and Canada". *International Journal of Public Sector Management*, Vol 17. No. 3, pp. 204-221.
- Chavan, M. (2009). "The balanced scorecard: a new challenge". *The Journal of Management Development*, Vol. 28 No. 5, pp. 393-406.
- Costa Oliveira, H. M. (2014). "The balanced scorecard operating as a risk management tool". *Review of Economic Studies and Research*, Vol. 7 No. 2, pp. 41-57.
- Dawe, T. (2007). "Performance management and measurement in small communities: Taking the first step towards implementing a balanced scorecard approach". *Government Finance Review*, Vol. 23 No. 1, pp. 54-59.
- Deem, J. W., Barnes, B., Segal, S., and Preziosi, R. (2010). "The relationship of organizational culture to balanced scorecard effectiveness". *Advanced Management Journal*, Vol. 75 No. 4, pp. 31-39.
- Dimitropoulos , P., Kosmas, I., and Douvis, I. (2017). "Implementing the balanced scorecard in a local government sport organization". *International Journal of Productivity and Performance Management*, Vol. 66 No. 3, pp. 362-379.
- Goh, S.C. (2012). "Making performance measurement systems more effective in public sector Organizations". *Measuring Business Excellence*, Vol. 18 No. 1, pp. 31-42.
- Greatbanks, R., Tapp, D. (2007) "The impact of balanced scorecards in a public sector environment: Empirical evidence from Dunedin City Council, New Zealand", *International Journal of Operations & Production Management*, Vol. 27 No. 8, pp. 846-873.
- Goh, S.C., Elliott, C., Richards, G. (2015) "Performance management in Canadian public organizations: findings of a multi-case study", *International Journal of Productivity and Performance Management*, Vol. 64 No. 2, pp.157-174
- Gomes, C.R., and Lirio, S.V. (2014). "Strategic planning in Brazilian small-scale municipalities: is the balanced scorecard a feasible tool?" *Brazilian Journal Of Management*, Vol 7. No. 1, pp.8-21.

Kaplan, R.S. and Bower, M. (1999), “The Balanced Scorecard for public sector organizations”. Harvard Business Publishing Letters – Balanced Scorecard Report, November 15, pp. 1-3.

Kaplan, R. S., and Norton, D. P. (1992). “The Balanced Scorecard - Measures That Drive Performance”. *Harvard Business Review*, Vol. 70 No.1, pp. 71-79.

Kaplan, R. S., and Norton, D. P. (1996). “Using the Balanced Scorecard as a Strategic Management System”. *Harvard Business Review*, Vol. 74 No.1, pp. 75-85.

Kaplan, R. S., and Norton, D. P. (2001). “Transforming the Balanced Scorecard from Performance Measurement to Strategic Management: Part I”. *Accounting Horizons*, Vol. 15 No. 1, pp. 87-104.

Kaplan, R. S. (2001). “Strategic Performance Measurement and Management in Nonprofit Organizations”. *Non-profit Management and Leadership*, Vol. 11 No. 3, pp. 353-370

Kaplan, R. S., and Norton, D. P. (2006). “How to Implement a New Strategy Without Disrupting Your Organization”. *Harvard Business Review*, Vol. 84 No. 3, pp.100-109.

Kaplan, R. S., and Norton, D. P. (2007). Using the Balanced Scorecard as a Strategic Management System”. *Harvard Business Review*, Vol. 85 No. 7, pp. 150-161.

Kaplan, R. S., and Norton, D. P. (2008). “Mastering the Management System”. *Harvard Business Review*, Vol. 86 No. 1, pp. 62-77.

Mary, L. R., Biondi, L., Gomes, R., Melo, A.I., Ohemeng, F., Perez-Lopez, G., Rossi, A. and Sutiyo, W. (2012). “Current state of public sector performance management in seven selected countries”. *International Journal of Productivity and Performance Management*, Vol. 61 No. 3, pp. 235-271.

Melitski, J., and Manoharan, A. (2014). “Performance measurement, accountability, and transparency of budgets and financial reports”. *Public Administration Quarterly*, Vol. 38 No. 1, pp. 38-70.

Moullin, M. (2017). “Improving and evaluating performance with the Public Sector Scorecard”. *International Journal of Productivity and Performance Management*, Vol. 66 No. 4, pp. 442-458

Niven, P (2003), “Balanced Scorecard Step by Step for Governments and Nonprofits”, John Wiley and Sons, New Jersey

Northcott, D., and Taulapapa, T.M. (2012). “Using the balanced scorecard to manage performance in public sector organizations”. *International Journal of Public Sector Management*, Vol. 25 No. 3, pp. 166-191.

Padovani, E., Yetano, A., and Orelli, R. L. (2010). “Municipal performance measurement and management in practice: which factors matter?” *Public Administration Quarterly*, Vol. 34 No. 4, pp. 591-635.

Perera, S., Schoch, H., and Sabaratnam, S. (2007). “Adoption of the balanced scorecard in local government organizations: an exploratory study”. *Asia-Pacific Management Accounting Journal*, Vol. 2 No. 1, pp. 53-70.

Pollanen, R.M. (2005) "Performance measurement in municipalities: Empirical evidence in Canadian context", *International Journal of Public Sector Management*, Vol. 18 No. 1, pp.4-24.

Propper, C., Wilson, D. (2003). "The Use and Usefulness of Performance Measures in the Public Sector". *Oxford Review of Economics Policy*, Vol. 19, No. 2, pp. 250-267.

Rodrigues Quesado, P., Aibar Guzman, B., Lima Rodrigues, L. (2014). "Determinant Factors of the Implementation of the Balanced Scorecard in Portugal: empirical evidence in public and private organizations". *Revista Brasileira de Gestão de Negócios*, Vol. 16 No. 5, pp.199-222

Sanger, M.B. (2008). "From measurement to management: breaking through the barriers to state and local performance", *Public Administration Review*, Vol. 68, pp. S70-S85.

Schobel, K. and Scholey, C. (2012). "Balanced Scorecards in education: focusing on financial strategies". *Measuring Business Excellence*, 16(3), pp.17-28

Scholey, C. and Schobel, K. (2016). Performance Measurement for Not for Profits – The Balanced Scorecard as an Approach. Available at: <https://www.cpacanada.ca/en/business-and-accounting-resources/strategy-risk-and-governance/not-for-profit-governance/publications/performance-measurement-for-nfpos>, accessed July 15, 2017.

Sharma, B., and Gadenne, D. (2011). "Balanced Scorecard Implementation in a Local Government Authority: Issues and Challenges". *Australian Journal of Public Administration*, Vol. 70 No. 2, pp. 167-184

Smith, P. C. (1995), "On the Unintended Consequences of Publishing Performance Data in the Public Sector", *International Journal of Public Administration*, Vol. 18 No. 2, pp. 277–310.

Specklé R.F. and Verbeeten, F.H.M. (2014). "The use of performance measurement systems in the public sector: Effects on performance". *Management Accounting Research*, Vol. 25 No. 2, pp. 131-146

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# **EVIDENCE OF THE IMPACT OF LEADER STATUS-RELATED BEHAVIORS ON ORGANIZATIONAL OUTCOMES IN FINANCIAL SERVICE FIRMS**

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## **ABSTRACT**

*The U.S. financial services industry has been in a state crisis for three decades, precipitated by ethical misconduct within the industry. Regulatory and legislative changes have been introduced, yet the industry's ethical climate remains largely unchanged. Industry participants have acknowledged the limitations of external intervention and have called for change at the organizational level that specifically targets organizational leadership and culture to promote ethical and organizational citizenship behavior (OCB) outcomes. Deming proposed that firms may improve quality through comparative performance assessment with outside industries. This study is modeled after research conducted by Nembhard and Edmondson (2006) to determine whether significant organizational findings from the healthcare industry are reproducible in the financial services industry. This study used a multivariate, experimental design to examine the relationship of professional status and psychological safety on organizational citizenship behavior outcomes, while incorporating the moderating effect of leader inclusiveness. 247 current financial services professionals participated in this study. The study implemented a three-phased analytical process involving latent class analysis, recursive path analysis, and qualitative analysis. The results of the study indicate that professional status influences perceptions of psychological safety and is moderated by leader inclusiveness. The results also confirm that leader inclusiveness has a direct influence on OCB-voice and that psychological safety directly mediates OCB helping and organizational commitment outcomes. The findings of this study provide managerial insights on how organizational leaders in the financial services industry might effectively manage professional status differences to enhance employee perceptions of psychological safety and to stimulate organizational citizenship behavior in employees.*

**JEL:** L290, M140, M190

**KEYWORDS:** Professional Status, Leader Inclusiveness, Team Leader Coaching, Psychological Safety, Financial Services Firms, Organizational Citizenship Behavior, Ethical Outcomes

## **INTRODUCTION**

From the late 1970s to the present, troubles in the financial services industry have unfortunately made headline news. Potential remedies to halt these crises have typically relied on forces outside of the financial firms themselves (e.g., regulatory/SEC intervention). Despite ongoing indications from industry insiders that broad-based behavioral lapses in ethics have been a concern for financial services firms for years, few organizational considerations, including a need to revamp the leadership, management, and organizational dynamics of these firms have been prescribed. Until recently, limited attention has been paid to how ethical behavior is developed and fostered within these organizations. Over the past few years, new attention has been devoted to how organizational behavior may influence financial crises. For example, the leader-team member dynamic in financial services firms has not been studied, nor have the potential moderating influences of professional status, leader inclusiveness, and team leader coaching been examined. The possible mediating effect of psychological safety has not been examined or measured in

conjunction with OCB. In addition, virtually no research has explored the effect of professional status differences on psychological safety and organizational citizenship behaviors.

This study was primarily a quantitative study with factors generated from qualitative research (Guba & Lincoln, 1994). The research questions derived for the qualitative component of the study were built in conjunction with the hypotheses and both sets of inquiries are rooted in the academic literature that corresponds to this study. Because this study is modeled after the Nembhard and Edmondson (2006) research on healthcare organizations, this study has incorporated hypotheses adapted from that original research for the quantitative portion. The qualitative research questions incorporated into the study were focused on gaining understanding of how financial professionals at various levels in their organizational hierarchies have experienced professional status differences in the workplace and of how financial professionals characterize the ethical behaviors and conduct of their superiors. This study seeks to provide new insight regarding possible antecedents to organizational citizenship behavior and is designed to answer the question: “Is professional status in financial services firms associated with employee perceptions of psychological safety and does this influence organizational citizenship behavior of employees?” Leader influence on follower behaviors has generated a considerable amount of scholarly activity (Yukl, 1999).

The usefulness of such a study is, therefore, twofold: 1) the project addresses a gap in the existing body of management literature, and 2) the results of the study may generate managerial insights regarding how leaders and managers in the financial services industry might effectively manage professional status differences to enhance employee perceptions of psychological safety and to generate stronger organizational citizenship behaviors. This paper is organized in the following way: It opens with a review of related literature, then describes the data and methodology used in the study. It then presents and discusses the results of the study and concludes with a summary of findings, managerial insights and applications, and possible future related studies.

## LITERATURE REVIEW

Both the financial services and the healthcare industries are characterized by notable professional status differences within work groups that influence organizational dynamics and employee behavior (Ho, 2009; Nembhard & Edmondson, 2006). Status characteristic theory, social identity theory, social exchange theory, and leader-member exchange theory provide insights into the impact of professional status on organizational life and on member social dynamics. Status characteristic theory was conceived by social scientists as a paradigm through which to facilitate understanding of status organizing processes that occur in social groups (Berger, Cohen, & Zelditch, 1972; Berger, Rosenholtz, & Zelditch, 1980). A consideration of the influence of professional status is valuable because related organizational research has also demonstrated that unequal status among organizational members can influence organizational members to withhold information in the workplace and can influence workplace participants to speak less (Argyris, 1986; Kirchler & Davis, 1986; Pagliari & Grimshaw, 2002; Vinokur, Burnstein, Sechrest, & Wortman, 1985; Weisband, Schneider, & Connolly, 1995). In understanding how employees self-identify with social groups in organizational environments, social identity theory offers important insights regarding how status perceptions shape interpersonal and group dynamics in workplace settings. Social identity theory explores intra-group relations, i.e., how people come to perceive themselves as “members” of a particular social group (Tajfel & Turner, 1979; Turner, Oakes, Haslam, & McGarty, 1994).

Developed by Blau (1964), social exchange theory examines interpersonal relationships and makes the claim that relationships fall into two general categories: economic exchanges and social exchanges (Blau, 1964; Bishop, Scott, & Burroughs, 2000). The theory suggests that people develop transactional (economic) or trust (social) relationships based on their experiences with others. Leader-Member Exchange Theory (LMX) was initially presented by Graen (1976) and is commonly referred to as a relationship-based approach to leadership. Since its introduction, LMX theory has generated considerable interest in the

academic community and has gone through four notable shifts in its development to the current understanding of LMX (Graen & Uhl-Bien, 1995) in order to arrive at the current perspective on the theory. The LMX theory is a theory of leadership that focuses on dyadic or “two-way” working relationships that develop between supervisors and subordinates.

Both industries have turned in poor quality and poor performance significant enough to have been labeled as system-based crises (Dudley, 2014; IOM, 1999). Healthcare, according to Nembhard and Edmondson (2006), needed the benefit of greater employee willingness to engage in continuous improvement efforts. Financial services firms, according to industry leaders, would benefit from stronger pro-social, ethical behavior (Dudley, 2014). Though the issues facing these industries appear to be different, they find a common foundation in the area of organizational citizenship behavior.

Organizational citizenship behavior is a multidimensional construct that was initially explored by Organ (1977), who introduced the idea of discretionary contributions from workers, and Bateman and Organ (1983), who developed the idea of qualitative performance (Organ, Podsakoff, & MacKenzie, 2006). Organ, Podsakoff, and MacKenzie (2006) defined organizational citizenship behavior as “individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and, in the aggregate, promotes the efficient and effective functioning of the organization” (p.8). This definition of organizational citizenship behavior is non-specific and encompasses any and all behaviors that promote the efficient and effective functioning of an organization. Podsakoff, MacKenzie, Paine, and Bacharach (2000) supported this idea that organizational citizenship behavior is expansive; in a review of the academic literature on OCB, these authors distinguished over thirty different forms of organizational citizenship behavior that have been studied and measured. Organ, et al. (2006) identified seven common “themes” or dimensions to OCB, which are presented in the table below: Helping, Sportsmanship, Organizational Loyalty, Organizational Compliance, Individual Initiative, Civic Virtue, and Self-Development (p. 297). Leader inclusiveness and psychological safety provide additional insights into the Nembhard and Edmondson study results as well as substantiate the inclusion of these variables in this study’s research design.

Leader inclusiveness is a construct that was introduced by Nembhard and Edmondson in conjunction with their 2006 study on leader behaviors in interdisciplinary healthcare teams working in neonatal intensive care units. The authors evaluated the words and actions of leaders with high professional status with the intent of understanding how these words and behaviors informed leader-team member interactions and employee willingness to engage in quality improvement efforts. Leader inclusiveness was then defined as: “Words and deeds exhibited by leaders that invite and appreciate others’ contributions that occur in environments characterized by status or power differences” (Nembhard & Edmondson, 2006, p. 947). Leader inclusiveness also incorporates attempts made by high-status leaders to include those team members in decisions and discussions who might otherwise be left out of the discussion or discouraged from sharing. The hallmark of this construct rests on the notion that leader inclusiveness occurs in environments characterized by notably unequal status distribution among members. Leader inclusiveness may incorporate coaching, participative leadership, consultation, and feedback. Nembhard and Edmondson (2006) stated that the goal of their research involved the contribution of knowledge regarding the role of status in shaping perceptions of psychological safety and, more broadly, the conditions that support improvement and learning in cross-disciplinary teams (p. 944). Empirical research suggests that when the insights and expertise of team members at varying levels is ignored or overlooked, group and organizational goals suffer (Littlepage, Robinson, & Reddington, 1997). Specifically, organizational innovation and improvements do not flourish as they might if lower-level employees invited to share opinions and have those opinions incorporated (Nemeth, 1986).

Psychological safety was first conceptualized by Kahn (1990) as a finding from an exploratory qualitative research study he conducted on personal engagement and disengagement at work. In this study, he identified three contributing psychological conditions that influence employee psychological engagement:

meaningfulness, safety, and availability. He also asserted that psychological safety was an important antecedent to psychological engagement. According to Kahn (1990), “Supportive, resilient, and clarifying management heightens psychological safety” (p. 711). Argyris (1986; 1993) alluded to this idea when he wrote about the defensive posturing that goes on in within organizations. He suggested that an individual’s tacit beliefs regarding interpersonal exchanges in the workplace ultimately inhibit learning behaviors and promote organizational ineffectiveness and he asserted that leaders, by being consistent across espoused values, words, and actions, could reduce these defensive orientations in workplace settings. Altering leadership behavior in order to reduce status discrepancies and create psychologically safe work environments may stimulate greater employee engagement and “helping” behaviors from employees.

## DATA AND METHODOLOGY

The primary research question of this study is: “Is professional status in financial services firms associated with employee perceptions of psychological safety and does this influence employee organizational citizenship behaviors (OCB)?” This study is modeled after Nembhard and Edmondson’s 2006 study in healthcare that found that a leader’s handling of his/her own professional status can have a decisive influence on employee engagement and improvement efforts. Nembhard and Edmondson’s research affirmed that high-status leaders use of encouraging and invitational words and behaviors contributed to stronger employee perceptions of psychological safety. Psychological safety, in turn, resulted in notably higher employee engagement in quality improvement efforts. This study attempts to determine whether these findings are reproducible in another industry and a different type of organization, namely a financial services organization (Deming, 1986). In lieu of improvement efforts, the output (dependent variable) in question in this study is organizational citizenship behavior, a construct that incorporates, among other things, improvement. Organizational citizenship behavior (OCB) was selected because it specifically addresses pro-social and moral obligation aspects of employee organizational behavior (Organ, Podsakoff, & MacKenzie, 2006). This study was conducted as a quantitative research study with a qualitative component and, therefore, included hypotheses derived for the quantitative portion of the study and research questions related to the qualitative portion of the study. The Nembhard-Edmondson 2006 study that inspired this project was a mixed-method study. Because this study is modeled after Nembhard and Edmondson’s (2006) research, this study has incorporated several hypotheses adapted from that original research for the quantitative portion and has introduced an additional hypothesis. The research questions derived for the qualitative component of the study were built in conjunction with these hypotheses and both parts of the survey are rooted in the academic literature that corresponds to this study.

The benefit of including the quantitative portion of the research is that this method permits the use of multiple variables; it can help to identify the strength of relationships between variables, and it permits the researcher to generalize from a sample to the larger population (Creswell, 2003, p. 18). The benefit of the qualitative portion of the research is that it offers the researcher an opportunity to understand how individuals make sense of their environments and their experiences (Lincoln, 2005). Following Nembhard and Edmondson, the present study also included a three-phase data collection process, structured somewhat differently: 1) In phase one, two preliminary 20-minute interviews with senior managers in financial services were conducted in order to confirm the topic and wording presented in the qualitative portion of the survey. 2) In phase two, a pilot study was conducted with 16 professionals working in various financial services firms (commercial banking, private equity, credit union, and financial consulting). 3) In phase three, the survey was electronically distributed to a sample population that only included people working in financial services firms and who functioned in financial services roles. The surveys were completed during April and May of 2015. A cross-sectional electronic survey was created that incorporated a quantitative portion that consisted of 42 questions over ten measures. Two open-ended qualitative survey questions were also included as part of the survey instrument to address content areas that the quantitative portion of the survey was unable to address. The survey was distributed to 270 financial services professionals, and 247 responses were received for a response rate of 91.48%.

## RESULTS AND DISCUSSIONS

The financial services industry has suffered from professional misconduct due to participants (individuals/groups/and firms) in every sphere of the industry whose behavior has broken trust with the public and brought harm to customers and employees alike (Black, 2010; Dudley, 2014; EIU, 2013; Tenbrunsel & Thomas, 2015; Santoro & Strauss, 2013). The healthcare industry, dealing with the consequences of thousands of avoidable errors and avoidable deaths, has been attempting to remedy similar concerns about its performance (Nembhard & Edmondson, 2006; IOM, 1999). Deming (1986) noted, comparative performance assessment across industries may provide insight into how organizations might advance quality improvement efforts. Though dissimilar in context, when these two industries' performance failures are viewed through the lens of organizational behavior, similarities between their crises begin to emerge. With this in mind, the current study was modeled after Nembhard and Edmondson's 2006 study exploring professional status, psychological safety, and engagement in quality improvement efforts in healthcare. This study was designed to provide new insight into potential antecedents to both psychological safety and organizational citizenship behavior (OCB) as well as to answer the question: "Is professional status in financial services firms associated with employee perceptions of psychological safety and does this influence organizational citizenship behavior of employees?" Within the existing body of research on antecedents to OCB, the potential moderating influences of professional status, leader inclusiveness, and team leader coaching have not yet been examined, nor has the possible mediating effect of psychological safety on OCB been explored.

In Nembhard and Edmondson's original 2006 study, job titles were utilized by the authors in order to ascertain status-level of their survey respondents. In the current study, this approach was not utilized due to the ambiguity and disparate meanings of equivalent job titles (e.g., financial analyst, senior analyst, etc). For this reason, a latent class analysis was conducted in order to determine whether homogenous status-based subgroupings might emerge within the sample population. The latent class analysis results confirmed that there were homogeneous subgroupings within the sample population that were distinctly "higher status" and "lower status" in nature. Based on the model fit criteria, ease in interpretability, and parsimony, the sample population (Lanza & Rhoades, 2013; Nylund, Asparouhov, & Muthen, 2007) was divided into one of two distinctive status classes.

As shown in Table 1, the statistical results of the path analysis indicate that for this sample population, professional status was significantly associated with employee perceptions of psychological safety, which supports the Nembhard and Edmondson 2006 findings. At a slightly higher p value (in the "exploratory" range) years in current work group ( $p < .071$ ) was also positively associated with psychological safety. The path analysis results also suggest that the interaction between professional status and leader inclusiveness and between professional status and team leader coaching is significantly associated with OCB. In the case of leader inclusiveness, the interaction effect of professional status on leader inclusiveness was positively associated with organizational commitment ( $p < .023$ ). The interaction effect of class and team leader coaching showed a negative and statistically significant association with OCB-Voice and with organizational commitment, suggesting that every unit of change in team leader coaching for high status (class = 1) results in a negative change in OCB-Voice relative to the low status (class = 0) people. Higher responses in OCB-Voice were evidenced in low status people as team leader coaching increases and less for the higher status people. In other words, the higher the person's status, the less TLC is able to predict OCB-Voice or organizational commitment. Professional status interacts with team leader coaching differently for the low professional status class than for the high professional status class.

Table 1: Results - Recursive Path Analysis

Direct Effect Paths	Unstandardized Coefficient Estimate	Standard Error (SE)	Unstandardized 95% CI [Lower, Upper]	p	Standardized Estimates
Psych_Safety → OCB-V	0.914	0.549	[-0.363, 1.835]	<b>0.10</b>	0.104
Social_Desire_Bias → OCB-V	0.813	0.843	[-0.925, 2.289]	0.335	0.062
<b>Leader_Inc → OCB-V</b>	<b>1.98</b>	<b>0.615</b>	<b>[0.789, 3.178]</b>	<b>0.001</b>	<b>0.286</b>
<b>Team Leader Coach → OCB-V</b>	<b>2.528</b>	<b>0.629</b>	<b>[1.193, 3.641]</b>	<b>0.000</b>	<b>0.399</b>
Yrs_in_Current Group → OCB-V	0.03	0.095	[-0.175, 0.201]	0.756	0.018
Class x Leader Inc → OCB-V	0.491	1.098	[-1.745, 2.560]	0.655	0.143
<b>Class x TLC → OCB-V</b>	<b>-1.733</b>	<b>0.899</b>	<b>[-3.352, 0.230]</b>	<b>0.054</b>	<b>-0.515</b>
Class x Yrs_in_Current_Grp → OCB-V	0.022	0.157	[-0.289, 0.322]	0.887	0.011
Class → OCB-V	5.144	6.556	[-6.619, 19.015]	0.433	0.286
<b>Psych_Safety → OCB-H</b>	<b>2.067</b>	<b>0.892</b>	<b>[0.267, 3.827]</b>	<b>0.02</b>	<b>0.179</b>
Social_Desire_Bias → OCB-H	0.703	1.122	[-1.628, 2.883]	0.531	0.041
Leader_Inc → OCB-H	1.472	0.915	[-0.378, 3.129]	0.108	0.162
<b>Team Leader Coach → OCB-H</b>	<b>2.828</b>	<b>0.895</b>	<b>[1.013, 4.443]</b>	<b>0.002</b>	<b>0.34</b>
Yrs_in_Current Group → OCB-H	0.073	0.142	[-0.227, 0.331]	0.607	0.034
Class x Leader Inc → OCB-H	0.571	1.468	[-2.110, 3.432]	0.697	0.127
Class x TLC → OCB-H	-0.789	1.201	[-3.159, 1.631]	0.511	-0.178
Class x Yrs_in_Current_Grp → OCB-H	-0.053	0.234	[-0.486, 0.418]	0.821	-0.19
Class → OCB-H	1.176	8.838	[-14.334, 19.954]	0.894	0.05
<b>Psych_Safety → ORG COM</b>	<b>0.651</b>	<b>0.34</b>	<b>[-0.038, 1.314]</b>	<b>0.055</b>	<b>0.127</b>
<b>Social_Desire_Bias → ORG COM</b>	<b>-0.995</b>	<b>0.381</b>	<b>[-1.810, -0.322]</b>	<b>0.009</b>	<b>-0.13</b>
Leader_Inc → ORG COM	0.572	0.35	[-0.026, 1.333]	<b>0.10</b>	0.142
<b>Team Leader Coach → ORG COM</b>	<b>1.609</b>	<b>0.293</b>	<b>[0.943, 2.110]</b>	<b>0.000</b>	<b>0.435</b>
Yrs_in_Current Group → ORG COM	0.085	0.058	[-0.029, 0.196]	0.145	0.089
<b>Class x Leader Inc → ORG COM</b>	<b>1.291</b>	<b>0.567</b>	<b>[0.097, 2.325]</b>	<b>0.023</b>	<b>0.646</b>
<b>Class x TLC → ORG COM</b>	<b>-1.102</b>	<b>0.468</b>	<b>[-1.936, -0.152]</b>	<b>0.018</b>	<b>-0.56</b>
Class x Yrs_in_Current_Grp → ORG COM	-0.004	0.122	[-0.244, 0.238]	0.973	-0.003
Class → ORG COM	-1.363	2.941	[-6.881, 4.668]	0.643	-0.13
<b>Social_Desire_Bias → Psych Safety</b>	<b>-0.207</b>	<b>0.073</b>	<b>[-0.351, -0.063]</b>	<b>0.004</b>	<b>-0.138</b>
<b>Leader_Inc → Psych Safety</b>	<b>0.380</b>	<b>0.079</b>	<b>[0.211, 0.517]</b>	<b>0.000</b>	<b>0.482</b>
Team Leader Coach → Psych Safety	0.106	0.069	[-0.026, 0.238]	0.121	0.147
<b>Yrs_in_Current Group → Psych Safety</b>	<b>0.026</b>	<b>0.014</b>	<b>[-0.007, 0.049]</b>	<b>0.071</b>	<b>0.14</b>
Class x Leader Inc → Psych Safety	-0.194	0.118	[0.356, 2.508]	<b>0.10</b>	-0.496
Class x TLC → Psych Safety	-0.050	0.099	[-0.407, 0.059]	0.613	-0.13
Class x Yrs_in_Cur_Grp → Psych Safety	-0.026	0.026	[-0.230, 0.136]	0.305	-0.112
<b>Class → Psych Safety</b>	<b>1.449</b>	<b>0.54</b>	<b>[-0.082, 0.023]</b>	<b>0.007</b>	<b>0.706</b>

*This table shows results of recursive path analysis.*

This study makes an important contribution and both directly and indirect supports several important empirical studies which explored the relationships between ethical leadership, leader behaviors, work climate/psychological safety, and OCB. The most novel contribution pertains to the findings that affirm the relationships between leader inclusiveness and team leader coaching and OCB. In addition, the interaction effect of professional status on these leader behaviors provides specific managerial insight regarding how

managers and organizational leaders might better navigate discrepancies in professional status to draw out and elicit stronger organizational citizenship behaviors from employees. This study found a significant association between employee perceptions of psychological safety and OCB and demonstrated support for the mediating effect of psychological safety on every type of OCB evaluated in this study. Finally, this study is unique in the body of existing research in that it explores the respective relationships between professional status, leader behaviors (inclusiveness and team leader coaching), psychological safety, and OCB within the domain of financial services firms.

## CONCLUSION

The financial industry, like the healthcare industry, has been fraught with performance issues. It is also, like the healthcare industry, is an industry deeply influenced by status and hierarchy (Ho, 2009; Groysberg, Polzer, & Eifenbein, 2011). This study sought to explore how professional status level in the workplace may act as a moderating variable to influence employee perceptions of psychological safety. Related to this, the study also sought to evaluate the impact of leader inclusiveness as a moderator of psychological safety. A cross-sectional electronic survey incorporating elements of the original Nembhard and Edmondson 2006 study was created that incorporated a quantitative portion that consisted of 42 questions over ten measures. Two open-ended qualitative survey questions were also included as part of the survey instrument to address content areas that the quantitative portion of the survey was unable to address. The survey was distributed to 270 financial services professionals, and 247 responses were received for a response rate of 91.48%. Possible limitations of the study include sampling error, measurement error, common-method variance, and the cross-sectional design of the study.

There is a risk of sampling error any time a sample is drawn that is designed to represent a broader population (Doane & Seward, 2011). Sampling error can occur when the population that comprises the sample does not adequately represent the broader population in question. In the case of path analysis, measurement error may result in under- or over-estimation of path coefficient which can ultimately distort findings that result in erroneous conclusions regarding the statistical significance of relationships between model variables or the appropriateness of the model itself (Cole & Preacher, 2014). According to Cole and Preacher (2014), one method for controlling the effects of this is to limit the complexity of the model by reducing the number of variables. In an effort to control the effects of this, this model was contained to a moderate number of variables and resulting in a model with attenuated complexity. Common method variance is a type of systematic error that may be introduced into the data analysis that occurs when researchers collect all of their data from the same survey instrument (Richardson, Simmering, & Sturman, 2009); common method variance needs to be addressed because failure to do so can result in misleading conclusions. Cross-sectional studies are like “snapshots,” capturing the sentiments of survey respondents at just a moment in time. By their very nature, therefore, cross-sectional studies present challenges if a goal of the research in question is to understand how relational dynamics create workplace climates and foster desirable organizational outcomes, as was the case with this study. In the future, a staged data collection or a longitudinal study may be warranted.

The study confirmed the hypothesis that higher status professionals are likely to experience greater psychological safety in the workplace. The findings from this study suggest that leader inclusiveness and team leader coaching, either directly or when moderated by professional status, can influence both employee perceptions of psychological safety and organizational citizenship behavior outcomes. The findings provide managerial insight regarding dispositions that managers can take towards work group members to foster both a greater sense of psychological safety and organizational citizenship behaviors. Two important caveats to this study, however, are that higher psychological safety has been demonstrated to elicit higher levels of unethical behavior in certain environments (Pearsall & Ellis, 2011) and that OCB may be more closely associated to counterproductive work behaviors than has been understood in the

management literature (Klotz & Bolino, 2013). Future studies that explore the relationship between psychological safety and OCB measures may be enhanced with consideration of these two phenomena.

## REFERENCES

- Argyris, C. (1986). Reinforcing organizational defensive routines: An unintended human resources activity. *Human Resource Management, 25*(4), 541-555. doi:10.1002/ hrm.3930250405
- Bateman, T. S., & Organ, D. W. (1983). Job satisfaction and the good soldier: The relationship between affect and employee “citizenship.” *Academy of Management Journal, 26*, 587-595. doi: 10.2307/255908
- Berger, J., Cohen, B. P., & Zelditch Jr., M. (1972). Status characteristics and social interaction. *American Sociological Review, 37*, 241-255.
- Berger, J., Rosenholtz, S. J., & Zelditch Jr., M. (1980). Status organizing processes. *Annual Review of Sociology, 6*, 479-508. Retrieved from jstor.org/stable/2946017
- Bishop, J. W., Scott, K. D., & Burroughs, S. M. (2000). Support, commitment, and employee outcomes in a team environment. *Journal of Management, 26*, 1113-1132. doi: 10.1177/014920630002600603.
- Black, W. K. (2010), Epidemics of ‘control fraud’ lead to recurrent, intensifying bubbles and crises. doi: 10.2139/ssrn.1590447
- Blau, P. (1964). *Exchange and power in social life*. New York, NY: Wiley.
- Cole, D. A., & Preacher, K. J. (2013). Manifest variable path analysis: Potentially serious and misleading consequences due to uncorrected measurement error. *Psychological Methods, 19*, 300-315. doi: 10.1037/a0033805
- Creswell, J. W. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches* (2nd ed.). Thousand Oaks, CA: Sage Publications, Inc.
- Deming, W. E. (1986). *Out of the Crisis*, Cambridge, UK: Cambridge University Press.
- Doane, D. P., & Seward, L. E. (2011) *Applied statistics in business and economics* (3<sup>rd</sup> ed.). New York, NY: McGraw-Hill Irwin.
- Dudley, B. (2014, October, 20). Enhancing financial stability by improving culture in the financial services industry. Remarks presented at the Workshop on Reforming Culture and Behavior in the Financial Services Industry, Federal Reserve Bank of New York, NY.
- Graen, G. B. & Uhl-Bien, M. (1995). Relationship-based approach to leadership: development of leader-member exchange (LMX) theory of leadership over 25 years: applying a multi-level multi-domain perspective. *Leadership Quarterly, 6*(2), 219-247.
- Graen, G. B. (1976). Role making processes within complex organizations. In M. D. Dunnette (Ed.), *Handbook of industrial and organizational psychology* (pp. 1201–1245). Chicago, IL: Rand-McNally.
- Groysberg, B., Polzer, J. T., & Elfenbein, H. A. (2011). Too many cooks spoil the broth: How high-status individuals decrease group effectiveness. *Organization Science, 22*(3), 722-737. doi: 10.1287/orsc.1100.0547



Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of Qualitative Research* (pp. 105-117). Thousand Oaks, CA: Sage.

Ho, K. (2009). *Liquidated: An Ethnography of Wall Street*, Durham and London: Duke University Press.

Kirchler, E., & Davis, J. H. (1986). The influence of member status differences and task type on group consensus and member position change. *Journal of Personality and Social Psychology*, 51(1), 83-91.

Klotz, A., & Bolino, M. (2013). Citizenship and counterproductive work behavior: A moral licensing view. *Academy of Management Review*, 38(2), 292-306. doi:10.5465/amr.2011.0109

Lanza, S., & Rhoades, B. L. (2013). Latent class analysis: An alternative perspective on subgroup analysis in prevention and treatment. *Prevention Science*, 14, 157-168. doi: 10.1007/s11121-011-0201-1.

Lincoln, Y. A. (2005). Content, lived experience, and qualitative research. In R. A. Swanson and E. F. Holton, III (Eds.), *Research in Organizations: Foundations and Methods of Inquiry* (pp. 221-231). San Francisco: Berrett Koehler.

Littlepage, G., Robison W., & Reddington, K. (1997). Effects of task experience and group experience on group performance, member ability, and recognition of expertise. *Organizational Behavior and Human Decision Processes*, 69, 133-147.

Nembhard, I., & Edmondson, A. (2006). Making it safe: The effects of leader inclusiveness and professional status on psychological safety and improvement efforts in health care teams. *Journal of Organizational Behavior*, 27(7), 941-966. doi: 10.1002/job.413

Nylund K. L., Asparouhov T., & Muthén B. O. (2007). Deciding on the number of classes in latent class analysis and growth mixture modeling: A monte carlo simulation study. *Structural Equation Modeling*, 14(4), 535-569.

Organ, D. W. (1977). A reappraisal and reinterpretation of the satisfaction-causes-performance hypothesis. *Academy of Management Review*, 2(1), 46-53. doi: 10.5465/AMR.1977.4409162

Organ, D. W., Podsakoff, P. M., & MacKenzie, S. B. (2006). *Organizational Citizenship Behavior: Its nature, antecedents, and consequences*. Thousand Oaks, CA: Sage Publications.

Pagliari, C., & Grimshaw, J. (2002). Impact of group structure and process on multidisciplinary evidence-based guideline development: an observational study. *Journal of Evaluation of Clinical Practice*, 8(2), 145-153. doi: 10.1046/j.1365-2753.2002.00333.x

Pearsall, M., & Ellis, A. (2011). Thick as thieves: The effects of ethical orientation and psychological safety on unethical team behavior. *Journal of Applied Psychology*, 96(2), 401-411. doi: <http://dx.doi.org/10.1037/a0021503>

Podsakoff, P. M., MacKenzie, S. B., Paine, J. B., & Bachrach, D. G. (2000). Organizational citizenship behaviors: A critical review of the theoretical and empirical literature and suggestions for future research. *Journal of Management*, 26(3), 513-563. doi:10.1177/014920630002600307

Richardson, H. A., Simmering, M. J., & Sturman, M. C. (2009). A tale of three perspectives: Examining post hoc statistical techniques for detection and correction of common method variance. *Organizational Research Methods*, 12, 762-800. doi: 10.1177/1094428109332834.

Santoro, M. A., & Strauss, R. J. (2013). *Wall Street Values: Business Ethics and the Global Financial Crisis*. New York, NY: Cambridge University Press.

Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. *The Social Psychology of Intergroup Relations*, 33, 47.

Tenbrunsel, A., & Thomas, J. (2015). The street, the bull, and the crisis: a survey of U.S. and U.K. financial services industry. New York, NY: University of Notre Dame & Labaton Sucharow.

Turner, J. C., Oakes, P. J., Haslam, S. A., & McGarty, C. (1994). Self and collective: cognition and social context. *Personality and Social Psychology Bulletin*, 20(5), 454-463. doi: 10.1177/0146167294205002

Vinokur, A., Burnstein, E., Sechrest, L., Wortman, P. M. (1985). Group decision making by experts: Field study of panels evaluating medical technologies. *Journal of Personality and Social Psychology*, 49, 70-84.

Weisbad, S. P., Schneider, S. K., & Connolly, T. (1995). Computer-mediated communication and social information: Status salience and status differences. *Academy of Management Journal*, 38, 1124-1151. doi: 10.2307/256623.

Yukl, G. (1999). An evaluation of conceptual weaknesses in transformational and charismatic leadership theories. *The Leadership Quarterly*, 10, 285-305. doi: 10.1016/S1048-9843(99)00013-2.

## BIOGRAPHY

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# **DATA-ORIENTED BUSINESS MODELS: GAINING COMPETITIVE ADVANTAGE**

Peter Géczy, National Institute of Advanced Industrial Science and Technology (AIST)

## **ABSTRACT**

*Data has been widely regarded as a new treasure throw for contemporary organizations. Information technology sector has been experiencing a major shift towards data orientation. A recent explosion of digital data has significantly influenced a number of other economic sectors in developed economies. Exponential growth of data is expected to continue in a foreseeable future. Capitalizing on this trend is gradually becoming a necessity for contemporary businesses. Extracting value from data is a substantial challenge. Data acquisition is the starting point. Efficient processing of collected data is the next stage. Suitably processed data is used for designing data products and services. At each stage, there are significant opportunities for value creation and monetization—the core aspects of business models. Data-oriented activities also provide opportunities for gaining competitive advantage. Despite the growing importance of data-driven innovation, there is a considerable absence of studies addressing data-oriented business models. We explore the essential elements and enablers of viable data-oriented business models and pathways to competitive advantage.*

**JEL:** C8, C81, C82, C88, D7, D8, D81, M15

**KEYWORDS:** Data-Oriented Business Models, Data-Driven Innovation, Data Economy, Data Engineering, Data Products, Data Services, Actionable Knowledge

## **INTRODUCTION**

**D**ata has been growing exponentially over the past decade. This growth is estimated to continue at over the following decade (Gantz and Reinsel, 2012). Many developed economies have achieved digital dominance around the beginning of the twenty-first century. That is, digital data has surpassed analog one, and it will continue to do so. That was the first milestone. The next milestone is anticipated to occur soon. It is estimated that emerging markets will outgrow mature markets in data production (EMC, 2014). Consequently, the capitalization of data economy may experience shift towards emerging markets. The rise of digital data and its dominance has been accompanied with both benefits and challenges (McAfee and Brynjolfsson, 2012; Charlesworth, 2009). Digital data is easier to produce. There is an abundant spectrum of devices that can rapidly produce large amounts of digital data. Devices range from large-scale systems, throughout mobile devices, to miniature sensors. Digital data is also easier to store and manage. High capacity data storage hardware and database software have been developed (Kroenke and Auer, 2013). Most importantly, digital data is easier to manipulate and process. The main processing tools have become digital computers. Vast variety of software tools can easily manipulate raw data from other devices and produce new data—thus, reinforcing the production loop.

The reinforced data production loop has brought unexpected consequences. Data is produced at a faster rate than we can adequately process and store it. The production has outpaced the processing (Gantz and Reinsel, 2012). Commercially oriented data processing is computationally vastly more intensive than the reinforced data production. Presently, the expansion of digital data is disproportional to the progress in data processing technologies. The disproportional growth of data to the desired processing capabilities has

led to the big data problems (Géczy, 2014; Fan et al. 2014). Since the expansion of data is faster than the capabilities of organizations to suitably process it, there is an increasing gap between the required and available processing capabilities. The increasing gap is central to the big data problem. When organizations experience the big data problem, they need to address it quickly. Failure to do so leads to diminishing abilities to utilize data and harness its potential.

Organizations have been striving to realize the potential and transformational powers of data (Redman, 2015). They started collecting extensive volumes of data both internally and externally (Provost and Fawcett, 2013; Manyika et al., 2011). Internal data may provide valuable insights on operational awareness and internal functioning. By utilizing such insights, organizations can innovate their business processes and improve operating efficiency. External data offers indispensable insights about their customers. Better understanding of their customers' needs helps innovating their products and services. Various data-oriented economic activities have started in an effort to realize commercial potential of data. Data economy has been gaining a significant influence (Géczy, 2015). The activities can be divided into three major segments: data collection, data processing, and data services or products. Data collection activities relate to acquisition of raw data. They encompass hardware and software systems for collecting and storing data. Data processing activities pertain to manipulation and analysis. They include systems for analysis, conversion, modeling, knowledge extraction, etc. Data services or products represent the final outcome in commercialization of data.

Thriving data economy gave birth to innovative business models (McCallum and Gleason, 2013). The early business models have been trying to apply the existing approaches to data-oriented activities, or focusing solely on data and its content. While applicable in some instances, many data-oriented activities have specific characteristics that make them unfit for the conventional business models. Analogously, focusing on the contents of data itself has led to simply collecting and reselling it in a raw form. Novel business models have been emerging with aim to accommodate specifics of data-oriented economic activities, or target only certain markets. Mobile communication markets have been attracting a significant attention—even from governmental and regulatory bodies (ACMA, 2011). Facilitation of novel business models requires perspective that encompasses specifics of data-oriented activities and traditional approaches. The presented work attempts to undertake this challenge.

The manuscript is organized as follows. The literature review section provides a concise overview of related works. It is followed by the section 'Methodology' where we explain our conceptual framework. The section, 'Data-oriented Value Creation' presents several pertinent styles for value creation from data. They are positioned within the introduced conceptual framework. The following section is 'Data-oriented Monetization'. Various pertinent monetization strategies are presented here. They are also mapped into the introduced conceptual framework. The next section 'Gaining Competitive Advantages—a Path Forward' highlights selected opportunities outlining how data-orientation can lead to competitive advantages for organizations. In the section 'Summary', we illustrate the overall perspective on data-oriented value creation and monetization. The presentation concludes with a concise summary of the essential points.

## LITERATURE REVIEW

Data and information are the key assets in data economy (Newman, 2011; St. Amant and Ulijn, 2009). Data economy has been growing over the past years and it has been estimated to continue doing so. The growth has been fueled by the exponential expansion of data. Data economy has been increasingly influencing several sectors. Notable effects have been evident in commerce, labor, education and government (Géczy, 2015). Commercial economic activities have been ranging from data collection, throughout data processing to offering of novel data services and products. Data-oriented commercial activities call for new data professionals, such as data scientists and engineers. Shortage of skilled data

professionals gave birth to novel academic programs. Realization of the economic and social potentials of data requires involvement of regulatory bodies. Government must sensibly regulate the economic and social environments in order to balance the needs of organizations for data and the rights of individuals to privacy. Data has become an asset for organizations (Oppenheim et al., 2003; Tallon, 2013). This new digital asset has started replacing physical assets in value. Many modern technology companies have greater digital assets than physical ones. While physical assets have been commoditized, data has a potential for maintaining value and even growing in value (Lievesley et al., 1993). Value of data has been rising and companies have been aware of it. Organizations have been attempting to derive further value from data. Extracting value and insights from data has become the objective for many organizations (Vertesi and Dourish, 2011). They have been increasingly involved in a range of data-oriented activities. Organizations have started collecting volumes of data about their operations, suppliers and customers. The prevailing trend has been to collect as much data as possible, and analyze and explore it later. Operational data can be explored for insights into business processes and used for extraction of actionable knowledge. The insights have been utilized for alleviating operational efficiency (Géczy et al., 2007 and 2008). Actionable knowledge extraction techniques have been employed for improving core competencies and providing timely business intelligence (Laursen and Thorlund, 2010).

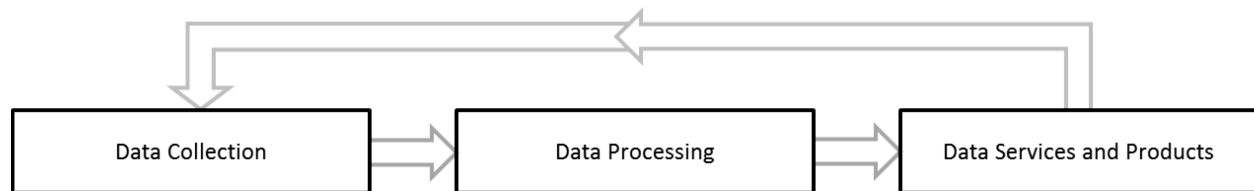
Data-oriented economic activities gave rise to business models based on provision, transformation and utilization of data (Redman, 2015; Timmers, 1999; Alt and Zimmermann, 2001). The emerging business models have been diverging from the traditional concepts (McCallum and Gleason, 2013). Business models are still a relatively modern concept and scholars are in a disagreement on various issues. However, several common grounds have been identified: a) the business model is representing a new unit of analysis, b) business models emphasize an encompassing approach to explaining how companies do business, c) organizational activities play the key role in conceptualization of business models, d) business models aim at explaining how values are created and captured (Zott et al., 2010). The last outline of what the business model represents has been gaining a notable attention. The business model presents the logic or strategies how enterprises create values for customers and how they monetize it for profit (Teece, 2010). Hence, the business models comprise of two main components: value creation and monetization. The presented work embraces this conceptualization of a business model. Commercialization of data and data-oriented activities has been exploited by organizations for gaining competitive advantages. That is, enriching or tailoring their business models for attributes that enable organizations to outperform their competitors (Porter, 1980). Data analytics have been utilized as a mean to attain competitive advantage for organizations (Davenport et al., 2007 and 2010). Taking into account the sensitivity of personal data and aiming at users trust has been also explored as a way to competitive advantage (Morey, 2015). Access to data and services via the Application Program Interfaces (APIs) has been outlined as another strategy towards competitive advantage (Iyer and Subramaniam, 2015).

## METHODOLOGY

A business model represents the logic of an enterprise (Zott et al., 2010; Teece, 2010). It explains how the enterprise creates and delivers value, and how it gets rewarded for it. Hence, there are two main elements involved: value creation and monetization. In describing a business model, it is necessary to address both of these elements. The methodology presented in this work adds a new dimension in categorizing value creation and monetization strategies. The new dimension exposes associations with the major stages of data-oriented economic activities. Incorporation of the new dimension enables us to provide better perspective on characteristics of data-oriented business models and explore further details. It permits us to position the value creation and monetization strategies within the major segments of data-oriented economic activities. These features are beneficial for both data professionals and technology managers. The presentation of major data-oriented activities includes the data flows between them (see Figure 1). The illustration also resonates with the process of data product creation and data flow cycle. It starts with the collection of data. Raw data is collected for a specific purpose (e.g. creation of a data

product). Collected data needs to be suitably processed. During the processing, relevant information, knowledge and insights are extracted. These are utilized for designing a viable data product. Data product is marketed to customers. Use of a product generates additional data—the feedback. (also referred to as a ‘data exhaust’). The feedback data is collected, processed and used for improvement of a data product.

Figure 1: Major Segments of Data-Oriented Economic Activities and Data Flows



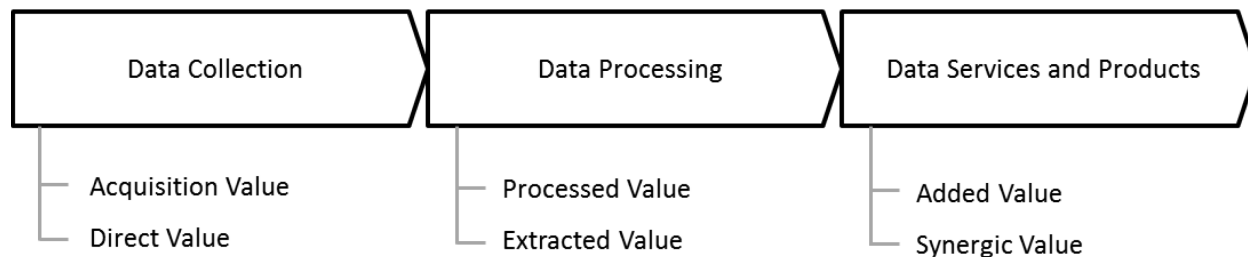
*Data-oriented economic activities span across three major segments: data collection, data processing, and data services or products. Data collection encompasses activities related to the acquisition of raw data. Data processing segment includes activities related to processing and manipulation of raw data, and extraction of knowledge or insights from data. Data services and products are designed utilizing processed data or extracted insights. Arrows illustrate the major data flows between the segments.*

The cyclic process is depicted in Figure 1. As described in the former paragraph, it outlines the major segments of data-oriented economic activities. Three major areas of data-oriented economic activities pertain to data collection, data processing and data services or products. Data collection segment covers economic activities related to gathering of raw data. These include, for instance, sell of devices for data collection and digitization, or sell of raw data itself. Data processing segment highlights economic activities related to manipulation of raw data and extraction of valuable insights. For instance, sell of software products for data processing, analytics and modelling, or timely insights. Data products and services delineate the final segment of the chain. It encompasses economic activities associated with broad-ranging services and products. Understanding of the major segments of data-oriented economic activities and data flow cycle is crucial for positioning of value creation and monetization. We map the presented strategies for value creation and monetization directly into the corresponding segments. This allows us to clearly see which value creation and monetization strategies are viable at which stage. Furthermore, mapping of value creation and monetization strategies into appropriate segments allows managers and data professional to creatively combine them when devising their specific data-oriented business models.

### Data-Oriented Value Creation

Data is the enabler for creating value in data economy (Newman, 2011). Value of data can be realized immediately, or over an extended period of time. Organizations are gradually recognizing this fact and treating data as a valuable long-term asset (Oppenheim et al., 2003). However, many organizations are unable to derive desirable value from data. They lack knowledge of and perspective on value differentiation and derivation. We present a perspective on value differentiation and creation with respect to the segments of major data-oriented economic activities. Data holds different potentials for value creation at various stages. We distinguish three pertinent stages of significant data-oriented economic activities: data collection, data processing, and data services and products utilization. Different kinds of values can be derived from data at different stage (as illustrated in Figure 2). Data collection stage generates direct and acquisition values. Data processing stage presents opportunities for deriving processed and extracted values. Data services and products provide grounds for deriving added and synergic data values. The following paragraphs concisely outline the mentioned data-oriented values.

Figure 2: Data-oriented Value Creation at Various Stages



*Value derived from data varies depending on the prevailing economic activity. At each stage, there are two major values. Data collection stage distinguishes acquisition and direct values. Data processing stage underlines processed and extracted values. Data services and products are characterized by added and synergic values.*

*Acquisition value:* of data reflects the demands and needs of organizations for acquiring data. If an organization wants to acquire certain data, what would it need? Would it require a purchase of new hardware, software, changes in infrastructure or processes (or other aspects of operation)? Data acquisition is inherently linked with costs (e.g. hardware, software, labor, etc.). The costs reflect the acquisition value of data. Organizations can create a notable acquisition values by providing cost effective data acquisition solutions.

*Direct value:* underscores the direct sale value of raw data. Collected raw data can be sold to organizations (or other entities) directly or via platforms—such as data marts. Organizations collecting raw data may add new revenue streams by simply selling it. If the data is unique, or hard to collect, it can have a significant direct value. For instance, high-resolution hyperspectral satellite images for finding oil and mineral deposits.

*Processed value:* of data is derived from its processing. Data processing is desirable in numerous instances. For example, privacy laws in various legislative regions do not allow sale of raw data containing identifiable information, but only aggregate data containing items that vary among different regions (i.e. processed or anonymized data). In another instance, organizations may require data be in a specific format, in order to smoothly integrate with their internal systems. Hence, the processed value can be created from the manipulation of data as well as from the processed data itself.

*Extracted value:* pertains to information, knowledge or insights extracted from data. Analysis of data may provide new knowledge or insights about certain aspects that are highly valuable yet are not directly noticeable from the data itself. Extraction of such knowledge may require utilization of advanced algorithms. For instance, product suggestions generate significant value and revenue for Amazon. They are provided by complex systems, called recommendation engines that extract recommendable products from large data about customers and their purchases.

*Added value:* refers to value creation by adding data to products or services. Bundling data with products or services results in an increased value of the combined offering. Added data can be raw, processed or extracted from other data. Take an example of a cloud-based platform for development of targeted analytics. Providing ready-to-use data for testing of developed analytics in various target domains increases the value of the combined offering: platform plus data.

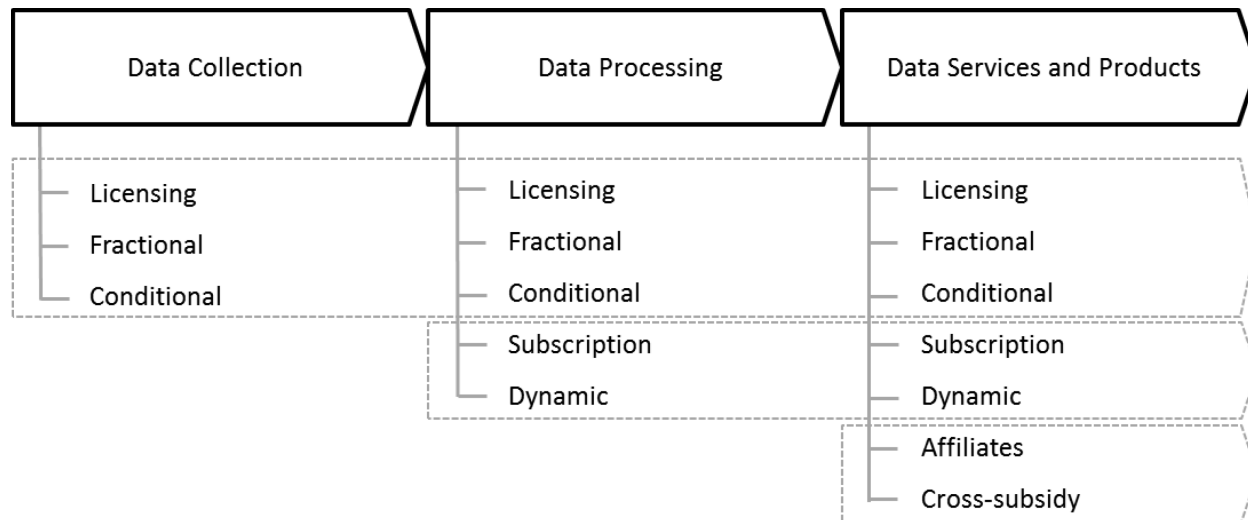
*Synergic value:* is derived from the symbiotic relationship between data and services or products. Removing the data from a product or service would result in a loss of value and service or product itself. Hence, the synergic value creation differs from the added value creation. In the former, the product or service would have no value without the data. In the later, it would retain some value even without the

data. Consider a movie streaming service (e.g. Netflix). Without the digitized movies data, the service would not exist.

Data-Oriented Monetization

Monetization of created value is an integral part of business models (Teece, 2010). Businesses must generate sufficient revenue in order to strive and compete in economic environments. Data-oriented activities provide several novel opportunities for revenue generation. Understanding such opportunities is indispensable to creating both core and supplementary revenue streams. We present several major monetization strategies and map them into formerly introduced three major stages of data-oriented activities.

Figure 3: Data-Oriented Monetization at Different Stages



*Monetization of data and data driven activities is achievable at all three stages. Different stages are indicative of varying spectrum of monetization strategies. Range of monetization strategies expands at each stage. Data collection stage features licensing, fractional and conditional monetization strategies. In data processing stage, the range is expanded for two more strategies: subscription and dynamic monetization. Data services and data products provide the most options for monetization—further expanding the range for affiliate and cross-subsidy monetization strategies.*

Value created by data driven activities, or data itself, can be variously monetized. We map the monetization strategies to the major data-oriented activity stages: data collection, data processing, or data products and services (see Figure 3). Different stages provide different monetization opportunities. The spectrum of opportunities expands at each successive stage. At data collection stage, the major monetization strategies include licensing, fractional, and conditional monetization. At the data processing stage, two additional monetization strategies are viable: subscription and dynamic monetization. The third stage, data products and services, has the largest spectrum of monetization strategies, including affiliates and cross-subsidies. Individual monetization strategies are concisely outlined in the following paragraphs. Licensing is a common monetization strategy that grants users certain rights in exchange for money. Data, services and products can be monetized by licensing. In a broad sense, this monetization strategy also includes temporarily granting certain rights in exchange for money, as in lending, renting or leasing. Licensing is generally used for monetization of protected intellectual property in digital or other forms. For instance, digitized music or movies can be licensed for use in streaming services over networks.



*Fractional:* strategy underlines monetization of divided and metered segments of value creation. Generally, this encompasses the schemes of the form: ‘pay-per-X’, where X denotes various metered entities, such as amounts of data, transmission speeds, usage times, etc. Variants of this scheme are also referred to as pay-as-you-go, micropayments, etc. For instance, data storage services (e.g. Dropbox) structure their monetization schemes depending on the amount of allocated data storage.

*Conditional:* strategy refers to monetization that is subject to certain conditions. For example, online weather data service (e.g. Forecast.io) may provide free data access until certain number of requests per day (via API - application programming interface), and then charge for every request exceeding the free limit. That is, monetization occurs only when certain conditions are satisfied (minimum number of access calls are exceeded).

*Subscription:* is a commonly used monetization strategy where users pay subscription fees to have access to data or services. Rather than monetizing data or products in a single instance, a subscription strategy offers periodic (e.g. weekly, monthly, annually) monetization of data, products or services. Content providers such as magazines or newspapers often use the subscription-based monetization (e.g. online version of The New York Times).

*Dynamic:* monetization strategy underscores the variation of value according to outside conditions. Dynamic pricing strategies are often used to incentivize certain economic behaviors or maximize revenues (e.g. increasing prices of airline tickets during the major holiday seasons). However, contemporary data driven pricing models can offer virtually real-time dynamics aimed at various goals (e.g. maximization of revenue or sale volume). For instance, the transportation service Uber changes prices dynamically by accounting for location, driver availability, local traffic conditions and other timely data. Cross-subsidy monetization strategy is a practice of subsidizing lower prices for one group of customers by charging higher prices to another group of customers. Differentiated pricing may relate to a single product or several different products provided to different customer groups. Cross-subsidization is an enabler for provision of free services or products. For instance, search engines offer free search services containing advertisements (e.g. Google). While search services are free, advertisers pay for relevant display of their advertisements. Vast data collected from users fuels the platforms for display and pricing of advertisements.

### Gaining Competitive Advantages—A Path Forward

Contemporary economic environments are highly competitive. Organizations are facing competitions from inside their primary business domains as well as from outside. Competitors come in form of both established players and novel entrants. To survive in competitive environments, organizations must outperform their competitors. They must devise forward-looking strategies that enable them to gain competitive advantages (Porter, 1980). Data-orientation presents novel avenues for gaining competitive advantages. Data is a valuable asset. It permits creation of superior products and services, erection of barriers to entry, and monetization. Many organizations have been collecting vast amounts of data, but have been lacking capabilities to effectively explore them. Similarly, many companies have been involved in data-oriented activities, but have been unable to realize their full potential. Data and its effective utilization have significant potential for differentiation, hence enabling companies to gain desired competitive advantages. We explore several viable opportunities for gaining competitive advantages from data and data-oriented activities.

*Creating Valuable Datasets:* Valuable datasets are hard to create. They can serve as an effective barrier for new entrants. Valuable datasets should contain accurate, clean and timely data. Datasets should have useful applications. They could be used for building valuable products or services, or high valued direct monetization. Data should also appreciate in value over time, with greater active use, or with more users.

*Developing Data-driven Pricing:* Data-driven pricing can provide desirable dynamics to pricing strategies. From extensive historical transaction data, companies can develop pricing strategies optimized for meeting their needs (e.g. maximizing revenues or sale volumes). Data-driven pricing can be tailored to specific demographics. Tailored data-driven pricing is difficult to replicate for competitors, thus providing additional competitive advantages.

*Extracting Actionable Insights from Data:* Actionable insights are difficult to extract from data. Bigger data provides potential for greater insights. Valuable insights require complex data analysis. Complexity of analytic algorithms generally rises with depth of insights. Deeper actionable insights are more tailored to the specific characteristics of a company. Thus, they contribute to valuable internal or operational know-how.

*Innovating Operations Based on Internal Data:* Operating efficiency improvements and internal innovation are pertinent for organizations. Improved operations lead to lower operating costs and higher productivity. Collecting data about internal operations is the starting point. Effective analysis of the data is the next requirement. The more internal data organizations collect and effectively analyze, the better they can streamline processes towards their core business activities.

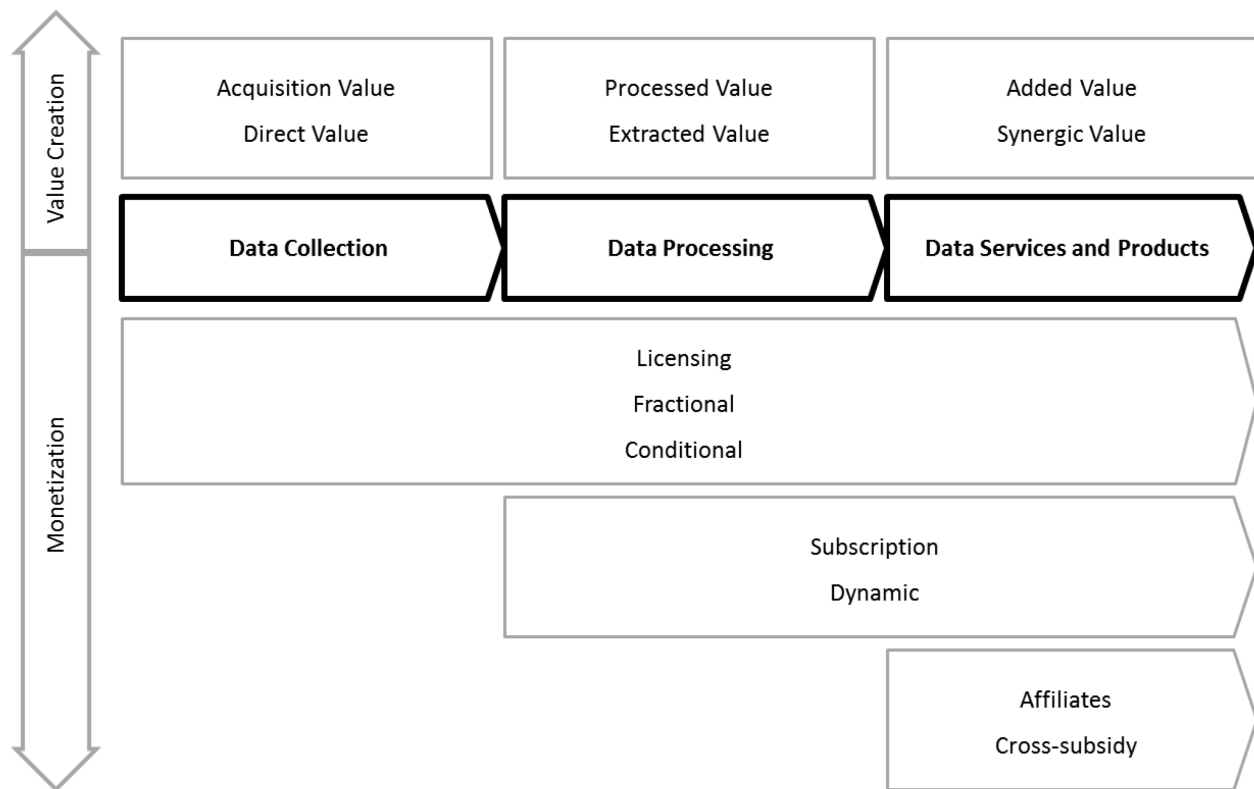
*Learning About Customers from Data.;* Every company strives to gain better information, knowledge and insights about its customers. The better information it has, the better it can understand and serve its customers. Transaction and interaction data from their customers may provide valuable insights about customers' needs and preferences. Serving those needs and preferences leads to greater customer satisfaction and retention.

*Building Accurate Decision Models and Predictors:* Accurate decision making in the face of uncertainty is a highly valuable and desirable feature. Consider, for instance, credit scoring or fraud detection businesses. Accurate models and predictors about the core business issues help lowering the level of uncertainty for decision making. Good data helps to build better models and predictors.

## Summary

Digitization has led to extensive rise of digital data over the past few decades (Gantz and Reinsel, 2012). Rapid expansion of digital data has not been met with adequate progress in data processing technologies. This increasingly widening gap have resulted in big data problems (Géczy, 2014). Organizations have been confronted with notable challenges due to the problems with big data (Buhl et al, 2013; Hunter, 2013; Klein et al., 2013; Walsh et al., 2012). However, availability of data presents also opportunities for organizations. Innovative companies have been increasingly trying to harness the potential of data. Data is the core asset for many data-driven and technology-oriented enterprises. Small number of them has been able to realize its potential and create large businesses around data. Unfortunately, many organizations are struggling to tap into the economic potential of data. They have been unable to beneficially incorporate data-oriented activities into their business models. Some lack capabilities to create a value from data and others to adequately monetize it. Moreover, they lack a suitable perspective on value creation and monetization strategies. This work attempts to illuminate these issues.

Figure 4: Illustrative Perspective on Data-oriented Value Creation and Monetization Strategies



*Data-oriented value creation and monetization strategies at the stages of data collection, data processing, and data products and services. Data-oriented value creation strategies are generally more distinctive at various stages. Monetization strategies are generally more spread. Licensing, fractional, and conditional monetization strategies span across all three stages. Subscription and dynamic monetization strategies extend over data processing and data services stages. Affiliates and cross-subsidy monetization strategies are used for data services and products.*

We presented a beneficial perspective on value creation and monetization strategies at the stages of data collection, data processing, and data services or products. This perspective is illustrated in Figure 4. Each stage features its distinctive strategies, but some span over multiple stages. Data-oriented value creation strategies are relatively aligned with individual stages. Monetization strategies are stretched over several stages. Data-oriented value creation strategies are more stage specific. That is, different stages offer different opportunities for creating value from data or data-oriented activities. Data collection stage provides prospects for creating acquisition or direct values. Data processing stage presents possibility for creating processed and extracted values. Added and synergic values are representative of data services or products. The highlighted values are by no means definitive but rather indicative of individual stages. Future developments in data-oriented economic activities may give rise to new value creation strategies.

Monetization of data or data-oriented activities has expansive characteristics. In other words, the spectrum of possible monetization strategies expands with each successive stage. At the data collection stage, prevailing strategies are licensing, fractional and conditional monetization. At the data processing stage, the range is expanded with dynamic and subscription-based monetization strategies. Data services and products provide additional possibilities for affiliate and cross-subsidy monetization. The presented monetization strategies are representative instances. One can ascertain other monetization strategies that may prove viable in data economy. Data orientation provides opportunities for gaining competitive advantages for organizations. Effective utilization of data can be the key differentiator in competitive economic environments. There are various avenues for exploring data and data-oriented activities for competitive advantage. Building valuable and unique datasets serves as a high barrier to entry.

Developing data-driven pricing allows flexible maximization of revenues. Extracting actionable insights from data enriches valuable organizational know-how. Innovating operations based on internal data helps streamlining processes along the core business activities. Learning about customers from transactional data is beneficial for improving customer satisfaction and retention. Building accurate models and predictors helps lowering the uncertainty levels in decision-making. Data and data-oriented activities can lead to gaining competitive advantages in numerous other ways.

## REFERENCES

- ACMA (2011) “*Emerging Business Models in the Digital Economy—The Mobile Applications Market*,” The Australian Communications and Media Authority.
- Alt, R., Zimmermann, H.-D. (2001) “Business Models,” *Electronic Markets*, 10, p. 3-9.
- Buhl, H. U., Raglinger, M., Moser, F., Heidemann, J. (2013) “Big Data,” *Business & Information Systems Engineering*, vol. 5(2), p. 65-69.
- Charlesworth, A. (2009) “*The Digital Revolution*,” Dorling Kindersley.
- Davenport, T. H., Harris, J. G. (2007) “*Competing on Analytics: The New Science of Winning*,” Harvard Business School Press, Boston.
- Davenport, T. H., Harris, J. G., Morison, R. (2010) “*Analytics at Work: Smarter Decisions, Better Results*,” Harvard Business School Press, Boston.
- EMC (2014) “The EMC Digital Universe Study,” [www.emc.com/leadership/digital-universe/index.htm](http://www.emc.com/leadership/digital-universe/index.htm) (Accessed: April 10, 2015)
- Fan, J., Han, F., Liu, H. (2014) “Challenges of Big Data Analysis,” *National Science Review*, vol. 1(2), p. 293-314.
- Gantz, J., Reinsel, D. (2012) “The Digital Universe in 2020: Big Data, Bigger Digital Shadows, and Biggest Growth in the Far East,” *IDC iView*, December 2012.
- Géczy, P., Izumi, N., Akaho, S., Hasida, K. (2007) “Knowledge Worker Intranet Behaviour and Usability,” *International Journal of Business Intelligence and Data Mining*, vol. 2(4), p. 447-470.
- Géczy, P., Izumi, N., Akaho, S., Hasida, K. (2008) “Enterprise Web Services and Elements of Human Interactions,” *Business Information Systems* (W. Abramowicz and D. Fensel, Eds.), Springer-Verlag, p. 263-272.
- Géczy, P. (2014) “Big Data Characteristics,” *The Macrotheme Review*, vol. 3(6), p. 94-104.
- Géczy, P. (2015) “Data Economy Dimensions,” *Global Journal of Business Research*, vol. 9(4), p. 77-89.
- Hunter, P. (2013) “Journey to the Centre of Big Bata,” *Engineering & Technology*, vol. 8(3), p. 56-59.
- Iyer, B., Subramaniam, M. (2015) “Are You Using APIs to Gain Competitive Advantage?,” *Harvard Business Review*, April 2015.

Klein, D., Tran-Gia, P., Hartmann, M. (2013) "Big Data," *Informatik-Spektrum*, vol. 36(3), p. 319-323.

Kroenke, D. M., Auer, D. J. (2013) "Database Processing: Fundamentals, Design, and Implementation (13th Ed.)", Prentice Hall.

Laursen, G. H. N., Thorlund, J. (2010) "Business Analytics for Managers: Taking Business Intelligence Beyond Reporting," Wiley, Indianapolis.

Lievesley, D., Ross, S., Higgs, E. (1993) "Increasing the Value of Data," *BLRD Reports*, vol. 6112, p. 205-218.

Manyika, J., Chui, M., Brown, B., Bughin, J., Dobbs, R., Roxburgh, C., Byers, A. H. (2011) "Big Data: The Next Frontier for Innovation, Competition, and Productivity," *McKinsey Global Institute*, May 2011.

McAfee, A., Brynjolfsson, E. (2012) "Big Data: The Management Revolution," *Harvard Business Review*, October 2012.

McCallum, Q. E., Gleason, K. (2013) "Business Models for the Data Economy," O'Reilly, Sebastopol.

Morey, T. (2015) "Make Customer Data and Trust a Competitive Advantage," *Harvard Business Review*, May 2015.

Newman, D. (2011) "How to Plan, Participate and Prosper in the Data Economy," Gartner, Stamford.

Oppenheim, C., Stenson, J., Wilson, R.M.S. (2003) "Studies on Information as an Asset I: Definitions," *Journal of Information Science*, 29, p. 159-166.

Porter, M.E. (1980) "Competitive Strategy: Techniques for Analysing Industry and Competitors," The Free Press, New York.

Provost, F., Fawcett, T. (2013) "Data Science and its Relationship to Big Data and Data-Driven Decision Making," *Big Data*, vol. 1(1), p. 51-59.

Provost, F., Fawcett, T. (2013) "Data Science for Business: What you Need to Know about Data Mining and Data-Analytic Thinking," O'Reilly, Sebastopol.

Redman, T. C. (2015) "Overcome Your Company's Resistance to Data," *Harvard Business Review*, March, 2015.

Redman, T. C. (2015) "4 Business Models for Data Age," *Harvard Business Review*, May, 2015.

St. Amant, K., Ulijn, J. M. (2009) "Examining the Information Economy: Exploring the Overlap between Professional Communication Activities and Information-Management Practices," *IEEE Transactions on Professional Communication*, vol. 52(3), p. 225-228.

Tallon, P. P. (2013) "Corporate Governance of Big Data: Perspectives on Value, Risk, and Cost," *Computer*, vol. 46(6), p. 32-38.

Teece, D. J. (2010) "Business Models, Business Strategy and Innovation," *Long Range Planning*, 43, p. 172-194.

Timmers, P. (1999) "Business Models for Electronic Markets," *Electronic Markets*, 8, p. 3-8.

Vertesi, J., Dourish, P. (2011) "The Value of Data: Considering the Context of Production in Data Economies," *In Proceedings of the ACM 2011 Conference on Computer Supported Cooperative Work*, p. 533-542.

Walsh, R. O., Callaghan, R., Yoffou, S., Hughes, R. (2012) "Big Data Is a Solution - So Where's the Problem?" *Cutter IT Journal*, vol. 25(10), p. 6-12.

Zott, C., Amit, R., Massa, L. (2010) "*The Business Model: Theoretical Roots, Recent Developments, and Future Research*," IESE Business School - University of Navarra, Barcelona.

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# **THE IMPACT OF HUMAN ERROR FACTORS ON TOP LEVEL STRATEGIC DECISION-MAKING: EVIDENCE FROM THE MEXICAN STEEL INDUSTRY**

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## **ABSTRACT**

*The strategic decision-making process is a keystone for companies to maintain their competitive advantage and prevail in the future. The purpose of this work was to identify and understand human error factors in the strategic decision-making process that influence bias at executive levels of the Mexican steel industry. Identified factors include emotionality, cognitive complexity, decision timing, and context. There is little experimental evidence to validate the impact of human error factors in this type of strategic decision-making at top levels. This lack of research motivated our present work. During the first phase of this research, a qualitative exploratory study was performed on 11 top executives from the steel-making industry. The analysis of this information reveals that human error is present in strategic decision-making processes. Based on these results, variables were added to the model and the objective of the study was extended for the second phase.*

**JEL:** M00, M10, D91

**KEYWORDS:** Strategic Decision-Making, Human Error, Top Management, Cognitive Bias, Judgment

## **INTRODUCTION**

Strategic decision-making is an important responsibility confronted by top management in organizations. Once the director has made and implemented a decision, its impacts are irreversible, and costs are inherent and irrecoverable. Therefore, attention should be paid to decision-making to identify factors that can lead to incorrect decisions (Nutt, 1989). Strategic decision-making applies to decisions of great importance that involve a substantial quantity of resources and determine the future of the company in the mid- and long-term because they set the objectives and the courses of action to follow (Kownatzki et al., 2013). Human error is considered a latent condition. It has important aspects that cause susceptibility among company executives. Human error occurs at the execution moment of strategic decision-making because of the human condition. These errors ultimately generate compromising and conflicting situations in contexts of high risk and cost, which lead to company deterioration. Errors in strategic decisions are more evident and costly in an increasingly competitive market, which does not allow a great range of maneuvering and ignores competition from organizations that do not make proper decisions. According to Nutt (2002), more than half of business decisions fail, and approximately 70% of change management efforts are unsuccessful.

The steel industry is also immersed in these statistics. Examples of errors in strategic decisions making that have contributed to closing or selling companies in the United States include Bethlehem Steel Corp. and Wheeling Pittsburgh Steel Corp. Examples in Canada include Stelco and Sydney Steel Corp. An example in the United Kingdom is British Steel. In the Mexican steel industry, we have the case of

'Fundidora de Hierro y Acero de Monterrey,' which disappeared in May, 1986 (CANACERO) (Novoa, 1989).

In Mexico, several studies regarding the Mexican executive profile can help us to understand the manner in which they make decisions. Three research studies are presented here as examples. Serralde (1987) established that regarding implementation, the Mexican executive's decisions are impulsive. Being pressured by this lack of effectiveness, the executive generally responds irrationally to attacks, leaning on the least suitable people and rushing to vague decisions that reduce the pressure he is experiencing and very minimally achieving the expected result. Another characteristic of Mexican organizations noted by Serralde (1987) relates only to top management making strategic, operative, or administrative decisions. Only rarely is second level management accorded authority to decide without the superior's intervention.

For the Mexican management's profile, Llano (1994) established a control style of great confidence in his personal and unique authority. He considers the opinions of his subordinates as important and believes there are other valuable qualities as a boss in addition to having knowledge. The researcher identified a more individualistic or competitive profile of the executive who is less cooperative with his colleagues and less inclined to delegate or empower his subordinates. However, he has relevant trust in group decisions and the convincing strength of reason. In another study, Ramírez (2014) identified the Mexican director's profile as a man balanced between individualism and group participation. For him, the authority's structure is crucial in an organization, and the control unit is critically important, with the desire to retain power. In addition, he advocates possession of unique authority. However, he requires others' opinions to make decisions because he does not want these be only personal decisions or be an individualist. These studies of Mexican management only generally and evolutionarily characterize the executives, without in-depth knowledge regarding what they truly consider when making strategic decisions or their perception of errors in this decision-making. Thus, in the study, it is necessary to more deeply explore the perceptions of Mexican directors in strategic decision-making. This study was developed in the Mexican steel industry. Minimal qualitative research in Mexico has been performed regarding human error in strategic decision-making. Therefore, the objective of this study was to identify the perspectives of Mexican directors on strategic decisions and the factors that affect these decisions. Thus, the following research questions are presented: What are the characteristics of strategic decisions made by directors? How do directors perceive human error in their strategic decision-making?

The remainder of the paper is organized as follows. The literature review section follows. Then the data and methodology section presented. Next, we present the results and discussion. The final section contains the concluding comments.

## LITERATURE REVIEW

### Human Error in Strategic Decision-Making

The review of the current literature indicates that 70% to 80% of company bankruptcies and occupational accidents can be attributed, at least partially, to human error (Wickens & Hollands, 1999). These bankruptcies and accidents have several causes (Bird, 1974; Heinrich et al., 1980; Reason, 1990; Weigmann & Shappell, 1997). Errors can be defined as deficiencies or failures in the critical processes involved in the selection of an objective or the specification of the means to achieve it, regardless of whether the actions performed by this scheme of decisions worked as planned (Reason, 1990).

The academic literature presents different explanations with regard to decision-making, including the following: the agency theory (Jensen & Meckling, 1976; Ross, 1973); the psychology of judgment and decision-making (Plous, 1993); the conceptual model of decision-making at top management levels (Boulding et al., 1994); the theory of emotion in decision-making (Ariely, 2008); the role of emotion in



the process of decisions (Fenton-O'Creevy et al., 2011); hypotheses on why executives are inconsistent in making strategic decisions (Mitchell et al., 2011); the rational model of making decisions, which considers the impact of the aversion to loss and the overconfidence in companies' strategies; the cognitive bias in these processes (Kahneman, 2012); and the elements of neuroscience and the neuro economy of decisions (Redish, 2013).

In human error literature revisions, diverse contributions from the following authors have been found: James Sully with 'The Theory of the Illusions' (Sully, 1881); William James and Joseph Jastrow and the concepts regarding the habits and lapses of conscience (James, 1890; Jastrow, 1905); Sigmund Freud's Theory of 'Freudian Lapses' (Freud, 1922); Jens Rasmussen with his SRK Model of Skill – Rule – Knowledge (Rasmussen, 1982); James Reason and his Model of Causalities or Swiss Cheese (Reason, 1990); and Nassim Taleb with the Theory of Impact of the Highly Improbable (Taleb, 2007). Reason (1990) established a conceptualization of a context prone to error or infringement, expressing the basic perception that when the human mind is fallible. The fundamental topic is to determine where and how it can fail. In the context of unstable environments and the impossibility of acting blindly, the members of organizations and, in particular, the directors' levels need to manipulate great amounts of information to comply with their essential functions. Administrative practices are directed to guarantee organizational success; among them, strategic decision-making should be implemented (Duarte, 2005).

Strategic decision-making is one of the most important responsibilities that top management levels currently confront in organizations. In this process, once the director has made and carried out a decision, its impacts are irreversible, and its costs are inherent and irrecoverable. Therefore, decision-making deserves considerable focus, especially when there are factors that can lead to incorrect decision-making (Nutt, 1989). This finding represents a decision process that involves the assignment of resources necessary to achieve and maintain a competitive advantage (Rodríguez, 2007). Thus, strategic decision-making is an essential task for top management because it allows the organization to align their resources and capacities to the threats and opportunities in the environment (Hitt & Collins, 2007). The information above reflects the effort of academics to explain decision-making behavior from the premise of rationality. This effort is not exempt of questionings, as we have previously shown. Therefore, an objective of this study was to determine the perspective of top Mexican directors in the steel industry regarding human error in strategic decision-making. It also aims to answer the research questions noted previously.

## DATA AND METHODOLOGY

To identify the methods by which executives make their strategic decisions and the perception of the reasons for blunders in the process, a series of interviews of a group of eleven executives from steel industries in the north of Mexico was conducted by email over a period of 6 months January through–June 2016. Email was used because of its simplicity in contacting the directors and obtaining their answers. Initially, the first author sent specific questions to 7 directors about the topic. Once the answers were analyzed, other questions were sent that were also analyzed. At this time the last 4 executives were incorporated into the questionnaire to achieve a total of 11. Thus, the orientation of this study is qualitative and exploratory. We seek to show the characteristics of decision-making and the perception of the aspects that influence wrong decisions, according to the director's indications. This analysis has a phenomenological perspective, which is characterized by the circumstance that researchers are part of the reality they intend to know (Corbin et al., 1998; Gioia & Pitre, 1990).

The written answers were integrated into a database for analysis. The group of researchers was formed by well-trained people in qualitative research, as they themselves were involved in the research. All the members of the group checked the entire database. The first step was to read the participants' answers line by line. Subsequently, the researchers identified potential categories through the open codification process

(Corbin et al., 1998). References were identified in this process that enabled generation of concepts based on the participants' responses. By means of another reading of the researchers, the codification of memorandums was developed as part of the process in this type of methodology. Sequentially, the team of researchers met to identify similarities. Once the situation was discussed and certain inconsistencies clarified, the categories were established based on the information provided by the participants. Finally, the quantity and percentages of the participants who responded within the main categories were established. The analysis approach was qualitative and established aspects related to strategic decisions from the director's perspective of this industry as a unit of analysis.

## RESULTS AND DISCUSSION

Here, we present a brief summary of the demographic characteristics of the participants in this study. Regarding the participants' positions, 7 were directors, 3 were superintendents (with a consideration to a director level), and 1 was a deputy director. Regarding the participants' level of education, 4 had Master's degrees, while the other 7 had Bachelor's degrees. The average age of the participants was 58.7 years. The average years in the company were 24.6.

### Strategic Decisions

Strategic decisions depend on the type of industry (Elbanna & Child, 2007). In this case, according to the size of the organization and the organizational hierarchy, it is possible to consider the participants as members of the executive team and their decisions as strategic. Furthermore, according to the participants' characteristics, which are part of the highest organizational level, the decisions on this level tend to be less structured (Mitchell et al., 2011). Therefore, it is possible to expect, according to the noted conditions, a greater possibility of errors in this kind of decision-making. In addition, in the language used by the executives, we find concepts and terminology that reflects their level, functions, and organization. This finding was observed through the executives' answers and comments about the human, material, and financial supplies and resources. Similarly, they relate processes of different characteristics according to the role they play. In addition, they note aspects related to the results of the organization they feel concerned about in strategic decision-making.

An aspect we highlight is that some participants noted the context that existed at that time on the steel market. At this time the industry was characterized by low prices and resource limitations, a situation that breeds adequacy for decision-making. Another element to consider is the distinction among strategic decision content studies, which refer to goals and strategies and other factors. Conversely, the process for such decisions is related to elements, such as speed, biases, and understanding, among others (Elbanna & Child, 2007; Mitchell et al., 2011). In this survey, both aspects were reviewed based on what the respondents noted. Subsequently, according to the answers regarding failures, the approach focuses on the process of strategic decision-making.

The analysis that follows is related to the strategic decisions each one of them takes. First, we found that decision content (Mitchell et al., 2011) can be subdivided as internal or external in an organization. Consecutively, some of them are noted here: investment project decisions, concerning the sale or disincorporation of an industry and purchase or incorporation of a new company; decisions taken with the needed opportunity to start operations with new equipment that would generate more income; to determine volume according to markets; and to establish that investment products have a greater production capacity. In the outside classification, we can find the markets, competition, and clients. Moreover, the internal orientation of the organization is related to its plans and processes.

Another element within this context is decision-making objectives, which are reflected in profits and indicated savings, where new equipment that results in operational synergies and brings a greater volume

of production/sales appears. For each case, there are people and families who depend on these decisions, in addition to ensuring the continuity and profitability of the company itself and to satisfy the market in which it is being positioned. Conversely, one can find decisions related to the process and the criteria for doing so. Thus, aspects were noted both in relation to the decision and to the implementation of the decision. Some of the above noted criteria are presented: discriminating the investment requirements among different options; establishing which decision elements are more important; including contract renegotiations; and the offered and selected equipment must be of the latest technology (state of the art). Here, aspects of the decision-making process prevailed more than the implementation of the same.

The participants were asked whether they followed a process or specific model for decision-making. The answers about following a process included the following: yes, you have to follow a process; the decision process has to involve a large group of people; sometimes strategic decisions are taken by the top management, and we engage in following the rules and procedures established by the organization; and the directive guideline is followed, even if there is no argument. There is no clear evidence that they follow a process or a model when deciding strategically or establishing a defined orientation for the decision based on the influence of the senior management. Similarly, we asked: Is strategic decision-making key to your job, or is it just another process? The answers are as follows: I consider that strategic decision-making is very important... currently, a director uses many hats and can direct a company on a daily basis...; I consider it should be... however, the organizational structure turns this (decision-making) into just one more process among my responsibilities; and yes, the decision-making in our work is the key and is part of our functions.

In summary, the dominating perception is that it is only another process in their functions but is key. Similarly, the concept that 'it should be,' which characterizes it as an ideal situation, suggests the prevalence of strategic decision-making as one more of their functions. The processes for strategic decision-making are influenced by the director's previous experience, his knowledge of the organizational context in which they are integrated, and the context itself (Boulding et al., 1994; Mitchell et al., 2011). However, the noted information according to their decisions comprehensively shows an application of strategic decision-making because it is possible to identify aspects of the content, processes, and aspects related to the same decisions. Thus, information gathered in this section reflects an executive awareness of the importance of strategic decisions, the ability to identify them, and then proceeding to take them. In addition, with the noted information, it is possible to answer one of the research study questions related to the characteristics of strategic decision-making. From the perspective of the paradigms with which strategic decision-making is studied, according to the information noted above, the director has objectives and benefits to obtain and then proposes alternatives from which he decides. Thus, it reflects a rational perspective on his decisions (Dean & Sharfman, 1996; Eisenhardt & Zbaracki, 1992).

#### Elements that Influence Wrong Strategic Decision-Making

Reasons or elements noted by the participants in wrong strategic decision-making, reveal certain similarities, which allowed the establishment of categories. In Table 1, several categories are shown in order of decreasing relative importance and according to the percentage estimation from the observations that reflect such importance. Furthermore, from the examples found in Table 1, the words and ideas that help explain the category can be found in the categories noted below by level. See Table 2.

The individual component has garnered much focus in the investigation of strategic decision-making (Bromiley & Rau, 2015; Larrick, 2016). In this individual perspective, the following categories are considered: lack of information, incorrect analysis, human factor, emotion, time pressure, and experience and intuition. Group level or other functional areas: The opinion category was found in this group level or other functional areas of the organization because of the interaction reflected in the participants' perceptions (Larrick, 2016). At the organizational level, different strategic and operative internal aspects

related to strategic decisions were noted. Here, the following categories were identified: vision, goals, objectives, planning, strengths, participation of top management, availability of resources, and changes in the execution of the project (Harrison, 1996; Larrick, 2016; Mitroff & Kilmann, 1978; Pondy, 1967). At the external level, environmental information can be found, an aspect that has been considered essential for strategic decision-making (Harrison, 1996; Shepherd & Rudd, 2014). In addition, from the systemic perspective, it is possible to conclude that these 4 elements or levels (3 of them internal and the other external) are interconnected among each other and influence errors in strategic decision-making. Furthermore, the location of the identified categories as possible causes of errors allows distinguishing the different previous levels. Strategic decisions are complex (Hill & Kikulis, 1999; Kownatzki et al., 2013) because they depend on multiple aspects; the findings in this work confirm the complexity of the elements of human error (Column 3, Table 2).

Table 1: Categories Identified from the Fault on Strategic Decision-Making

Categories	%	Examples
Perspective, goals, objectives, planning, and strengths	15	...in other ways, undefined objectives, unreachable or diffused. ...lose business focus.
Wrong information or lack of information	11	...lack of strategic information from the competition. ...biased on the issue to be decided.
Wrong analysis	11	...to continue considering the past, although it does not match the present or future. ...using assumptions that do not have a sufficient basis.
Human factor	11	...inconsistencies between saying and doing. ...their personality and leadership have strong influences on the results.
Different opinions	9	...that there is poor communication in the task force where they participate. ...differences among priorities and agendas of the different representatives in the implementation process.
The participation of top management	9	...the strategic decisions rely exclusively on the top. ...the corporative anxiety influenced by the Directive Counsel. ...pressure from the organizational pyramid.
Low emotional and rational level	9	...decreased rational capacity by emotional circumstances. ...low emotional and physical level.
Availability of resources	7	...lack of support or supplies ...availability of resources related to possible solutions.
Changes in project execution	6	...the bureaucratization of the processes. ...wrong selection of the contractor who is in charge of the project.
The environment	6	...in these moments, a greater speed of change, technologically and generationally. ...not considering or not knowing the environment according to the market or the competition.
Urgency or precipitation in decision-making	4	...the rush to do it faster and carelessness.
Experience and intuition	2	...to have a developed sense of intuition is the best tool against time; this ability will make you pull through.
	100	

*This table shows the categories identified and examples of the answers included. Source: Author's own construction.*

The information provided by Table 1 allows expansion of the initial research question: How is human failure perceived in making strategic decisions? For a wider, systematic perspective, we ask: What can cause errors in strategic decision-making from the individual's perspective, from the organization, from other areas of management, from the natural or team group, and from the environment?

### Systemic Structure of the Categories

To answer to this question, it is necessary to frame the different levels that influence errors in strategic decision-making into a systemic structure according to the participants (Churchman, 1968; von Bertalanffy, 1968). According to what is noted later, there is an interaction of such levels when considering the error elements in decision-making. Thus, it is possible to identify the 4 next levels in the survey categories. See Table 2.

The above contrasts with what was stated in the previous section when asked about strategic decisions. In general, the responses were mainly related to the individual and their organizational function. That is, the respondents visualized their strategic decisions with their responsibilities in the organizational hierarchy; however, their perspective on error reflects other levels, as noted above.

Table 2: Categories and Dimensions at the Identified Levels

Level / Category	%	Dimensions
<b>Individual level</b>	<b>48</b>	
Incorrect information or lack of information	11	Incorrect information Insufficient information
Incorrect analysis	11	Lack of knowledge Use of wrong assumptions
Human factor	11	It is the most important element in decision-making Negative characteristics of people when making decisions
Low emotional and rational level	9	Emotional as error generator Dilemma among rational and emotional
Urgency or precipitation in decision-making	4	Urgency in decision-making
Experience and intuition	2	Experience Intuition
<b>Group level and other functional areas</b>	<b>9</b>	
Contrary opinions	9	Difficulty interacting with their own group Difficulty interacting with other areas
<b>Organization level</b>	<b>37</b>	
Vision, goals, objectives, planning, strengths	15	Consider the company's strategic elements when deciding Strategic elements are not considered when deciding
Participation of senior management	9	Follow indications of the top management with or without arguments Follow procedures and rules when the top management sends indications
Availability of resources	7	Lack of resources for various reasons
Changes in project execution	6	Wrong choices Organizational barriers
<b>External level</b>	<b>6</b>	
The environment	6	The environment in a general perspective The environment in a specific perspective Markets and competition

*This table shows the categories and dimensions identified Source: Author's own construction.*

### Category Content Analysis

In the analysis of category content and its levels of classification (Table 2), it is possible to review the relationships among strategic decisions and the errors caused in greater depth. The errors and decisions are inconsistent judgments of the managers who shape the direction of the company (Mitchell et al., 2011). In the analysis of categories considered as individual level, the incorrect information and incorrect analysis categories and their respective dimensions initially showed characteristics of the rational process (Dean & Sharfman, 1996; Elbanna & Child, 2007) when noting the different elements that influence the error, which are part of this process. In this same line of argument, in adopting a psychological perspective of judgment, several cognitive processes of simplification or heuristics have been identified that are used in complex, ambiguous, and uncertain decision situations. However, at times, these processes are useful. At other times, they cause errors of judgment or biases when making a decision (Carter et al., 2007; Chen & Lee, 2003; Das & Teng, 1999).

In the categories resulting from this study with Mexican business managers, several errors of judgment or bias have been identified in decision-making (Carter et al., 2007; Chen & Lee, 2003; Das & Teng, 1999; Haley & Stumpf, 1989). The categories and participant notes that can be considered a specific type of bias are presented below. Adjustment and anchoring bias consists of the tendency to make initial judgments of

certain variables and to adjust the initial judgments when new data arrive, although the adjustment is mostly insufficient (Carter et al., 2007; Chen & Lee, 2003; Das & Teng, 1999). The following aspects were noted in the incorrect analysis category: continue considering the past, although it no longer coincides with the present or the future; and do not seek operational alternatives or ‘high’ technological innovations available in the market. The bias of previous hypotheses consists of the tendency to seek and use information consistent with the executive’s beliefs rather than information that is inconsistent (Carter et al., 2007; Chen & Lee, 2003; Das & Teng, 1999).

In the category of information and the category of incorrect analysis, the following notes were identified that appear to correspond to this error of judgment: insufficient market information or studies thereof; lack of strategic information and competition; biased information on the subject to be decided; using assumptions that do not have sufficient basis; and overestimate key variables in decision-making. Although the study did not focus directly on this objective, the previous analysis showed that a few notes coincided with certain biases or heuristics that exist in the literature. Thus, what we have in the errors are aspects related to the perspective of the processes and the possible errors that can be made when making decisions. In the same manner, the questioning of heuristics used in the strategic decision support decisions but, at other moments, generate errors (Boulding et al., 1994).

Proceeding with the analysis of the categories at the individual level, another category that we find is the human factor, in which contradictory situations appear. This dimension distinguishes the person as the most important element when deciding. Conversely, another dimension involves personal deficiencies and resistance, which is an aspect that makes the decision difficult. Personality, leadership style, and other characteristics of the decision maker are oriented to diverse paradigms with which the strategic decision has been studied, since the decision maker at this level is an essential part of this process (Elbanna & Child, 2007; Miller et al., 1998). Therefore, this situation increases the likelihood of errors. At this individual level, the low emotional and rational level categories were also identified. In the main dimension, emotion was considered a generator of errors by affecting the rational aspect of the executive. Another dimension that appears is the influence dilemma that is presented between the emotional and the rational. Thus, emotional decision-making (Pfister & Böhm, 2008; van Kleef et al., 2010) can be considered a rational paradigm, as noted above (Dean & Sharfman, 1996). Therefore, in the beliefs of these managers, emotions are the cause of strategic decisions.

At the individual level two categories were identified with relatively minor importance: urgency or precipitation in the decision and experience/intuition. On the group level and other functional areas and organization level categories, of the categories that emerged in the survey, the opinions category reflects problematic situations of interaction, both within the team itself and with other areas of the organization (Larrick, 2016). This aspect can result from a policy perspective, particularly in relation to other areas of the organization. In the vision, goals, objectives, planning, strengths category, the results are important because this category specifically reflects the decision-making strategy. Thus, in this category, the dimensions note that the strategic aspects in the decision are not fully considered. Thus, this situation can show a lack of alignment with the company’s strategy in decision-making (Harrison, 1996; Osterwalder et al., 2005; Shepherd & Rudd, 2014). The vision, goals, objectives, planning, strengths category can be framed in the paradigm of rationality (Dean & Sharfman, 1996; Eisenhardt & Zbaracki, 1992). This theoretical perspective has been widely used in the survey of strategic decisions. Therefore, since the goals and objectives are part of the rationality of procedures (Dean & Sharfman, 1996), in this perspective, it is possible to consider that decisions are part of a rational processes. In strategic decision-making, another paradigm that has been studied is policy (Bourgeois III & Eisenhardt, 1988; Dean & Sharfman, 1996; Elbanna & Child, 2007). Policy is one of the elements that can significantly influence strategic decisions. Policy is defined as observable, but often disguised, actions by which managers increase their power to influence a decision. Policy contrasts with direct influence tactics that are

developed through open and frank discussion by fully sharing information in contexts open to all decision makers (Bourgeois III & Eisenhardt, 1988; Dean & Sharfman, 1996).

Similarly, the two dimensions identified in the top management involvement category also reflect aspects considered to be a policy due to what is indicated by following instructions (in the strategic decisions) of the top management, considering the possibility that this dimension originates from a controlling agenda (Bourgeois III & Eisenhardt, 1988; Eisenhardt & Zbaracki, 1992). In the Mexican context, the existence of authoritarian management styles has been noted (Llano, 1994; Ramírez, 2014; Serralde, 1987). It has been noted in other countries, as well (Martinsons & Davison, 2007). Although what is noted by the participants is not a specific test of the above, it is possible to use it as a situation indicator. Conversely, the unavailability of resources category has been considered a conflict, settled at the organization level. Other aspects are considered part of policy that resolves lack of resource conflicts (Pondy, 1967). Finally, in the category of project execution changes, in the dimension of organizational barriers or conflicts, this may be related to the retention of information or control agendas (Pondy, 1967). On the one hand, the categories reviewed at the group/organization levels, except those of vision and its elements, can be interpreted as the presence of a certain degree of policy aspects that possibly influence strategic decision-making errors. On the other hand, the vision category appears to be more oriented to rationality in the process, since it proposes a series of steps, some of which are not achieved precisely because of the causes of the error in that process (Dean & Sharfman, 1996). Regarding the category external level, identified with the external environment, there were few notes found. In these notes, two dimensions can be identified: one, related to specific aspects, such as the market and competition, and the other, with the environment in general.

As noted above, in the prevailing environment of the interviews, there was a high awareness of current environmental conditions. It is possible that they thus did not consider it an important cause of the error. In addition, in the decisions classified as internal and external category, internal factors dominated. Therefore, derived from the analysis of the categories and their dimensions, it is possible to indicate that certain categories identified in the survey correspond with certain heuristics and identified biases. It is important to consider the complexity of the decision, which is reflected by the information indicated in the categories identified. Then, whether or not they are aware of the heuristics they use at any given time, managers are seeking to provide a rational response to excessively broad aspects. Therefore, there is a greater possibility of error (Carter et al., 2007; Dean & Sharfman, 1996).

Other categories may have a broader rational orientation than the thinking shortcuts of the executive (Elbanna & Child, 2007; Harrison, 1996), which focus on other thinking processes that influence performance and the possible decision-making errors that can be made. Thus, in relation to the paradigms previously noted, the existence of rational and policy paradigms is primarily concluded in this section. That is, errors in strategic decision-making in the perspective of these managers, on the one hand, can be located within the rationality of the decision maker. On the other hand, the interaction of the executive in this process is framed in a policy activity, in the group, and in the organization to which he belongs.

#### An Approach to the Shared Mental Model of the Error in Strategic Decisions

In the study of strategic decisions of the executive, the existence of a mental model of the executive has been noted (Chermack, 2003; Gary & Wood, 2011; Shrivastava & Mitroff, 1984; Walsh & Fahey, 1986). The mental model consists of knowledge and beliefs about important elements for strategic decision-making. Boulding et al., 1994, notes that the knowledge of the executive is in a mental model, as is the market and the competition. In the organization, the manuals and policies contain the rules for making decisions, for which managers must have knowledge. Conversely, the knowledge can also be found informally in the mental model of the managers, in their assumptions and beliefs (Chermack, 2003; Gary et al., 2012; Hill & Kikulis, 1999).

The executive's experience with the environment, the market, the competition, and his organization are transforming his beliefs into a set that allows him to form a mental model of the external and internal environment, and this perception helps him make decisions. This process is continuously modified as changes in the environment occur (Boulding et al., 1994). The above emphasizes the importance of feedback in the shaping of the mental model (Gary & Wood, 2011; Shepherd & Rudd, 2014). In accordance with the context's importance, two models of the interaction between the executive with the context have been identified. The first involves distinguishing what the manager thinks or believes about the context. The second is oriented to establish the manner in which the context affects and influences what the manager thinks. The models have an interactive relationship that depend on its consistency, can affect the quality of decisions and the process of developing them (Gary & Wood, 2011; Mitchell et al., 2011). Consequently, from the strategic decision perspective, errors can originate from knowledge of the managers, such as the environment for the manager's beliefs about how he perceives the environment (Chermack, 2003; Gary & Wood, 2011).

In Table 2, several categories and their respective dimensions have similarities that can be considered shared beliefs about human error in strategic decision-making due to their relative importance. Categories that had a greater relative importance reflect a certain degree of shared knowledge of what affects errors in decision-making. Through this knowledge, we can infer that it reflects certain elements of the shared mental model of users in this group (Mathieu et al., 2000) due to the coincidence of the elements noted by managers of the same level (Miller et al., 1998). In the shared mental model, it is important to note that the knowledge that is shared tends to be accurate, such that the mental model supports the group to make the most appropriate decisions (Gurtner et al., 2007). However, the group does not always work with an exact mental model due, among other things, to the dynamism of the environment. Therefore, it is important to update the knowledge and beliefs of the manager's mental model. The above continues to make relevant the agreement between the knowledge of reality in the mental model and the beliefs that the manager has in his mental model (Mitchell et al., 2011). Another aspect to consider in our study, according to demographic data, is that participants showed significant experience at the managerial level. According to studies related to the shared mental model, the greater work experience of the individual influences the generation of more consolidated mental models (Rentsch et al., 1994). In this perspective, from the knowledge and beliefs of the managers regarding the errors in strategic decisions, the categories and dimensions found may allow a first approximation of the mental model of managers and their errors in this process.

## CONCLUDING COMMENTS

The purpose of this research was to identify and understand human error factors in the strategic decision-making process that influence bias at executive levels of the Mexican steel industry. We initially sent specific questions to seven directors about the topic. Once the answers were analyzed, other questions were sent that were also analyzed. Next, the last 4 executives were incorporated into the questionnaire to achieve a total of 11. The orientation of the research was qualitative and exploratory. We sought to show the characteristics of decision-making and the perception of the aspects that influence wrong decisions, according to the director's indications and specifics real cases. This analysis has a phenomenological perspective, which is characterized by the circumstance that researchers are part of the reality they intend to know.

The study found that human error is present in the strategic decision-making process. The factors identified include, emotionality, cognitive complexity, decision timing, and context. Additionally, it was possible to establish a first approximation to the shared mental model of the managers with respect to the error in strategic decision-making. The knowledge and beliefs of Mexican manager are deeply reflected in a subject that is relevant to the Mexican organization. This research has certain limitations. The study focused only on Executives of the five top steel Mexican companies. Furthermore, the researchers could



include Executives for the entire steel sector even from other sectors. Finally, the future research could include other variables as burnout, shirking, low morale among others.

## REFERENCES

- Ariely, D. (2008). *Predictably irrational: The hidden forces that shape our decisions*, Harper Collins Publishers, New York, NY.
- Bird, F. E. (1974). *Management guide to loss control*, Institute Press, Atlanta, GA
- Boulding, W., Moore, M. C., Staelin, R., Corfman, K. P., Dickson, P. R., Fitzsimons, G., Weitz, B. A. (1994). Understanding managers' strategic decision-making process. *Marketing Letters*, Vol. 5, pp.413–426. doi:10.1007/BF00999214
- Bourgeois III, L. J., & Eisenhardt, K. M. (1988). Strategic decision processes in high velocity environments: Four cases in the microcomputer industry. *Management Science*, Vol. 34, pp.816–835. doi:10.1287/mnsc.34.7.816
- Bromiley, P., & Rau, D. (2015). Social, behavioral, and cognitive influences on upper echelons during strategy process: A literature review. *Journal of Management*, Vol. 42, pp.174–202. doi:10.1177/0149206315617240
- Carter, C. R., Kaufmann, L., & Michel, A. (2007). Behavioral supply management: A taxonomy of judgment and decision-making biases. *International Journal of Physical Distribution & Logistics Management*, Vol. 37, pp.631–669. doi:10.1108/09600030710825694
- Chen, J. Q., & Lee, S. M. (2003). An exploratory cognitive DSS for strategic decision making. *Decision Support Systems*, Vol. 36, pp.147–160. doi:10.1016/S0167-9236(02)00139-2
- Chermack, T. J. (2003). Mental models in decision making and implications for human resource development. *Advances in Developing Human Resources*, Vol. 5, pp.408–422. doi:10.1177/1523422303257373
- Churchman, C. W. (1968). *The systems approach*, Delta. New York, NY.
- Corbin, J., Strauss, A., & Strauss, A. L. (1998). *Basics of qualitative research: Procedures and techniques for developing grounded theory*, Sage, Thousand Oaks, CA.
- Das, T. K., & Teng, B. S. (1999). Cognitive biases and strategic decision processes: An integrative perspective. *Journal of Management Studies*, Vol. 36, pp.757–778. doi:10.1111/1467-6486.00157
- Dean, J. W., & Sharfman, M. P. (1996). Does decision process matter? A study of strategic decision-making effectiveness. *Academy of Management Journal*, Vol. 39, pp.368–396. doi:10.2307/256784
- Duarte, D. D. (2005). Toma de decisiones: El imperativo diario de la vida en la organización moderna. *ACIMED*, Vol. 13, pp.1–10.
- Eisenhardt, K. M., & Zbaracki, M. J. (1992). Strategic decision making. *Strategic Management Journal*, Vol. 13, pp.17–37. doi:10.1002/smj.4250130904

Elbanna, S., & Child, J. (2007). The influence of decision, environmental and firm characteristics on the rationality of strategic decision-making. *Journal of Management Studies*, Vol. 44, pp.561–591. doi:10.1111/j.1467-6486.2006.00670.x

Fenton-O'Creevy, M., Soane, E., Nicholson, N., & Willman, P. (2011). Thinking, feeling and deciding: The influence of emotions on the decision making and performance of traders. *Journal of Organizational Behavior*, Vol. 32, pp.1044–1061. doi:10.1002/job.720

Freud, S. (1922). *Introductory lectures on psychoanalysis*. (J. Riviere, Trans.), George Allen & Unwin, London.

Gary, M. S., & Wood, R. E. (2011). Mental models, decision rules, and performance heterogeneity. *Strategic Management Journal*, Vol. 32, pp.569–594. doi:10.1002/smj.899

Gary, M. S., Wood, R. E., & Pillinger, T. (2012). Enhancing mental models, analogical transfer, and performance in strategic decision making. *Strategic Management Journal*, Vol. 33, pp.1229–1246. doi:10.1002/smj.1979

Gioia, D. A., & Pitre, E. (1990). Multiparadigm perspectives on theory building. *Academy of Management Review*, Vol. 15, pp.584–602. doi:10.5465/AMR.1990.4310758

Gurtner, A., Tschan, F., Semmer, N. K., & Nägele, C. (2007). Getting groups to develop good strategies: Effects of reflexivity interventions on team process, team performance, and shared mental models. *Organizational Behavior and Human Decision Processes*, Vol. 102, pp.127–142. doi:10.1016/j.obhdp.2006.05.002

Haley, U. C. V., & Stumpf, S. A. (1989). Cognitive trails in strategic decision-making: Linking theories of personalities and cognitions. *Journal of Management Studies*, Vol. 26, pp.477–497. doi:10.1111/j.1467-6486.1989.tb00740.x

Harrison, E. F. (1996). A process perspective on strategic decision making. *Management Decision*, Vol. 34, pp.46–53. doi:10.1108/00251749610106972

Heinrich, H.W., Petersen, D., & Ross, N. (1980). Principles of accident prevention. *In industrial accident prevention*, McGraw-Hill, New York, NY.

Hill, L., & Kikulis, L. M. (1999). Contemplating restructuring: A case study of strategic decision making in interuniversity athletic conferences. *Journal of Sport Management*, Vol. 13(1), pp.18–44. doi:10.1123/jsm.13.1.18

Hitt, M. A., & Collins, J. D. (2007). Business ethics, strategic decision making, and firm performance. *Business Horizons*, Vol. 50, pp.353–357. doi:10.1016/j.bushor.2007.04.004

James, W. (1890). *The principles of psychology*, Holt, New York, NY.

Jastrow, J. (1905). The lapses of consciousness. *The Popular Science Monthly*, Vol. 67, pp.481–502.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, Vol. 3, pp.305–360. doi:10.1016/0304-405X(76)90026-X

Kahneman, D. (2012). *Thinking, fast and slow*, Farrar, Straus & Giroux New York, NY.

Kownatzki, M., Walter, J., Floyd, S. W., & Lechner, C. (2013). Corporate control and the speed of strategic business unit decision making. *Academy of Management Journal*, Vol. 56, pp.1295–1324. doi:10.5465/amj.2011.0804

Larrick, R. P. (2016). The social context of decisions. *Annual Review of Organizational Psychology and Organizational Behavior*, Vol. 3, pp.441–467. doi:10.1146/annurev-orgpsych-041015-062445

Llano, C. (1994). *El nuevo empresario en México*, Fondo de Cultura Económica, México.

Martinsons, M. G., & Davison, R. M. (2007). Strategic decision making and support systems: Comparing American, Japanese and Chinese management. *Decision Support Systems*, Vol. 43, pp.284–300. doi:10.1016/j.dss.2006.10.005

Mathieu, J. E., Heffner, T. S., Goodwin, G. F., Salas, E., & Cannon-Bowers, J. A. (2000). The influence of shared mental models on team process and performance. *Journal of Applied Psychology*, Vol. 85, pp.273–283. doi:10.1037/0021-9010.85.2.273

Miller, C. C., Burke, L. M., & Glick, W. H. (1998). Cognitive diversity among upper-echelon executives: Implications for strategic decision processes. *Strategic Management Journal*, Vol. 19, pp.39–58. doi:10.1002/(SICI)1097-0266(199801)19:1<39::AID-SMJ932>3.0.CO;2-A

Mitchell, J. R., Shepherd, D. A., & Sharfman, M. P. (2011). Erratic strategic decisions: When and why managers are inconsistent in strategic decision making. *Strategic Management Journal*, Vol. 32, pp.683–704. doi:10.1002/smj.905

Mitroff, I. I., & Kilmann, R. H. (1978). *Methodological approaches to social science*, Jossey-Bass, London.

Novoa, J. Z. (1989). *La muerte de Fundidora: Reconversión de la cultura industrial Mexicana*, LIMUSA, México.

Nutt, P. (1989). *Making tough decisions*, Jossey-Bass, San Francisco, CA.

Nutt, P. (2002). *Why decisions fail: Avoiding the blunders and traps that lead to debacles*, Berrett-Koehler Publishers, San Francisco, CA.

Osterwalder, A., Pigneur, Y., & Tucci, C. L. (2005). Clarifying business models: Origins, present, and future of the concept. *Communications of the Association for Information Systems*, Vol. 16(1), pp.1.

Pfister, H. R., & Böhm, G. (2008). The multiplicity of emotions: A framework of emotional functions in decision making. *Judgment and Decision Making*, Vol. 3, pp.5.

Plous, S. (1993). *The psychology of judgment and decision making*, McGraw-Hill Education, New York, NY.

Pondy, L. R. (1967). Organizational conflict: Concepts and models. *Administrative Science Quarterly*, Vol. 12(2), pp.296–320. doi:10.2307/2391553

- Ramírez, F. (2014). El perfil del director mexicano. Retrieved from <http://uami.wikispaces.com/El+perfil+del+director+mexicano> [22 November 2014]
- Rasmussen, J. (1982). Human errors. A taxonomy for describing human malfunction in industrial installations. *Journal of Occupational Accidents*, Vol. 4, pp.311–333. doi:10.1016/0376-6349(82)90041-4
- Reason, J. (1990). *Human error*, Cambridge University Press, Cambridge, UK.
- Redish, A. D. (2013). *The mind within the brain*, Oxford University Press, Oxford.
- Rentsch, J. R., Heffner, T. S., & Duffy, L. T. (1994). What you know is what you get from experience team experience related to teamwork schemas. *Group & Organization Management*, Vol. 19, pp.450–474. doi:10.1177/1059601194194004
- Rodríguez, E. (2007). La toma de decisiones estratégica en las pequeñas y medianas empresas. *Sociedad & Información*, Vol. 8(1), pp.5–8.
- Ross, S. A. (1973). The economic theory of agency: The principal's problem. *American Economic Review*, Vol. 63, pp.134–139.
- Serralde, A. (1987). El estilo Mexicano de dirigir. *Management Today en Español, Janaury*, pp.5–20.
- Shepherd, N. G., & Rudd, J. M. (2014). The influence of context on the strategic decision-making process: A review of the literature. *International Journal of Management Reviews*, Vol. 16, pp.340–364. doi:10.1111/ijmr.12023
- Shrivastava, P., & Mitroff, I. I. (1984). Enhancing organizational research utilization: The role of decision makers' assumptions. *Academy of Management Review*, Vol. 9, pp.18–26. doi:10.2307/258228
- Sully, J. (1881). *Illusions: A psychological study*, C. Keagan Paul and Co, London, UK.
- Taleb, N. N. (2007). *El cisne negro*, Editorial Planeta, Barcelona, España.
- van Kleef, G. A., de Dreu, C. K. W., & Manstead, A. S. R. (2010). An interpersonal approach to emotion in social decision making: The emotions as social information model. *Advances in Experimental Social Psychology*, Vol. 42, pp.45–96. doi:10.1016/S0065-2601(10)42002-X
- von Bertalanffy, L. (1968). *General systems theory*, George Braziller, New York.
- Walsh, J. P., & Fahey, L. (1986). The role of negotiated belief structures in strategy making. *Journal of Management*, Vol. 12, pp.325–338. doi:10.1177/014920638601200302
- Weigmann, D. A., & Shappell, S. A. (1997). Human factors analysis of postaccident data: Applying theoretical taxonomies of human error. *International Journal of Aviation Psychology*, Vol. 7, pp.67–81. doi:10.1207/s15327108ijap0701\_4
- Wickens, C. D., & Hollands, J. G. (1999). *Engineering psychology and human performance*, Pearson, New York, NY.

Wilson, D. C., Butler, R. J., Cray, D., Hickson, D. J., & Mallory, G. R. (1986). Breaking the bounds of organization in strategic decision making. *Human Relations*, Vol. 39, pp.309–331.  
doi:10.1177/001872678603900402

## **BIOGRAPHY**

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# **SOCIAL MEDIA MARKETING STRATEGIES FOR EDUCATIONAL PROGRAMS**

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## **ABSTRACT**

*Social media marketing strategies have transformed how organizations interact with their audiences and customers. Social media platforms such as Facebook and Twitter are being utilized for communications by nearly every organization. This study looks at how educational organizations who provide services to K-12 educators use social media and judge to what extent it is effective. Social media usage was evaluated to determine if interaction is collaborative, meaningful, and measurable. Data was gathered from the content, frequency and type of messages and a rubric was used to measure the effectiveness of several organizations. The studied educational organizations were found to have quite varied choices for preferred social media and had a great range of effectiveness in the media used. The most effective were found to engage two-way communication with their followers rather than simply broadcasting messages.*

**JEL:** M30, M31

**KEYWORDS:** Social Media, Engaging Customers, Interaction, Effective Marketing, Communications

## **INTRODUCTION**

The problem is that social media marketing is not engaging for all organizations although for some it has been very engaging. What factors lead an organization to get motivated customers through social channels, while others fall flat? The authors noticed that some organizations had strong connections and frequent community engagement, and others did not exhibit such behaviors of their members. This research will consider engagement to action toward purchase behavior and the challenges that organizations face on that path. The authors will consider previous research and consumer behavior theories such as Maslow (1943, 1954), Alderfer ERG Motivation theory (1969) and Hofstede et al. (2010). The framework here reviews evaluative criteria such as the purpose of the organization, and if there is a resulting response that could lead to some positive result or even to financial success. Why did some succeed? What difference was there? The authors' results provide advice to be more effective. One of the most critical challenges for organizations is how to find the Return on Investment (ROI) in Social Media Marketing. This research is intended to explore how a variety of organizations address these marketing challenges. As organizations consider where to invest their marketing resources, they need to know what has the greatest impact toward their goals. This task leads to the following research questions that guided this study: 1. What services and information are offered? 2. How is the organization and its services presented on social media? 3. How does the organization utilize social media? And, 4. What is the organization's implied value proposition to potential users/customers?

The challenges of marketing educational programs in a complicated world led the research team to investigate which companies are promoting educational programs and how are they promoting them. The educational organizations faced the problem of solving specific issues. Five outcomes of educational programs were the basis of the research search on the internet: a) establish a positive school culture, b) increase academic performance, c) improve safety d) decrease problem behavior, and e) establish or

encourage physically active classrooms/education (McCabe & Weaver, 2018). These outcomes were used to identify organizations offering services to K-12 educators to accomplish the five outcomes. Once identified, the organizations became the subjects for this research. The researchers examined how they are promoting themselves on social media and then evaluated/explained how the messages were being communicated through these marketing channels. The paper summarizes the effectiveness of the social media for the organizations in the study, using five criteria: Usability, Efficiency, Accessibility, Interaction and Metrics.

## LITERATURE REVIEW

The review of the literature for this research is consumer behavior focused, especially related to Alderfer (1969) and his ERG (existence, relatedness, and growth) concerning what motivates people to behave. Studies by Maslow (1943, 1954) and Hofstede, et al. (2010) indicate levels of hierarchy of how humans will behave. Alderfer (1969) considered more empirical studies in his motivation research. Since this is a study of social media, the authors especially want to focus on the relatedness part of ERG, which includes all of the needs which involve relationships with significant other people and depends on a process of sharing or mutuality. The elements of this research include exchanges of acceptance, confirmation, understanding and influence. These elements are all associated with the practice of social media. The opposite of relatedness is not anger, instead it is a sense of distance, lack of being connected or indifference (Alderfer, 1969).

Hofstede, et al. (2010) considered organizational culture and cooperation and survival and sustaining the group. Their work focuses on long-term vs. short-term orientation, indulgence vs. restraint, and deep evolution of cultures. This edition focuses on the concept of a “moral circle” that carries culture. Related to this study are the concepts of the avoidance of uncertainty, long-term vs. short-term orientations, and how the workplace and culture relate. The study is important for consumer behaviors of the business to business communication via social media, studied in this paper. This research resulted from an accidentally created database at IBM over three decades. Giddens (2001) looks at social anthropology, or the division of labor between sociologists and anthropologists. The research in this study looks at social media, which include social processes within societies and society in the larger picture. Hofstede looked at both groups and categories. A group is a number of people in contact with each other (Hofstede, et al. 2010). A category consists of people who have something in common, but may not have had any contact (Hofstede, et al. 2010). The researchers explored how social media is worthwhile for an organization’s communication and growth. The authors drew on several studies for the criteria to select educational organizations for inclusion in this study: 1. DePorter, B., & Hernacki, M. (1992) with Quantum Learning and Supercamp focused on outcomes of K-12 education. 2. DePorter, B., Reardon, M., & Singer-Nourie, S. (1999) 8 Keys to Success, and, 3. Given, B. & DePorter, B., (2015) transformation due to human imitation of positive interactions, and goal-setting behaviors that lead to achievement in K-12 schools.

### Social Media

Media can be considered social because it stores and transmits human knowledge that originates in social society (Fuchs, 2017). The most accessed websites include social networking sites like Facebook, LinkedIn, YouTube and Twitter. They support communication, collaboration, content sharing or building of online communities (Fuchs, 2017). Lee, Hosanagar & Nair (2016) found that social media content related to brand personality is associated with higher levels of consumer engagement but mention of information, such as price or ratings, content leads to lower levels of engagement. However, overall higher engagement happens combining information with the brand personality content. The successful marketer will choose content that informs along with the brand content to improve social media engagement. How do organizations get the attention of an audience online? Using graphics or photographs are two methods to get attention. Ozmen (2015) analyzed users’ attitudes about online



content, including how information is retrieved and processed. The study was geared to find out how to better capture the attention of users, by using photo retrieval. How should online ads be presented for more effective responses? Users lost attention faster and stopped viewing earlier while viewing non-uniform photo sizes. They also were attracted by keywords and the initial presentation. They gave more importance to specific details over general information, indicating that being explicitly clear in the content may lead to even greater value to users. Attitudes toward information retrieval and processing do matter. eMarketer estimates adults in the United States watch TV for four hours a day and consume another six hours on digital media. Of that time, three hours are on mobile devices (nonvoice) and two hours on desktop/laptop computers. Since the number of devices has exploded, new multichannel attribution models have been expanded to more than half of U.S. companies (eMarketer, 2016).

Using these new models, now marketers theoretically can measure the attention given to each of these devices accurately. eMarketer predicted that cross channel measurements and attribution models will be used by 6 in 10 digital marketing and media practitioners in 2017. In 2016, these same practitioners said that they would be investing in the models, but did not all follow through on the promises. The authors considered motivation and intentions vs. actions as they researched social media for educational organizations. Wang & Kimozmen (2017) studied how social media positively impacts a business by improving customer satisfaction, among other things. It allows businesses to improve customer engagement, Customer Relationship Marketing (CRM) capabilities and overall performance. Wang & Kimozmen (2017) studied social CRM, a merger of social media into database-related marketing strategies and researched helping organizations meet their goals by improving capabilities and implementation. Motivation for successfully implementing the brand experience in social media channels is different for service organizations. Swani & Milne (2017) found that there are challenges in the successful implementation of social media strategies for brands. This can be segmented between services versus goods organizations. Services, not goods, messages were more popular with known corporate brand names. For products, not services, using the product brand name, image and video would be more successful in reaching the audience. Swani & Milne (2017) found that service messages generated more comments than goods messages in their study on Facebook. This study considered the number of comments users generated on Facebook pages.

Generic or organic means non-paid content to advertisers. Organic social media is created by brands, not paid for advertising, but it can lead to more visibility when the consumer shares it with others (Fulgoni, 2015). The second option is where marketers pay for internet companies to serve advertising in response to relevance and search behavior (Rutz & Bucklin, 2011). Having followers on social media does not mean that everyone will see all content when they open a social media platform and scroll through the newsfeed. The percentage of followers who automatically or organically see page posts gets smaller as social media platforms have included paid advertising in the business model, which limits the non-paid or organic results.

## METHOD

Building on a previous search engine study of website effectiveness, these are the steps in the author's current research, conducted from 2015-2017: 1. Searched for providers of identified outcomes, using Google, using variations of key words associated with five educational categories. (DePorter & Hernacki, 1992) 2. Visited and documented content. 3. Identified social media linked to website. 4. Visited social media platforms using multiple devices. And 5. assessed the digital approach used by the identified organizations. The authors considered how these organizations used social media for promotional messaging. The research team considered the product or service that they are promoting in the analysis. The team built spreadsheets and scored them on how effectively they promoted on social media. The authors gathered data on social media metrics such as frequency and timing of content published of 11

ranked websites on specific keywords. The methodology considered the social media promotion of the organizations.

On November 16, 2016, the researchers gathered the data by visiting each social platform that was listed on their organization's website. Overall, there were approximately 60 different platforms where the authors gathered publicly available data. This was done through the use of links provided on the websites, as that was the most reliable way to locate the content, although there are other ways to search for these pages, too. The research included measuring popularity as evidenced by the number of followers or likes. Using the following adapted rubric, the authors created a ranking system (1-4, four being highest) based on the following factors. Higher scores meant social media experiences were ranked more effective than those with lower scores (Aziz & Kamludin, 2014). The last two items in the rubric were adapted to fit social media parameters. 1. Usability – effectiveness – degree user can complete goal. 2. Efficiency – resources needed by user to complete goal. 3. Accessibility – can everyone access what is necessary to complete goal. 4. Interaction – how easily user can learn to interact with Social Media, and 5. Metrics – The number of followers, viewers and reviews indicating satisfaction on social media. The authors determined the total scores and ranked the social media effectiveness for each of the service brands, seen in Figure 1.

Figure 1: Sample Images of Links



Facebook Twitter Instagram Pinterest YouTube  
Figure 1 includes sample images of the links to social media platforms seen on websites.

## Findings

The social media platforms were a variety of for-profit, non-profit, public, and private organizations. Here are a few exploratory findings about specific social media included: two social media winners stood out: FISH Philosophy! and Edutopia. Fish Philosophy! was a commercial website. Both of these organizations had a very clear social media marketing strategy that was relevant to the search phrases. The Fish! Philosophy website had prominent links to their Facebook, Twitter, LinkedIn, and YouTube social media accounts, and clear 'contact us' information. Most of the other social media uses from other organizations were not memorable user experiences, because they were mostly about them, and not relevant to the audience. They seemed very self-promoting and bureaucratic. They looked like they were created by committees, rather than serving a specific audience. They were trying to satisfy many audiences, and therefore satisfied very little. Edutopia used bold visual images, including photos of founder and philanthropist George Lucas, and content seemed very fresh. The experience included wide-angle panoramas, sliding graphics, and offered relevant case examples of how people learn using an evidence-based approach. Table 1 describes the website name and the social media platforms that were found linking to that site on November 7, 2016. Every organization listed on the website at least two social media platforms (Facebook and Twitter). The greatest number of social media platforms listed was six. All of the websites had at least Facebook and Twitter account in social media. The next most popular was YouTube, followed by LinkedIn, Pinterest, Instagram, Flickr and one had Google+. Later in this report, the reader will see how interaction with followers differed by platform and by organization. As indicated in Table 1, Association for Supervision & Curriculum Development (ASCD) had six different social media platforms on which they promoted the organization. Success for All and Counseling in Schools had only Facebook and Twitter accounts referenced on their websites. None of the organizations were missing social media entirely.

Table 1: Use of Social Media This Table Presents the Various Social Media Sites Used by the Organizations in the Study on Nov. 7, 2016

Organization	Facebook	Twitter	YouTube	LinkedIn	Pinterest	Instagram	Flickr
NY State Ed Department	Yes	Yes					
Greater Good Science Center	Yes	Yes	Yes	Yes			
Assoc. Supervision & Curriculum Dev.	Yes	Yes	Yes	Yes	Yes	Yes	
Nat Association of Elementary School Principals	Yes	Yes	Yes	Yes			Yes
Edutopia	Yes	Yes	Yes		Yes	Yes	
FISH!	Yes	Yes	Yes	Yes			
Success for All Foundation	Yes	Yes					
American School Counselor Association	Yes	Yes		Yes			
Counseling in Schools	Yes	Yes					
We Are Teachers *	Yes	Yes	Yes		Yes		Yes
Safe Supportive Learning	Yes	Yes	Yes				

Table 1 describes the primary platforms for social media as indicated on the websites on a specific date, November, 7, 2016. \*We Are Teachers also linked to Google+.

Different organizations made distinctive choices about their preference for which social media to use. The number of followers is one indication of how invested the organization is in that social media platform. In addition, the number of followers may be reflected in the quality of the content and the shareability of that content. Edutopia has made a significant investment in all three of these platforms. There is a large drop off of followers/viewers after the first two of the educational organizations reviewed. Nine days later, we looked closely at three of these major platforms, Facebook, Twitter and YouTube. Table 2 describes the number of Facebook followers (i.e., likes) on November 16, 2016. On Facebook, to become a follower, a user needs to click the button that says “like”. The first column shows that Edutopia clearly has the most followers, with one million, and the next is we are teachers with 760,000 followers. The remaining pages have much smaller numbers of followers.

Table 3 describes the number of Twitter followers, or those who chose to see tweets on the Twitter platform from that organization. This is a measure of popularity, and of interest in the subjects that are presented by the organization. For some users, this is a newsfeed of the most current and relevant topics that the organization wants to share. It is also seen as a platform where users can repost (retweet) and comment directly to the user. Like Facebook, Twitter followers of Edutopia have the largest sized followers of the organizations chosen, with 850,000. The next largest size of followers is We Are Teachers, with 340,000. The low range of followers with fewer than 100 for Counseling in Schools, also have the smallest number of followers on Facebook.

Table 2: Number of Facebook Followers

Brand	# of Facebook followers
Edutopia	1,000,000
We Are Teachers	760,000
Assoc. Supervision & Curriculum Dev.	123,000
Greater Good Science Center	85,000
American School Counselors Association	30,000
FISH! Philosophy	17,500
National Association of Elementary School Principals	6,500
NY State Ed Department	4100
Success for All	2000
Safe Supportive Learning	450
Counseling in Schools	175

*This table presents the number of Facebook followers as of Nov. 16, 2016.*

Table 3: Number of Twitter Followers

Brand	# of Twitter Followers
Edutopia	850,000
We Are Teachers	340,000
Assoc. Supervision & Curriculum Dev.	181,000
Greater Good Science Center	32,000
Nat Assoc of Elem School Principals	28,000
Am School Counselor Assoc.	20,000
NY State Ed Department	15000
FISH!	3,200
Success for All Foundation	1,500
Safe Supportive Learning	700
Counseling in Schools	83

*Table 3 indicates the number of Twitter followers as of November 16, 2016.*

Table 4 indicates audience for YouTube, which is the number of views of the video presented. YouTube (owned by Google) is the second largest search engine by popularity. YouTube is advertiser and subscription supported. Users can subscribe to get YouTube without commercials for a monthly fee. Edutopia was in the number one position for YouTube views. It was also in the top position for Facebook and Twitter followers. The second largest metric was Berkeley’s Greater Good Science Center with nearly 4 million YouTube views. Five of our webpages researched did not have a YouTube Channel on this date in 2016.

Table 5 reports a summary of the connections or, in other words, effectiveness and engagement of the social media for the organizations in the study. The five measures were: Usability, Efficiency, Accessibility, Interaction and Metrics. Interaction included responsiveness by the number of and the recency of comments by those communicating with followers. For example, if there was a Facebook comment or review that was ignored, the score on interaction would be reduced. Metrics included the number of likes, followers and views, as shown in Figures 1, 2, and 3. The researchers scored on a 1-5 ranker, independent of other criteria. The totals of the five items ranged from a low of 6 (Counselors in

Schools) to a high of 20 (perfect score) for ASCD, Edutopia and We Are Teachers. Greater Good scored 19 points, just one point from a perfect score.

Table 4: Number of Youtube Views

Brand	# of Youtube Views
Edutopia	10,400,000
Greater Good Science Cen.	3,908,000
We Are Teachers	660,000
FISH!	570,000
Assoc. Supervision & Curriculum Dev.	160,000
Nat Assoc of Elem School Principals	34,000
NY State Ed Department	0
Success for All Foundation	0
Am School Counselor Assoc.	0
Counseling in Schools	0
Safe Supportive Learning	0

Table 4 describes the number of YouTube Views on November 16, 2016.

Table 5: Connections with Social Media

Social media	Usability	Efficiency	Accessibility	Interaction	Metrics	Total
Counselors in Schools	1	1	2	1	1	6
New York Dept. of Ed	3	2	3	1	1	10
Safe Support	2	2	2	2	2	10
Success for All	2	2	2	2	2	10
NAESP	3	2	3	2	3	13
ASCA	3	3	2	3	3	14
FISH! Philosophy	3	4	3	3	3	16
Greater Good	3	4	4	4	4	19
ASCD	4	4	4	4	4	20
Edutopia	4	4	4	4	4	20
We Are Teachers	4	4	4	4	4	20

Table 5 describes the connections with social media, when using the ranking scales (Aziz & Kamludin, 2014).

## CONCLUSIONS/FURTHER STUDY

The goals of the study were to answer the questions for selected organizations: 1. What services and information are offered via social media? 2. How is the organization and its services presented on social media? 3. How does the organization utilize social media? And, 4. What is the organization’s implied value proposition to potential users/customers? The foundation of the study is based in part on the research of motivation theory, consumer behavior and relatedness (Alderfer, 1969). The authors considered that consumer behavior and motivation theory can be revealed and measured through groups and organizations. The problem faced is that social media is not engaging for all organizations. Some organizations are successful and others miss the point in this area of engagement with customers. The organizations that are connecting through usability, efficiency, accessibility, interaction and metrics are those that are scoring the highest and therefore most effective in social media.

A summary of Table 5 results indicate that the top five scores come from three different top level domains, org, .edu and .com organizations. Top level domains refer to the final characters of a domain name, immediately after the “dot” symbol. The three domains with perfect scoring in the rubric were all .org top level domains. These organizations are all highly engaged with their audiences and use the practice of relatedness (Alderfer, 1969) in their public messaging in social media, referring to exchanges of acceptance, confirmation, understanding and influence. The perfect scores reflected listening to their audience and responding in ways that were meaningful and purposeful. What the most successful organizations did was a best practice use of social media tactics that engaged with their audience. Although there is no specific chart, the authors noted that ‘reviews’ (i.e., customer feedback) were encouraged by followers on Facebook for 50% of the organizations observed. The ability to give and receive reviews is one indication of engagement in social media practice.

The organizations with the highest scores were the most effective based on the rating system methodology described earlier. The high scores are an indication of success because they are effectively engaged and related to the needs of the followers and users. The authors believe that the results will be useful for a rubric of comparison to rate the potential engagement success of social media outreach and marketing strategies. The education industry and organizations in the study will be interested in the scoring and analysis, because it shines a focus on best practices and encourages certain specific behaviors of relatedness and engagement. Other educational programs not in this study, especially those focused on K-12 education, knowing they need to improve their social media may now be alert to what they need to do in order to promote their communications more successfully. Social media is generally considered on “rented space” compared to the “ownership” of a website, where the organization controls any changes that take place in the architecture, style, or content availability. There are several limitations to the research. Social media platforms are subject to constant change. What works one week in social media to build an audience may not work next month or year. The conversation about effectiveness naturally changes along with the platform algorithm update. A platform (Facebook, Twitter, YouTube, etc.) that is popular for users today may not be as popular next year, but the study’s basic rubric can remain a measurement tool that is usable no matter the platform. This research may be considered a pioneering study in this \$2 trillion education industry. It is based on a services industry, but could be used to study a product also. The authors suggest looking for a correlation between K-12 educational vs. commercial ventures and social media engagement. Geography may place in this conversation, as organizations based in New York may be very different than San Francisco as far as consumer tastes and educational influences via social media. The study of the “effectiveness” was relevant at this point in time. That study of effectiveness and impact will likely only increase in importance, and that can be researched in the future. It would also be valued by the authors to know if there is any pushback to the findings, especially for the learning organizations who scored poorly.

## APPENDIX

These are some details about the social media that were researched. The .GOV was New York State education system, a public non-profit. Greater Good Science Center was an .EDU from Berkeley, California. ASCD is the Association of Supervision and Curriculum (an .EDU). NAESP is the National Association of Elementary School Principals, a private non-profit for school principals, 501c3, and an .ORG, seeking membership for elementary school principals. Edutopia is a private (branded) non-profit .ORG., known as sponsors of National Public Radio (NPR) through institutional ads. They are founded by the (George) Lucas Educational Foundation and are entertainment-based. Edutopia is a .org, non-profit organization that looks at assessment, projects for learning, and develops teachers. They use the tagline “join the movement for change” to motivate others to participate. FISH! Philosophy use training videos from Pike’s Peak Market in Seattle to help organizations improve teamwork, customer service, employee engagement, leadership and retention through their special training methods. The .COM was FISH!, a

private for-profit firm, with events, written material for the K-12 teachers and other organizations. The promotion focused on selling the products and services. They offered a useful experience due to the tools found on the website and in social media.

## REFERENCES

Alderfer, C. (1969). An Empirical Test of a New Theory of Human Needs, *Organizational Behavior and Human Performance*, 4, 142-175.

Aziz, NS & Kamlundun, A., (2014). Assessing Website Usability Attributes Using Partial Least Squares *International Journal of Information and Electronics Engineering*, Vol. 4, No. 2, March 2014 p.137-144.

DePorter, B. & Hernacki, M. (1992). *Quantum Learning*. New York: Random House.

DePorter, B., Reardon, M., & Singer-Nourie, S. (1999). *Quantum teaching: Orchestrating student success*. Needham Heights, MA: Allyn and Bacon.

eMarketer (2016). Multichannel Attribution Roundup May 2016  
<https://www.scribd.com/document/318134322/EMarketer-Multichannel-Attribution-Roundup> accessed Feb. 24, 2018.

Giddens, A., ed. (2001). *The global third way debate*. Polity Press, Cambridge, UK.

Given, B. & DePorter, B, (2015). Excellence in Teaching and Learning,  
<https://www.quantumlearning.com/pdf/Excellence-in-Teaching-Chp1-2-web.pdf> accessed April 17, 2017.

Fuchs, C. (2017). *Social Media: A Critical Introduction*, Sage Press, London.

Fulgoni, G. (2015). How Brands Using Social Media Ignite Marketing and Drive Growth Measurement of Paid Social Media Appears Solid But Are the Metrics for Organic Social Overstated? *Journal of Advertising Research*, vol. 55 (3) 232-236.

Hofstede, G., Hofstede, G.J, & Minkov, M. (2010). *Cultures and Organizations, Software of the Mind*. 3<sup>rd</sup> Ed. McGraw-Hill, New York.

Lee, D., Hosanagar, K. & Nair, H. (2018). Advertising Content and Consumer Engagement on Social Media: Evidence from Facebook. *Management Science*, Published online Jan 18, 2018.

Maslow, A. H. (1943). A theory of human motivation. *Psychological review*, 50(4), 370.

Maslow, A. H. (1954). *Personality and motivation*. Harlow, England: Longman, 1, 987.

McCabe, M. & Weaver, R. (2018). Digital Marketing Strategies for Educational Programs, *Institute for Business & Finance Research*, Jan 3, 2018, Kona, Hawaii presentation.

Özmen, M. U. (2015). Online information retrieval behaviour and economics of attention. *Online Information Review*, 39(6), 779-794. doi:10.1108/OIR-05-2015-0139.

Rutz, O. & R. Bucklin (2011). From Generic to Branded: A Model of Spillover in Paid Search Advertising. *Journal of Marketing Research*: Vol. 48, No. 1, pp. 87-102.

Swani, K. & Milne, G. (2017). Evaluating Facebook brand content popularity for service versus goods offerings. *Journal of Business Research.*, Vol. 79, 123-133.

Wang, Z. & Kimozmen, H. (2017). Can Social media Marketing Improve Customer Relationship Capabilities and Firm Performance? Dynamic Capability Perspective. *Journal of Interactive Marketing* (Mergent, Inc.). Aug 2017, Vol. 39, 15-26.

Yang, S. & Ghose, A. (2010). Analyzing the Relationship Between Organic and Sponsored Search Advertising: Positive, Negative, or Zero Interdependence? *Marketing Science* 2010 29(4) , 602-623.

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# CONCEPTUAL MODEL FOR THE INTEGRATION OF THE SUPPLY CHAIN

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## ABSTRACT

*A customer orientation of the supply chain is need for companies that want to generate competitive advantages in the market. Customer orientation is possible when motivated by market research. The participants of a supply chain create compatible philosophies, synchronize their processes and exchange sensitive information regarding levels of inventories and demand. Likewise, when participants meet to jointly plan the creation of an offer of products and services designed to satisfy the wishes, needs and purchasing expectations of customers, the bases of a future logistic integration are established. This work proposes a conceptual model for the integration of the supply chain focused on the client. This article was generated through an exhaustive literature review and serves as a guide for the optimal integration of the members of a supply chain.*

**JEL:** O30, N7

**KEYWORDS:** Supply Chain, Logistics Integration, Strategic Alliance, Competitive Advantage

## INTRODUCTION

Strategic alliances and the buyer-seller society relationship have become more common. There is increased dialogue between business partners as management realizes the importance of sharing information and working together to jointly plan and execute strategic initiatives aimed to achieve improvements in given services. Staude (1987) wrote about the need for two types of organizational integration: interdepartmental and intradepartmental. A systemic approach requires that the objectives of the company, seen as a whole, be considered more important than the objectives of individual departments. A myopic perspective focused internally can be risky. For decades it has been recognized that satisfaction of needs and fulfillment of client demands must be the central objective of those that make up the supply chain. Many of the most progressive and successful firms emphasize the logistics service as a competitive differentiator in this area (Livingstone, 1992 y Stern, Sturdivant, & A., 1993).

Consumers have become increasingly demanding and look for more specialized services. The market environment is continuously changing to accommodate these consumer desires, and demand fluctuates each day. Therefore, the operation of logistics processes must be more efficient (Kovacs & Kot, 2016). For this reason, we consider the logistical integration of supply chain activities. These activities include participating entities such as suppliers, manufacturers, transporters, stockists, customs brokers, freight forwarders, shipping companies, airlines, railways, commercial brokers and points of sales to the consumer. The goals is to create value within the market of participation.

An efficient logistics process leads to reduce costs associated with redundancy and duplication. It compresses uncertainty that arises from changes in client's orders, volatility of demand and fluctuations in

delivery time. Dramatic changes in the way of thinking and acting are required to reach optimal levels of integration. Generating support to change the logistics practices of a traditional supply chain demands substantial justification. Unfortunately, there is a lack of empirical evidence to support the link between integrated logistics processes and the creation of value in the supply chain.

Graham & Zailani (2005) argue that limited understanding about logistics has expanded to encompass all actors, from suppliers to customers, including the entire value chain system. Logistics is: "An approach of the distribution mission of a company, which integrate two or more of the functions involved in moving goods from one resource to another considering them as an interrelated system or subsystem. Which link the purposes of management planning, implementation, and control, including in this dynamic all the stakeholders: from suppliers to customers counting the entire value chain system ". Today, manufacturers and their partners in the supply chain, strive to co-create higher value for the customer and a collaboration advantage through the adoption of supply chain management (Hee-Yong Lee et al., 2016).

To better understand the efforts of manufacturers and their corresponding partners we define the Supply Chain as the chain of network of entities through which materials flow. These entities can include suppliers, operators, manufacturing sites, distribution centers, retailers, and customers. Management of the supply chain coordinates and integrates all these activities in a process without interruptions. It links all partners in the chain, including the departments within an organization and external partners. Successful logistics management integrates all these activities with synergy that works to minimize the costs of total distribution, delivery times and maintenance of the desired customer service levels (Kenderdine & Larson, 1988). Directing the supply chain towards the wishes of the client recognizes the inclusion of the client in the processes of the supply chain. The client is considered not only the final destination of a good or service but an active participant and designer in the creation of value processes within the supply chain.

## LITERATURE REVIEW

The integration of the supply chain with a focus on the customer has aroused growing interest since value is added to the market when a supply network processes are synchronized, being the good relations with suppliers and the uses of their capabilities a vital source of competitive advantage. The environmental factors of an "adjustment" relationship, of joint alignment with the association's resources, are relevant for the client's satisfaction (Srivastava, Iyer, & Rawwas, 2017). Collaboration refers to the joint and continuous resolution of problems and coordinated actions to take advantage of the available resources of the members of a chain. What members of a chain look for through collaboration is to obtain mutual beneficial results, this involves designing well-coordinated information and materials flows to help companies to create fluid processes along the entire supply chain (A. Mackelprang, J. Robinson, E. Bernardes, 2014).

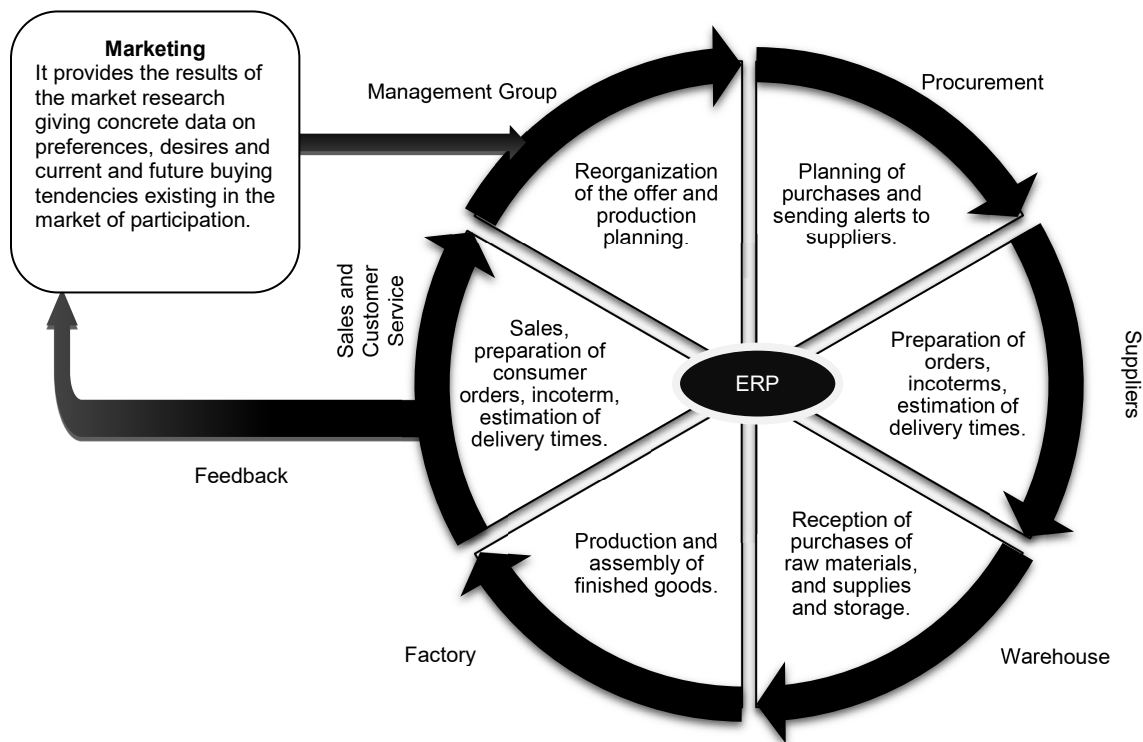
Hee-Yong Lee (2016) show that to improve the logistic performance management must be aware of the importance of collaboration practices required by integration since limited company resources can block their effective implementation. Management must strive to simultaneously implement the internal integration of suppliers and customers because none is inferior. Each member of a chain has resources and strengths with the potential to benefit the combined chain. In this manner, the weaknesses of each component are overcome. Manufacturers should retain the ability to quickly deal with a high level of dynamism of the chain if they want to integrate their logistical process into the general supply chain. External integration shows the grade to which a manufacturer develops collaborative relationships, exchanges information and jointly plans activities or processes of the supply chain with suppliers and customers (Danese et al., 2013). Internal integration refers to a comprehensive inner process, integrated planning, and control system (Stevens, 1989). Working with business partners might be helpful to cross-functional teams using the resources and capabilities of others to reduce duplicated tasks, improve product quality and jointly design products. When a company produces a new product, integration of the supplier helps reduce the time to commercialization, as well as problems of quality and cost (Quesada et al., 2008).

Customer integration occurs when companies work closely with customers and consider them a crucial part of the supply chain, where feedback on the delivered result for better customer satisfaction is vital (Graham & Zailani, 2005). The internet of things (IoT) is fast becoming the new dominant IT paradigm for companies that want to review the implementation of their operations and improve their efficiency (Witchalls & Chambers, 2013). Typical IoT technologies, among others, are identification by radiofrequency (RFID), sensors, wireless communications, cloud computing and 3D virtual reality technology (Miorandi et al., 2012). Supply chains that respond and adapt to the rapid growth of the IoT, integrating them into their business systems (ERP) will obtain more significant benefits and competitive advantages in the current business environment. Hence management needs to review and make new plans to develop and update its existing information systems and practices of their business functions, such as product design, procurement, operations, transportation, customer relations, marketing, human resources, accounting and finance (Li & Li, 2017). We focus on an integrated model where customer participation is key for the creation of products and services. Integrating information is collected into the management systems, thus enabling rapid response to the client, reducing human errors, reducing the waste of resources, allowing the generation of substantial savings and facilitating decision-making.

**MODEL PROPOSAL**

The conceptual model for integration of the supply chain that we propose is presented in Figure 1. The conceptual model links activities of the functional areas of an organization. The model integrates the logistics for the materials distribution area of the leading suppliers. We include their participation in the operational and planning activities of the company that manufactures the final product and service delivered to the final consumer or client. The functional areas of a company and the logistic of materials distribution area of its suppliers communicate with each other through Enterprise Resource Planning Systems linked to the same matrix.

Figure 1: A Conceptual Model for the Integration of the Supply Chain



*This figure shows our conceptual model for integration of the supply chain where the activities of the functional areas of an organization are linked.*

Management Group

The idea here is to shape a group of companies that fit with the existing needs among themselves. The firms make available to the chain the resources and capabilities that distinguish them, with the common goal of achieving superior performance. The management group should be configured by those in charge of the areas that plan, supply, produce, store, and deliver products and raw materials as shown in Table 1. What a company looks for by creating a glider group is to facilitate the rapid reaction to changes in the market and to ensure that companies involved are ready and have the necessary flexibility to respond adequately, making decisions that could affect, in a positive manner, the chain in general.

Table 1: Conformation of the Management Group

Manufacturer	Managing Director	Supply Manager	Production Manager	Marketing and Sales Manager
Supplier 1		Supply Manager	Production manager	Logistics manager
Supplier 2		Supply Manager	Production manager	Logistics manager
Supplier 3		Supply Manager	Production manager	Logistics manager
Supplier 4		Supply Manager	Production manager	Logistics manager

*This table shows the construction of a management group based on the model presented here.*

Managers of the supplying companies and the factory must agree on the incoterms selections in case of imports and exports before confirming orders, to speed up the process of international distribution of materials. In the foreign trade environment, it would be difficult to carry out import and export operations without international accepted rules, which indicate the obligations and rights of the buyer and the seller. Incoterms® Rules establish clear rules for buyers and sellers, regarding delimitation of rights and responsibilities, as well as the identification of costs, documents, and tasks necessary for the delivery of goods to the agreed place, to avoid uncertainties derived from different interpretations in different countries. The 2010 Incoterms® Rules involve 11 terms, ranging from the most straightforward obligations for the exporter, such as leaving the merchandise in its factory for the buyer to pick up (term EXW), to more complicated commitments, such as delivery of the goods, by the exporter, at the buyer's door (DDP term). To better understand them, they can be grouped into two categories as shown in Table 2, (PROMEXICO, 2015).

Table 2: International Trade Terms

For any mode or modes of transport.	EXW, FCA, CPT, CIP, DAT, DAP y DDP
For maritime and inland waterways.	FAS, FOB, CFR y CIF

*Table 2 shows the incoterms to each transport mode: Air, road, rail, maritime, inland waterways.*

Procurement

Currently, global competition has forced organizations to seek synergies in their operations to remain profitable in global markets. One of these areas is the supply area which is responsible for contracting services and buying products effectively and efficiently (Ahmad & Adnan, 2017). Competition occurs between networks of interconnected companies, which must be integrated and aligned strategically, to generate a competitive advantage for the supply chain as a whole. To build and maintain a competitive advantage companies need to configure and manage their supply chains from a holistic perspective. The key to maximizing the supply network performance holistically and systemically, is to create an adjustment between strategic groups of supply chains with the company's competitive priorities and flexibility

requirements and linking the regional market conditions. By balancing these strategic recommendations with possible pooled effects through network sourcing strategies, companies can effectively align their supply networks and achieve superior performance for the entire system (Moraitakis, Huo, & Pfohl, 2017). Instead of trying to find alternative partners in the supply chain to reduce dependency, companies are integrating widely with partners. Companies reduce their supply risk not by finding alternatives but by strengthening their existing relationships and making them more valuable to both parties (Muhammad Usman Ahmed et al., 2017).

### Suppliers

Suppliers can access confidential information of their customers, such as sales reports, to estimate demand and production, trends and customer preferences. This helps develop the ability to prepare the next lots and have them ready at the moment the buyer notifies of the purchase. With this, the supplier company tries to gain time to organize the shipments and to select sources of supply that offer the best quality of products at a lower price and to support the days of transport without being negatively affected.

### Warehouse

Since storage is actively involved in the supply chain, warehouses allow us to respond quickly to better adapt the supply to customers demand. In supply chains driven by demand, this can be mainly through the storage of products, or in the classification. Both are obliged to feed, to a significant degree, the external customer's expectations. In supply chains driven by supply, warehouses are renamed stores and maintain stocks required to feed domestic activities such as production. Therefore, warehouses are an integral part of the infrastructure of the supply/demand chain (Emmett, 2005).

Information flows in warehouses and supply chains occur not only internally, but also between external suppliers, contractors, and customers. A growing number of material handling systems (MHS) and even larger system components are integrating sensors and intelligence. Objects that can be products, equipment, containers or other things (Banker, 2015). IoT provides a holistic view of the warehouse and allows operators to improve performance and efficiency by analyzing data in almost real time. Performance of the system may adapt to achieve a specific commercial objective, as well as feedback in real time. First-hand information regarding the levels of inventories and supply needs to be communicated to purchasing, the leading suppliers, and the glider group. In a connected warehouse, all devices must communicate through a common platform that contains all the information. When enough devices connect to the matrix platform, the machines, subsystems, and systems begin to communicate with each other and will try to optimize automatically saving human effort, hours of work, materials, spaces, and allowing for reduced mistakes.

### Marketing

Marketing is the first echelon and the principal position that must provide detailed information on consumer purchasing behavior. Its specific duty is to provide information on current and future preferences, needs, and desires of the customers and clients. In doing so it enables the design and supply of products and services focused on customer satisfaction, with the entire supply chain concentrating on achieving the objective. To develop a logistics strategy it is necessary to obtain customer data on the importance of supplier attributes and the performance of leading suppliers in these attributes. However, most competitive strategy researchers emphasize the importance of competitive intelligence as the basis for implementing generic strategies without neglecting the importance of client evaluations. Since customer service can represent the best opportunity for a company to obtain a sustainable competitive advantage, competitive intelligence regarding logistics capabilities is of vital importance. As claimed by Mentzer et al., (1989), "Logistic performance quality is also a key marketing component that helps engender customer

satisfaction," which leads to the identification of the client with the organization when perceiving that their demands are satisfied in time, generating a stable relationship between the clients and the organization.

Market research helps make relevant and assertive decisions. The critical role of market research is to identify the target audience through the use of demographic, psychographic and needs data. Once the researcher identifies the customer's needs, ideas are generated, often by internal brainstorming, to develop basic concepts of products and services that can meet those needs. Some fundamental questions that result in new ideas are: What makes each concept work? What need does each concept have? Is it rational or emotional need? What is the point of difference of the concept concerning the competition? Also, how to combine the characteristics of the concept into a substantial benefit that meets the need? It is essential to determine the conceptual stage, regarding the positioning of the concept. This determination must occur early in the process so it affects all elements of the marketing mix. Most companies resolve the market positioning after the product or service is in the final stage and almost ready for public presentation. The delay in market positioning causes forced adjustments. This tactic defeats the purpose of positioning itself, which is like a first domino to fall, putting everything else in motion.

After generating the concepts (and their positions), research can determine which idea reveals the greatest viability with the highest purchase interest. In essence, the seller is looking for the address of the product or service. In our world of limited resources, this type of research is critical because it allows the marketer to reduce the options so that resources can be devoted exclusively to those ideas that reveal a spark of opportunity. It can also save a significant amount of R&D expenses, since many times this type of research is carried out before a prototype is produced (Del Vecchio, 1990).

### Sales and Customer Service

Once an organization accepts that customers want benefits, not just products, the next step is to deliver them. There are two ways of delivering the benefits in the form of a manufactured product that is distributed in the market and offered for sale and then consumed by the customer. The second method is to deliver them directly, as a service. The value of benefits delivered, either by product or directly as a service, is determined by the adjustment. Fit or adjustment is a term used to describe the conformity of the benefits with the individual needs of the clients (Frank W. Davis Karl B. Manrodt, 1997). Lambert (1992) argues that customer service is the key for integrating marketing and logistics and that such integration is necessary to produce an attractive market offer for target customers and thus advance the company's long-term profitability goals. The most common elements of logistical-customer service reported in the literature are the following: Cycle time of the order; consistency and reliability of delivery; availability of inventory; restrictions on the size of the order; convenience of the order; selection accuracy; packing and labeling of the system; delivery times and flexibility; ability to expedite distribution or delivery; ability to replace the order or product; billing and accuracy procedures; claims procedure; condition of goods upon arrival; post-sale support for the product; product tracking; order status information (Emerson & Grimm, 1996).

The availability of products (order integrity, order accuracy, and storage levels) is usually the most critical element in the combination of customer service. For most manufacturing sectors, order cycle time ranks second in importance (order transit times, assembly and shipping time) (Coyle et al., 1992). Coyle et al. (1996) suggest that reliability is perhaps the only characteristic that clients desire in the logistical capabilities of a company. The elements of customer services for logistics have four primary dimensions: time, reliability, communications, and convenience.

## **CONCLUSIONS**

To be competitive in the current market it is necessary to execute actions that allow the generation of value. A proposal to accomplish this is implementation of supply chain management models that allow the

operational and administrative integration of different forces, to achieve savings and make efficient use of human capital, materials, finance, space and time resources. We propose a model where customers are considered an integral part, since the satisfaction of their purchasing expectations, wishes, and demands, are the rudder that directs decision making for the supply chain. Companies bet on the logistics integration of their respective supply chains to create value since previous studies show its potential to generate savings. This work offers clarity to companies considering the integration of their logistics activities to the supply chain which they belong and do not have the experience or knowledge. For reasons of time, previous knowledge and experience this study has not been proven in a real context. For this reason, several paths remain open for future research including, mathematical modeling, real-world implementations and performance evaluations.

## BIBLIOGRAPHY

A. Mackelprang, J. Robinson, E. Bernardes, G. W. (2014). The relationship between strategic supply chain integration and performance: A meta-analytic evaluation and implications for supply chain management research. *Journal of Business Logistics: Strategic Supply Chain Research*, 35(1), 71–96. <https://doi.org/10.1111/jbl.12023>

Ahmad, B., & Adnan, G. (2017). Strategic Alignment between Competitive Strategy Dimensions and Supply Chain Strategy Dimensions. *FWU Journal of Social Sciences*, 11(1), 44–55.

Banker, S. (2015). Warehouse Control in the Age of the Internet of Things. *Supply Chain Management Review*, 19–32.

Danese, P., Romano, P., & Formentini, M. (2013). The impact of supply chain integration on responsiveness: The moderating effect of using an international supplier network. *Transportation Research Part E: Logistics and Transportation Review*, 49(1), 125–140. <https://doi.org/10.1016/j.tre.2012.08.002>

Del Vecchio, E. (1990). Market Research as a Continuous Process. *Journal of Services Marketing*, 4(3), 13–19. <https://doi.org/10.1108/EUM0000000002514>

Emerson, C. J., & Grimm, C. M. (1996). Logistics and marketing components of customer service: an empirical test of the Mentzer, Gomes, and Krapfel model. *International Journal of Physical Distribution & Logistics Management*, 26(8), 29–42. <https://doi.org/10.1108/09600039610128258>

Emmett, S. (2005). *Excellence in Warehouse management: How to Minimise Costs and Maximise Value*. (L. John Wiley & Sons, Ed.) (1st ed).

Frank W. Davis Karl B. Manrodt, (1991), "Service Logistics: An Introduction," *International Journal of Physical Distribution & Logistics Management*, Vol. 21 Iss 7 pp. 4 - 13 Graham, G., & Zailani, S. (2005).

Supply chain integration and performance: US versus East Asian companies. *Supply Chain Management: An International Journal*, 10(5), 379–393. <https://doi.org/10.1108/13598540510624205>

Hee-Yong Lee, Seo, Y.-J., & Dinwoodie, J. (2016). Supply chain integration and logistics performance: the role of supply chain dynamism. *The International Journal of Logistics Management*, 27(3), 668–685. <https://doi.org/10.1108/IJLM-06-2015-0100>

John J. Coyle, Edward J. Bardi, C. John Langley (1992), *The Management of Business Logistics*, fifth. Ed. West Publishing Company, New York, N.Y.

John J. Coyle, Edward J. Bardi, C. John Langley (1996), *The Management of Business Logistics*, 6th ed. West Publishing Company, NY York, N.Y.

Kenderdine, J. M., & Larson, P. D. (1988). Quality and logistics : A Framework for Strategic Integration. *International Journal of Physical Distribution & Logistics Management*, 18(6), 5–10.  
<https://doi.org/10.1108/eb014703>

Kovacs, G., & Kot, S. (2016). New Logistics and Production Trends As the Effect of Global Economy Changes. *Polish Journal of Management Studies*, 14(2), 115–126.  
<https://doi.org/10.17512/pjms.2016.14.2.11>

Lambert, D. M. (1992). Developing a customer focused logistics strategy. *International Journal of Physical Distribution & Logistics Management*, 22(6), 12–19.  
<https://doi.org/10.1108/EUM0000000000417>

Li, B., & Li, Y. (2017). Internet of things drives supply chain innovation: A research framework. *The International Journal of Organizational Innovation*, 9(3), 71–93.

Livingstone, G. (1992). Measuring Customer Service in Distribution. *International Journal of Physical Distribution & Logistics Management*, 22(6), 4–6. <https://doi.org/10.1108/EUM0000000000415>

Mentzer, J. T., Gomes, R., & Krapfel, R. E. J. (1989). Physical distribution service: A fundamental marketing concept? *Journal of the Academy of Marketing Science*, 17(1), 53–62.  
<https://doi.org/10.1007/BF02726354>

Miorandi, D., Sicari, S., De Pellegrini, F., & Chlamtac, I. (2012). Internet of things: Vision, applications, and research challenges. *Ad Hoc Networks*, 10(7), 1497–1516.  
<https://doi.org/10.1016/j.adhoc.2012.02.016>

Moraitakis, N. G., Huo, J., & Pfohl, H.-C. (2017). Alignment of Global Supply Networks Based on Strategic Groups of Supply Chains. *Logforum: Scientific Journal of Logistics*, 13(3), 327–338.

Muhammad Usman Ahmed, Mehmet Murat Kristal, Mark Pagell, T. F. G. (2017). Towards a classification of supply chain relationships: a routine based perspective. *Supply Chain Management: An International Journal*, 22(4), 341–374.

PROMEXICO. (2015). *Decídete a exportar Guía básica*. ProMéxico (1st ed, Vol. 1).  
<https://doi.org/10.1017/CBO9781107415324.004>

Quesada, G., Rachamadugu, R., Gonzalez, M., & Luis Martinez, J. (2008). Linking order winning and external supply chain integration strategies. *Supply Chain Management: An International Journal*, 13(4), 296–303. <https://doi.org/10.1108/13598540810882189>

Srivastava, P., Iyer, K. N. S., & Rawwas, M. Y. A. (2017). Performance impact of supply chain partnership strategy-environment co-alignment. *International Journal of Operations & Production Management*, 37(7), 927–949. <https://doi.org/10.1108/IJOPM-09-2015-0586>

Staude, G. E. (1987). The physical distribution concept as a philosophy of business. *International Journal of Physical Distribution & Materials Management*, 17(6), 32–37.



Stern, L. W., Sturdivant, F. D., & A., G. G. (1993). Accomplishing Marketing Channel Change: Paths and Pitfalls. *European Management Journal*, 11(1), 1–8.

Stevens, G. C. (1989). Integrating the Supply Chain. *International Journal of Physical Distribution & Materials Management*, 19(8), 3–8. <https://doi.org/10.1108/EUM00000000000329>

Witchalls, C., & Chambers, J. (2013). The Internet of Things Business Index: A Quiet Revolution Gathers Pace. Retrieved from [http://www.eiuperspectives.economist.com/sites/default/files/EIU Internet Business Index WEB\\_0.pdf](http://www.eiuperspectives.economist.com/sites/default/files/EIU%20Internet%20Business%20Index%20WEB_0.pdf)

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## **CHIAPANECA HANDICRAFT AS A DRIVER OF SUSTAINABLE LOCAL DEVELOPMENT**

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### **ABSTRACT**

*This research examines Chiapaneca handicraft as a driver of sustainable local development by artisans. Chiapaneca handicraft sale contributes to the Gross Domestic Product of Chiapa. Chiapaneca handicraft includes a wide variety of products, styles, and designs which represent the art and culture of Chiapas. In this research we study the perception of artisans regarding handicraft contributions to sustainable local development. This is quantitative, descriptive, and cross-sectional research. Selection of the sample was done for convenience to meet certain criteria. Forty artisans were surveyed within their work area of which twenty are located in Chiapa de Corzo and twenty are located in San Cristobal de las Casas. Both municipalities are in the State of Chiapas, Mexico. For data collection, an instrument based on the ESTEMPLE model was used. The instrument consisted of 11 items and 9 constructs. The study showed that artisans consider no use for technology in their craft work. They determine the product cost to establish the price of their products. The study also shows that artisanal activity has a positive impact in environmental, social and economic terms.*

**JEL:** M21, O180, R11

**KEYWORDS:** Sustainable Development, Handicraft, Strategy

### **INTRODUCTION**

In Mexico, artisanal activity is important, according to the National Survey of Cultural Consumption in Mexico (Instituto Nacional de Estadística, Geografía e Informática y Consejo Nacional para la Cultura y las Artes, 2012). The number of people aged 12 and over, who responded that they had made a craft was 11,791,856. Traditional craftsmanship means the creation of unique pieces, based on traditional knowledge and technologies, using hand tools and natural products (Lukić et al., 2015). Mexico is the third most important country in artisan activity, because of its quality, its variety, and its beauty (Romero Medina, 2017). Handicrafts improve the economy of the country in general. The Satellite Account of the Culture of Mexico (CSCM) states that handicrafts generate 20.3% of the Gross Domestic Product of the culture sector. Also, handicrafts and traditional toys are the largest productive activity in the cultural sector. In 2012, these activities generated 339,349 jobs (Instituto Nacional de Estadística, Geografía e Informática y Consejo Nacional para la Cultura y las artes, 2012). This research study aims to identify Chiapanecan artisan's perceptions towards their products, as far as being a driver of sustainable local development. This research is organized as follows: In the first section, a literature review is carried out that allows us to contextualize the richness of Chiapas, emphasizing craftsmanship and its role in the local development. Later the methodology is revealed and the results and conclusions are presented.

## LITERATURE FRAMEWORK

### Handicraft Paper in Chiapas, Mexico

Chiapas is among the top states in the production of handicrafts in Mexico, for a plethora reasons. The first and most important reason is its cultural diversity which is reflected in towns proud of their origins, their aesthetic sense and an identity that is reaffirmed in handmade products which are known worldwide. Fundamental parts of the heritage of Chiapas, Mexico include knowledge, techniques, and life experiences of the artisans of Chiapas. Master Artisans have contributed to the enrichment and development of people and are a role model for the next generation. For centuries, the people of Chiapas have developed a great ability to create products used in their daily lives (Instituto Casa de las Artesanías de Chiapas, 2017). Therefore, artisan, handicraft and Chiapanecans activities not only helps economic activity, which generates direct and indirect jobs, but represents the culture and pride of being from Chiapas. The artisanal activity in Chiapas is diverse, rich in colors, textures, designs, styles, and materials.

The Instituto Casa de las Artesanías de Chiapas (2017) classifies this activity into two groups: 1) artisan branches and 2) handicraft products. Handicraft branches include: pottery, basket weaving, weaving, toy making, chiseling, Mexican lacquerware, wood instrument making, mask making, metalworking, saddlery, wood and textile carving; Artisanal products include: jewelry, amber, and edible products. Artisanal activity in the State of Chiapas is an invaluable treasure, as well as being a fundamental element in enhancing tourism. It generates direct and indirect jobs, mainly in the tourist areas. Receptive tourism consumption in the first quarter of 2017 in Mexico was 16.2 (Instituto Nacional de Estadística, Geografía e Informática, 2017); and Chiapas in 2015 had 620,214 visitors (DATATUR, 2017). Therefore, the Instituto Casa de las Artesanías de Chiapas affirms that this entity is one of the largest varieties of handicrafts in Mexico, and variety is influenced by the diverse culture (Instituto de las Artesanias, 2007-2012). The handicrafts created in this entity give life to the daily life. It preserves the heritage of original cultures and religious symbolism, which translates into true works of art.

### Chiapaneca Handicraft as a Driver of Sustainable Local Development

Craftsmanship is an intangible heritage of the State of Chiapas because of its colors, texture, variety of textiles, designs, embroidery styles, which represent the traditions and customs of Chiapas. Therefore, craftsmanship can be considered an art from the perspective of Tartarkiewicz (1987). Tartarkiewicz (1987) affirms that art, like human creation, can be an artistic creation. Therefore, all art is an artistic creation that provokes delight, emotion or shock. The craft tradition is an expressive representation of regional creativity. Its richness and singularity is expressed through techniques, materials, and formal systems used. It is a result of the region's history and culture, revealing its positive features. In this process between the local and global communities, previously unimaginable connections and possibilities emerge. The term "glocal" is applied extolls the capacity of the "local/traditional" to compete on a global level. This affirmation exposes a vast range of opportunities for traditional craft production (Giulio, 2008).

Ahamad and Yasmin (2012) argue the handicraft sector has an enormous potential to generate profitable employment opportunities for the unemployed, and has an unlimited potential for economic development of a country/region. Kappus (2012) contributes to the debate on poverty-reducing potential, by noting that, through handicraft cooperative membership, crafters access livelihood assets, primarily economic, social and human capital. The relevance of artisanal activity in Chiapas is justified because currently there is a greater awareness of the use of traditional textiles, more spaces for marketing, an increase of educational programs related to textile production and more development alternatives for producers (Martinez Miranda 2017, cited by Amanoarte, 2017). In addition, artisan groups (mainly women) have risen, because the government has promoted the creation of organizations for granting financial resources (Pérez Mérimo, 2017, cited by Amanoarte, 2017). Craftsmanship is transcendent for many families of artisans. Ramos

Muñoz, Pablos Tuñon and Calderon Cisneros, (2000) found this allows the existence of the peasant economy and the payment of agricultural inputs. It is also essential for the organization of family work (Ramos Maza, 2004).

Artisanal production in Chiapas has a high participation by women. A study carried out in the highlands of Chiapas found a traditional feminine production (Ramos Muñoz, Pablos Tuñon and Calderon Cisneros 2000). The foregoing is consistent with that reported by Bartra (1998) who affirms that women often dedicate themselves to art while men work in the field, trading or as employees. In the same sense, embroidery weaving on the backstrap loom has been an activity that defines the role in the history of Mayan culture (Gil Corredor, 2016). Chiapas handicrafts are the product of sensitivity, dedication, and the talent of women and men who, within the cultural plurality, reflect their emotion before life and the search for beauty.

For Chiapas, handicrafts such as lacquer, possess the strength of an integrating symbol beyond the local sphere from which it comes or of textiles whose symbolism goes beyond the need for attire (Instituto Casa de las Artesanías de Chiapas, 2017). Starting from the benefits of the artisanal sector, the activity itself and the materials they use to produce the products are sustainable. From this point of view, sustainability is defined as a permanent process towards higher stages of human development (Serrano-Barquín, Serrano-Barquin and Osorio-Garcia, 2011, cited by Korstanje, 2013). It involves sustainable tourism and must sustain local economies, without harming the environment on which they depend. It must give people economic opportunities, without negatively affecting the structure of economic activity and must not interfere with existing forms of social organization (Payne, 1993, cited by Arroyo 2012).

Sustainable development is a new model for development, a model for resource conservation, intergenerational and intergeneric equity. In addition, it is a model for distribution of power and wealth. Sustainable development stresses the importance of local and regional actions towards sustainability as it refers to the capacity of local or regional organizations to promote activities for the empowerment and reproduction of their members. This is done while considering conservation of resources such as: human, cultural, economic, material, social, environmental and the sustainability of the organizational process itself.

The ability of an individual or group to sustain and promote social, political and economic development opportunities is an important component of sustainability (Martínez, 2016). Despite the importance of handicrafts, they are still poorly valued and sold at a very low price. Bartra (1998) reports that the economy of popular artists of Mexico is precarious and their products are sold inexpensively. There is no doubt that Chiapas handicraft has the potential to become an engine of sustainable local development in Chiapas. Within the framework of sustainable development objectives, objective 12 notes that sustainable consumption and production modalities must be guaranteed. Individuals must understand that consumption and sustainable production consists of promoting the efficient use of resources and energy, the construction of infrastructures that do not harm the environment, the improvement of access to basic services, and the creation of environmentally friendly jobs with fair wages and good labor conditions. This translates into a better quality of life and helps to achieve general development plans with reduced economic, environmental, and social costs along with increased competitiveness, and reduced poverty (Naciones Unidas, 2017).

## **METHODOLOGICAL ASPECTS**

This research is quantitative, descriptive, and transversal. For this research a convenience sample was selected to meet certain criteria. For data collection, an instrument based on the ESTEMPLE (Economic, Social, Technological, Environmental, Media, Political, Legal, Ethical) model was used. The target group for the current study consisted of forty artisans who were surveyed in their work areas. Twenty artisains

were located in Chiapa de Corzo, and twenty were located in San Cristobal de las Casas. Both municipalities are in the State of Chiapas, Mexico. The survey was conducted from August 30 to September 02, 2017. We experienced a 100 percent response rate. Sample participants include 80% women and 20% men. The average age of the artisans is 32 years and 100% are from indigenous origins. Table 1 shows definitions of the research variables.

Table 1: Operational Definition of Research Variables

Variables	Definition	Item	Unit of Measurement
Dependent	Sustainable local development	1). Economic 2). Social 3). Technological 4).Ecological 5). Media 6). Political 7). Legal 8). Ethical 9). Cultural	Instrument designed on the basis of 11 items
Independent	Chiapaneca handcraft as a driver of sustainable local development	Analysis of the sustainability of handicrafts from the perspective of artisans	

*For data collection an instrument consisting of 11 items and 9 constructs was used.*

## RESULTS

We start with an analysis of economic, social and Technological indicators presented in Table 2. Table 2 shows, that artisans consider economic indicators and calculate the cost of their product to determine the final price. Specifically, 2.5% responded rarely, 37.5% occasionally, 25% sometimes and 35% always. All of the artisans indicate that the segment to which their products are directed is not defined. They indicate that most people who visit Chiapa de Corzo and San Cristóbal de las Casas, in Chiapas, buy at least one product. On the other hand all of the artisans affirm that potential buyers are domestic tourists. This explains the Mexican custom of always taking souvenirs from places visited to family, friends and coworkers. In addition, 95% of artisans are convinced that the craftsmanship of the municipalities in Chiapas is clearly differentiated by their type of embroidery, colors, designs, materials, shapes and styles. There is no consensus among craftsmen about the usefulness of technology in the artisanal market. The results show 25% never use technology and 15% express that it is rarely use. But on the contrary other people indicate they earn more money selling through the internet. Furthermore, 42.5% indicate that occasionally it has used it. Only 17.5% indicate frequently or always using the internet.

The analysis continues with an analysis of ecological, political and media advertising indicators. Table 3 shows that when evaluating the sustainability of artisanal activity, 55% of artisans consider their products always to be environmentally friendly, 32.5% almost always and 12.5% said never. We observe that 100% of artisans believe that media does not have an influence on the general aspects of their activities, such as the production, distribution, and commercialization of their product. Some 62% of artisans respond that the political environment does not influence the development and sale of artisan products, 20% indicate occasionally, 12.5% indicate often always and 5% indicate always.

Table 2: Economic, Social and Technological Indicators

Variable		Frequency	Percentage	Valid Percentage	Accumulated Percentage
<b>a) Economic</b>					
Economic indicators - Product Price	Rarely	1	2.5	2.5	2.5
	Occasionally	15	37.5	37.5	40.0
	Often	10	25.0	25.0	65.0
	Always	14	35.0	35.0	100.0
<b>b) Social</b>					
Product segmentation	Never	40	100.0	100.0	100.0
Potential buyers	Occasionally	3	7.5	7.5	7.5
	Often	1	2.5	2.5	10.0
	Always	36	90.0	90.0	100.0
Product differentiation	Occasionally	2	5.0	5.0	5.0
	Often	9	22.5	22.5	27.5
	Always	29	72.5	72.5	100.0
<b>C) Technological</b>					
Utility of technology	Never	10	25.0	25.0	25.0
	Rarely	6	15.0	15.0	40.0
	Occasionally	17	42.5	42.5	82.5
	Often	3	7.5	7.5	90.0
	Always	4	10.0	10.0	100.0

Table 2 shows, survey responses to sections A-C of the survey.

Table 3: Ecological, Political and Media Advertising Indicators

Variable		Frequency	Percentage	Valid Percentage	Accumulated Percentage
<b>d) Ecological</b>					
Environmental sustainability	Never	5	12.5	12.5	12.5
	Occasionally	13	32.5	32.5	45.0
	Often	16	40.0	40.0	85.0
	Always	6	15.0	15.0	100.0
<b>e) Media</b>					
Influence of media	Never	40	100.0	100.0	100.0
<b>f) Political</b>					
Influence of the political environment	Never	21	52.5	52.5	52.5
	Rarely	4	10.0	10.0	62.5
	Occasionally	8	20.0	20.0	82.5
	Often	5	12.5	12.5	95.0
	Always	2	5.0	5.0	100.0

This table shows results of analysis on ecological, political and media advertising indicators.

Chiapas craftsmanship is diverse, ranging from ceramics, textiles, pottery, basket weaving, wood carving, metalworking, stonework, quarrying, glass, “cerería”, cardboard and paper, Saddlery, Furrier's, as well as traditional sweets. These activities have very little impact on the environment. Most importantly we note that Chiapas craftsmanship is primarily done by indigenous women. About 1.9 million people in Chiapas consider themselves indigenous, representing 36.1% of the state's population (National Institute of

Statistics, Geography and Informatics, 2015). Handicrafts have a positive social and economic impact since it represents the main source of income for Chiapas artisanal families. As of 2012, three out ten jobs occupied in the cultural sector were held by artisans (National Institute of Statistics and Geography & National Council for Culture and the Arts, 2012).

Next, we present results related to legal, ethical and cultural indicators. Table 4 shows the results. Some 70% of survey participants responded that laws do not influence the decisions to produce and market their product, 10% said occasionally and 15% said always. However, they believe work ethic influences artisanal activity. They note that designs are constantly copied and there is unfair competition. Specific responses regarding the importance of ethics indicated 22.5% said occasionally, 40% said frequently, 12.5% said always. Results show that 92.5% of artisans consider the handicrafts to not only reflect their culture but also traditions and feelings. These elements can be seen in the type of embroidery, designs, textiles, colors, and different materials with which the pieces are made.

Table 4: Legal, Ethical and Cultural Indicators

Variable		Frequency	Percentage	Valid Percentage	Accumulated Percentage
<b>g) Legal</b>					
Influence of legislation	Never	26	65.0	65.0	65.0
	Rarely	4	10.0	10.0	75.0
	Occasionally	4	10.0	10.0	85.0
	Often	6	15.0	15.0	100.0
<b>h) Ethical</b>					
Labor ethics	Never	7	17.5	17.5	17.5
	Rarely	3	7.5	7.5	25.0
	Occasionally	9	22.5	22.5	47.5
	Often	16	40.0	40.0	87.5
	Always	5	12.5	12.5	100.0
<b>i) Cultural</b>					
Cultural influence	Never	3	7.5	7.5	7.5
	Often	3	7.5	7.5	15.0
	Always	34	85.0	85.0	100.0

*This table presents survey results related to legal, ethical and cultural indicators.*

## CONCLUSIONS

This research examines the perception of Chiapaneca handicraft as a driver of sustainable local development by artisans. We survey forty Chiapas artisans from two areas with greater artisan concentrations: Chiapa de Corzo and San Cristóbal de las Casas. Craft work of the municipalities in Chiapas is clearly differentiated by its type of embroidery, colors, designs, materials, shapes, styles, so they can be identified by regions, municipalities, or ethnic groups. Most artisans find little use for technology to market their products. On the contrary, they view it as providing an opportunity for others to copy their designs and generate greater profits from their work. However, incorporating additional technology represents an opportunity for artisans to promote their products in other markets. Technology may become a sustainable marketing medium. They also consider that the media does not influence the general aspects of their activity.

Artisans indicate that political and legal aspects do not influence the development and commercialization of their products. Work ethic influences artisan activity from the perspective of the artisan. They believe



that their designs are constantly being copied and there is unfair competition. Income received by artisans directly impacts their family income, but unfortunately artisanal work is not valued and not well paid. Therefore, in Chiapas, sustainable strategies must be created to strengthen the artisanal sector, where spaces are created for commercialization. There is a need for an increase in educational programs related to textile production, and more development of alternatives for artisans, as well as design programs that grant financial support for the purchase of inputs and distribution of products. The results here show that 80% the artisans are women. Artisans are fully aware that their potential buyers are tourists. However, they emphasize that national tourists consume their products the most. This consumption is associated with the Mexican custom of always bringing a souvenir to family, friends, colleagues. Alternatively, domestic tourists may be more aware of the origin and way in which pieces were made. It is necessary to promote and disseminate the cultural wealth that exists in this activity through campaigns that seek to make consumers aware of the impact of valued artisan pieces and make a fair payment to the artisans, both at the national and international level.

This study confirms the high participation of women in this activity, which corresponds to traditional female production found by Ramos Muñoz, Pablos Tuñón and Calderón Cisneros in 2000. These results open new lines of research ranging from studies of gender in artisanal activity. We note that artisanal production in Chiapas is an activity of low impact for the environment and has the potential to become a generator of local development in the State. The richness of Chiapas and its craftsmanship can be seen in different ways in its products, which go beyond a piece made by hand. These pieces represent traditions, cultural heritage, customs, religious symbolism, ethnic diversity, nature, talent, creativity, imagination, dedication and sensitivity of its people. Textiles reveal colors, types of embroidery, designs, shapes and different materials with which the pieces are made. In spite of this, it is necessary to implement actions that guarantee the improvement of access to basic services to their producers. Artisans should be fairly remunerated and experience good working conditions. These improvements translate to a better quality of life, greater competitiveness and local development. In turn artisans reduce economic, environmental and social costs and have a positive impact on poverty indicators.

This study has limitations. Despite the richness of Chiapas craftsmanship, little has been documented in the literature. During the field work, we experience resistance from the artisans to answer our questions. Some reasons for their resistance were: they are shy, speak little Spanish, have concerns about the use of the information they provide, have not seen the impact of research work on their activity and in their environment. Thus, they find no reason to collaborate in these efforts. Further development of the artisan trades may reduce this reluctance.

## REFERENCIAS

Ahamad, F., & Yasmin, E. (2012). Impact of turmoil on the handicraft sector of Jammu and Kashmir: An economic analysis. *International NGO Journal* V7(5), pp. 76-83.

Amanoarte (2017). Retrieved from <http://amanoarte.org/amanoarte-asistio-al-festival-anual-de-textiles-en-xalapa-veracruz/>

Arroyo Cavazos, J. (2012). El Turismo Orientado a Los Pobres: Una Alternativa Estratégica Para Los Países En Desarrollo Olimpia Jiménez López. *Pasos: Revista de Turismo Y Patrimonio Cultural* 10(5), pp. 451–65.

Bartra, E. (1998). Neozapatismo, Arte Popular Y Género: De Humildes Muñecas de Trapo a Zapatistas. Retrieved from <http://lasa.international.pitt.edu/LASA98/Bartra.pdf>.

Gil Corredor, C. (2016). Ecología del saber: el conocer poetizado en los pueblos originarios mayas de Los Altos de Chiapas, México.

DATATUR (2017). Sistema nacional de información estadística del sector turismo en México. Retrieved from. [http://www.datatur.sectur.gob.mx/ITxEF/ITxEF\\_CHIS.aspx](http://www.datatur.sectur.gob.mx/ITxEF/ITxEF_CHIS.aspx)

El Instituto Casa de las Artesanías de Chiapas (19 de 11 de 2017). Retrieved from Artesanías: <http://casadelasartesaniaschiapas.gob.mx/alfareria>

Gil Corredor, C. (2016). La Estética Textil Como Intersubjetividad de Los Pueblos Originarios : Caso de Las Tejedoras Mayas. *Revista San Gregorio* 1 (11): 58–69.

Giulio, V. (2008). Artesanía + Innovación la herramienta del futuro. *Craft and Design, Accomplices in Local Development* (pág. 91). Toledo, España: Fundación Española para la Innovación de la Artesanía.

Instituto de las Artesanías. (2007-2012). Programa Institucional . Chiapas: Gobierno del Estado.

Instituto Nacional de Estadística, Geografía e Informática y Consejo Nacional para la Cultura y las artes (2017). Encuesta Nacional de Consumo Cultural en México. México: SEDESOL, FONART, INEGI.

Instituto Nacional de Estadística y Geografía , & Consejo Nacional para la Cultura y las Artes. (2012). Las artesanías en la Encuesta Nacional de Consumo Cultural de México: [https://www.gob.mx/cms/uploads/attachment/file/201779/Las\\_artesani\\_as\\_en\\_la\\_ENCCUM\\_con\\_image\\_n.pdf](https://www.gob.mx/cms/uploads/attachment/file/201779/Las_artesani_as_en_la_ENCCUM_con_image_n.pdf)

Instituto Nacional de Estadística, Geografía e Inf. (2015). Principales resultados de la Encuesta Intercensal 2015. Chiapas: INEGI.

Instituto Nacional de Estadística, Geografía e Informática (INEGI, 2017). PIB y Cuentas Nacionales de México. Indicadores trimestrales de actividad turística. Retrieved from: <http://www.inegi.org.mx/est/contenidos/proyectos/cn/itat/default.aspx>

Kappus, M. (2012). Understanding the Impact of Handicraft Cooperative Participation on Livelihood Strategy (Asset Accumulation and Resiliency) among Women: A Qualitative Case Study From Kigali, Rwanda. Unpublished Master's thesis. Lund University.

Korstanje, Maximiliano E. (2013). Turismo, Desarrollo Y Sustentabilidad. Reflexiones Teórico-Metodológicas. Pasos: *Revista de Turismo y Patrimonio Cultural*, 11 (1), pp. 247–50.

Lukić, T., T. Stojanović, B Đerčan, M. Živković, and J. Živković. (2015). “The Geographical Aspects of Traditional Handicrafts in Serbia.” *European Researcher*, V100 (11), pp.747–59. doi:10.13187/er.2015.100.747.

Martínez, C. B. (2016). Género, empoderamiento y sustentabilidad: una experiencia de microempresa artesanal de mujeres indígenas. En V. Vázquez García, M. Castañeda Salgado, N. Cárcamo Toalá, & A. Santos Tapia, *Género y medio ambiente en México: una antología* (pág. 308). México: Universidad Nacional Autónoma de México.

Naciones Unidas (19 de noviembre de 2017). Retrieved from Objetivos de Desarrollo Sostenible: <http://www.un.org/sustainabledevelopment/es/sustainable-consumption-production/>

Ramos Maza, T. (2004). Artesanas y Artesanías: Indígenas y Mestizas de Chiapas Construyendo Espacios de Cambio. *LiminaR Estudios Sociales Y Humanísticos* II (1): 50–71.

Ramos Muñoz, D, E Pablos Tuñón, and A Calderon Cisneros. (2000). Artesanía, Una Producción Local Para Mercados Globales. El Caso de Amatenango Del Valle, Chiapas México. Pontificia Universidad Javeriana.

Romero Medina, L. (2017). ¿Por qué festejamos a los artesanos en México? Retrieved from <https://fonart.gob.mx/web/index.php/sala-de-prensa/comunicados?id=189&Itemid=15>

Secretaría de Turismo. (2009). Plan de estrategia y Competitividad Turística para los Clústers de Tuxtla Gutiérrez, San Cristóbal de las Casas, Palenque, Comitán de Domínguez y Chiapa de Corzo. Chiapas: SECTUR.

Tatarkiewicz, W. (1987). Historia de las seis ideas. Madrid: Tecnos.

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# **ECONOMIC AND ENVIRONMENTAL ASPECTS OF ORGANIC FARMING: EVIDENCE FROM INDIA**

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## **ABSTRACT**

*This paper evaluates economic and environmental facets of small, landless and marginal farmers and provides solutions on how farmers can enhance their income with organic farming. A majority of the farming community is resource poor and purchasing fertilizers and chemicals in adequate quantities is beyond their capacity, thus encouraging organic farming. Moreover, Organic farming is favorable for small and scattered agriculture land holders. This paper finds that education was the most effective and compelling component for a farmer to utilize organic farming techniques. Further, environment and financial motives were primary motives behind the farmers' conversion to organic farming. In addition to the net profit advantage of organic farming, other hidden environmental benefits of organic farming should also be identified to make it more influential.*

**JEL:** Q5

**KEYWORDS:** Diversification, Economic Aspects, Marginal Size, Elasticity, Purchasing Power

## **INTRODUCTION**

Organic farming aims to maintain and improve soil fertility by evolving a sustainable agricultural system. The goal is to ensure adequate food production that relies, as much as possible, upon resources from within a local area. Organic farming is an applied biology as it manages to incorporate farm waste recycling, non-chemical weed management, biological pest control, and integrated nutrient management for sustainable soil fertility and crop productivity. India's food production was a success story following the green revolution. In the late 1960s, India significantly increased food production when the green revolution was launched. During the post green revolution, the production of food grain increased fourfold, from 50.82 million tons in 1950 to 211.1 million tons in 2001 to 2002 (Yojana November 2003). Although the green revolution played a leading role in making the country self-sufficient in food grains, it created some adverse effects which were matter of serious concern. Negative impacts of the green revolution include excessive use of chemical (150-500 kb/ha), imbalance in nutrition status causing significant deficiency of Nitrogen, Phosphorus, Potassium and environment degradation like depletion of stratospheric ozone, nitrate toxic etc. causing health hazards like cancer, methemoglobinemia, respiratory illness hypertension etc.

Considering how health conscious consumers are becoming in both developing and developed countries, it is crucial to provide safe and quality food products. The world organic food market is estimated to grow to around US \$110 billion annually in 2025 (Agriculture at a glance, Government of India, 2016). In Uttarakhand and Uttar Pradesh, 70% of land holdings are less than 100 acres in size and cover about 27% of the total agriculture land. Also, just over 3% of land holding are above 4 hectares in size. Small and marginal land holders are not able to apply technology and other resources efficiently making it difficult to make agriculture a profitable occupation as a result of higher input cost per unit of output (Government of Uttar-Pradesh, 2001). This paper evaluates the economic and environmental aspects of organic farming in

India. The remainder of the paper includes a literature review, data and methodology, results, discussion and conclusion.

**LITERATURE REVIEW AND RESEARCH DEVELOPMENT**

Total world land size is 13.4 billion hectares and total agriculture land size is 1.5 billion hectares. Table 2 shows that India agriculture land size is 1.18 million hectares. The total organically managed area worldwide is 50.9 million hectares while India’s organically managed area is 4.78 million hectares. There were 2.3 million organic agriculture producers in the world in 2015. Table 1 shows India as number one of the largest producers of organic farming countries with 585,200 producers (FiBL survey, 2017). The international market for organic foods is expanding especially in the U.S., Europe and Japan. The grand viewresearch.com/press-release estimated the organic food market to equal US \$ 77.4 billion in 2015. Moreover, it is estimated to generate revenue over USD 110 billion by 2025 with a growth rate of 42.12%. While generated revenue is increasing yearly, the economic impact of it on Indian farmers is low. This is due to increased number of farmers using small pieces of land to farm. Table 2 presents countries with the largest area of organic farming.

Table 1: Top Ten Countries with Largest Producers of Organic Farming (2015)

Countries	Producers (Thousands)
India	585.20
Euthopia	203.60
Mexico	200.04
Uganda	190.67
Philippine	165.96
Tanzania	148.61
Peru	96.86
Turkey	69.97
Paraguay	58.26
Italy	52.61

*This table shows countries that have the largest number of organic farming producers. Sources: www.Fibl.org*

Table 2: Countries with Largest Area of Organic Farming (2015)

Countries	Areas (Million Hectare)
Australia	22.69
Argentina	3.07
United States of America	2.03
Spain	1.97
China	1.61
Italy	1.49
France	1.38
Uruguay	1.31
India	1.18
Germany	1.00

*This table shows countries with the largest land areas dedicated to organic farming. Sources: www.Fibl.org*

Twentieth century’s world agriculture has moved fast towards organic crops. The increased production of organic crops also resulted in increased agricultural exports, thereby increasing revenue and employment

opportunities (The Hindu in 2010). An important reason for the emphasis of organic farming in India is that most arable soils in India contain organic carbon below the threshold level.

A majority of the farming community in India is resource poor and the purchase of fertilizers and chemicals in adequate quantities is beyond their capacity. A large fraction of farm by-products is utilized for non-farm use such as fuel or other domestic purpose. Lack of location specific technology to recycle organic wastes and lack of awareness to recycle organic wastes in agriculture are the main reasons for slow adoption of organic farming even though it was a native technique for the farmers which got lost during the green revolution period. Some 1,000 million tons of animal dung is produced in India annually, which yields about 500 million tons of farm manure, an excellent source of plant nutrition. An application of 10 tons of well rotten Farm Yard Manure per Hectare (FYM/ha) can add 50-60 kg K<sub>2</sub>O (Potassium Oxide). A systematic research and development program that will sustain agricultural systems through organic agriculture needs to be initiated.

#### Wastes into Organic Manures

Cropping systems can be managed advantageously. Efforts should be made to maintain yield stability and suppress the weeds and pests through adoption of appropriate cropping systems. Weeds and pest's incidence can be minimized through the adoption of appropriate long-term crop rotation systems. Inter cropping of garlic with sugarcane minimizes the incidence of shoot borer. Periodical substitution of wheat with a fodder crop in a rich-wheat system is a remedy for phyllaries minor. Introduction of legumes as break crops in intensive cereal-cereal system results in yield stability and restoration of soil fertility.

Manure offers a significant opportunity to fertilize crops. Large quantities of wastes in the form of manure can be generated from poultry farms, which are mostly mixed with floor materials e.g. litter, droppings, dead birds etc. Floor materials refers to the bedding materials (saw dust, wheat straw and rice hulls) which get mixed with dropping/left over feed. The content of N, P, O and K<sub>2</sub>O in the poultry litter varies between 3.0-4.0%, 2.0-2.5% and 1.0-2.0% respectively, depending upon the kind feed used. Poultry manure generally contains 38 g/kg of organic nitrogen, 4.8 g/kg of ortho-phosphorus and 20.9 g/kg of potash besides Ca, Na, Cu and Zn etc. in very small quantities (The Hindu Survey, 2005). The manure produced from poultry is estimated to be 17-20 kg of manure daily per 1000 kg broiler live weight. One adult chicken produces 25 kg of compost manure in one year.

Another source of organic fertilizer is vegetable waste. India grows about 20 million tons of vegetables and fruits annually. Out of these only 0.4% is utilized for domestic consumption and processing while the rest are treated as garbage. Little attempt has so far been made to exploit this waste as feed for fish. Properly processed vegetable leaves like cabbage carrot, cauliflower, radish, tomato etc. contain crude protein (8-20%), ether extract (2-4%), crude fiber (11-20%) and (30-80%) nitrogen free extract on a dry matter basis which can be used as a supplement for formulated fish feed. Protein, fiber and nitrogen free extract of wastes from carrot, cauliflower, dehydrated pea karela (bitter melon), onion, potatoes, spinach and tinda can also be used for preparing fish feeds (Xavier et. al, 2001).

Sericulture wastes are a mixture of silkworm feces, worm slough and mulberry leaves residues. Sericulture can serve as a nutrient medium and feed for fish ponds. A one-hectare mulberry plant can produce 4,000-6,000 kg of leaves, 1000 kg of silkworm wastes, which in turn can result in 125 kg of fish. Silkworm feces are also consumed by fish. The following areas for research and development under organic agriculture need attention. Research projects for formulation of organic farming practices should be formed and implemented as national project. Incentives for production of good quality organic manure, bio-pesticide, bio fertilizer and green manuring crops should be strengthened. Finally, development of pesticides of plants origin (such as neem) and use of agents especially under inter-grated pest management programmed system need to be promoted.

**DATA AND METHODOLOGY**

The study evaluates the economic and environmental aspects of organic farming in India. This paper is empirical in nature and the research is based on primary data. Six farmers who practiced organic farming in the Uttar Pradesh and Uttarakhand regions in 2010 were surveyed. A self-administrative pre-tested questionnaire was developed and administered to the respondents and used as the main data gathering instrument for the study (refer to the questionnaires given in Appendix A). The data collected was analyzed and presented below. Data on organic farming were collected from the state of Uttarakhand. The respondents reported to the author.

**RESULTS**

Table 3 presents the agricultural economic value of organic farming. Table 3 shows a farmer annually average income is Rs. 42,796.00 with standard deviation of Rs. 6,441.00 per year if farmer is performing organic farming.

Table 3: Agriculture Economic Value of Organic Farming

Name	Area in Acre (Reduced to 1 Acre, 1 Acre=43,545.72 Sq Feet )	Cost of Bio- Fertilizer in Rs (1 Acre)	Production of Rice Quintal/Acre	Economic Values in Rs. of One Crop Price 2,991.67/Qt	Economic Profit Values in Rs. of One Crop (After Cost Deduction)
Respondent 1	1 acre	2,500.00	12 qt.	35,900.00	33,400.00
Respondent 2	1 acre	1,875.00	16 qt.	47,867.00	45,992.00
Respondent 3	1 acre	2,000.00	14 qt.	41,883.00	39,883.00
Respondent 4	1 acre	2,100.00	14 qt.	41,883.00	39,783.00
Respondent 5	1 acre	2,000.00	16 qt.	47,867.00	45,867.00
Respondent 6	1 acre	2,000.00	18 qt.	53,850.00	51,850.00
Average	1 acre	2,079.17	15 qt.	44,875.00	42,796.00

*This table shows the value of organic farming in India.*

Table 4 presents the agricultural economic value of inorganic farming. Results show an inorganic farmer’s annual average income is Rs. 36,733.33 with standard deviation of Rs. 6,333.851 per year. In Table 3, the cost of bio-fertilizers, as reported by various respondents, used per acre of land to produce rice is reported. The quantity of rice and the total cost of rice produced are also given. The cost of rice has been calculated at the present market rate of Rs. 2300.00 per quintal for inorganic farming and 2,991.67 per quintal for organic farming. Similarly, Table 4 shows the cost of inorganic fertilizers along with the total value of rice produced per acre. The analysis assumes that except for the cost of fertilizers, other costs like laborer, irrigation, seeds etc. remain the same in both the cases. Therefore, the last column in the tables shows the value of rice produced after deducting the cost of fertilizers. For bio-fertilizers, the average value of production per acre is Rs 44,875 while for inorganic fertilizers is Rs. 39,866.67.

It is evident that in inorganic farming, the value of rice production exceeds organic farming. At first glance it appears that organic farming is less productive. However, a few years after the start of organic farming in a given farm, the soil condition improve. Further, in organic farming, harvest residual of paddy and wheat are left in the field to make a good bio-fertilizer. Thus, with successive years of bio farming the need for additional bio-fertilizers decreases, thereby making bio farming more economical. The following are the motivational aspects of organic farming identified by the farmers in Uttar Pradesh and Uttarakhand:



Table 4: Agriculture Economic Value of Inorganic Farming

Name	Area in Acre (Reduced To 1 Acre, 1 Acre=43545.72 Sq Feet )	Cost of Fertilizer in Rs (1 Acre)	Production of Rice Quintal/Acre Price	Economic Values in Rs. of One Crop 2300/Qt	Economic Values in Rs. of One Crop (After Cost Deduction)
Respondent 1	1 acre	5,000.00	18 qt.	41,400.00	47,600.00
Respondent 2	1 acre	5,250.00	18 qt.	41,400.00	36,150.00
Respondent 3	1 acre	5,000.00	18 qt.	41,400.00	36,400.00
Respondent 4	1 acre	4,500.00	14 qt.	32,200.00	27,700.00
Respondent 5	1 acre	5,250.00	18 qt.	41,400.00	36,150.00
Respondent 6	1 acre	5,000.00	18 qt.	41,400.00	36,400.00
Average	1 acre	5,000.00	17.2 qt.	39,866.67	36733.33

*This table shows the value of inorganic farming in India.*

*Environmental Motives:* About fifty four percent of the farmers’ responses could be broadly put under the motive environmental care or awareness of environmental safety and ill effects of hazardous practices followed in modern farming. It was amazing to find the farmers’ awareness and care for environment. Their motto was complete health for all human beings.

*Financial motives:* Reduction in cultivation costs and increases in net profit were two important financial motives for switching to organic farming. Most inputs required for organic cultivation were derived from locally available sources like FYM, plants, herbs, etc. Utilizing these materials reduced input costs and increased net profit, notwithstanding a lower yield in initial years.

*Soil health-oriented motives:* Some respondents believed soil health has been deteriorated due to chemicals. The life of soil living micro-organisms and earth worms were disturbed by heavy dumping of fertilizers and chemicals.

*Quality of output related motives:* About one fourth of respondents found quality of output as their major concern to shift towards organic farming. Some organic farmers indicated an increase in product quality like vegetable and food grains motivated them to go organic. These farmers were very particular about the grade and standard of their harvest. They attributed their conversion to taste, durability, and freshness of the organic produce.

*Motivation of Media:* An equal percentage of farmers (24%) felt that the influence of and motivation from success stories through media like books, magazines, radio and TV programmers on organic farming, played a considerable role in changing their farming activities. Their ideology was formulated by being exposed to the media. PSK Sudheer (2013) found increasing costs of chemical inputs (63%) and increase in net return in organic farming (11%) were motivating factors towards organic farming. Fairweather (2000) found that the antipathy to chemicals and the degradation of soil were the main motivation. Xavier et. Al. (2001) found that that quest for healthier food was the main motivations for farmers bio farm. The Government of India (2016) found that about 8% farmers were motivated towards bio farming due to ideological reasons propagated by the media.

**CONCLUSION/ CONTRIBUTION**

The paper evaluates the economic and environmental aspects of organic farming in India. Data was collected from six farmers who practiced organic farming. The paper found that education seemed to be one of the most effective and compelling component for a farmer to ratify or endorse organic farming. Educated conventional farmers were aware of the health hazards of contaminated food, so they practiced

organic farming at least on a limited basis. Further, environment and financial motives were primary motives behind the farmers’ conversion to organic farming. In addition to a net profit advantage of organic farming, other hidden environmental benefits of organic farming should also be identified to make it more influential and believable. For instance, if one agrees with organic practices’ long-term benign effect, then it would strengthen their confidence in this emerging field.

The paper also found that reduction in cost of cultivation and increase in net profit were important financial motives to switch to organic farming. Most inputs required for organic cultivation were derived from locally available sources like plants and herbs. It reduced input costs and increased their net profit, notwithstanding a lower yield in initial years. Anand Kumar (1998) found increasing costs of chemical inputs (63%), increase in net return in organic farming (11%), as reasons behind the shift. The limitation of this research is the small number of participants in the study. In future research, a comparative study will be conducted using more organic farmers in the Uttar Pradesh and Uttarakhand regions to identify new developments.

**APPENDIX**

Appendix A: Economic and Environmental Aspects of Organic Farming Questionnaire

<b>General Questionnaires</b>			
1. Name:			
2. Father' Name:			
3. Address:			
4. Age:			
5. Sex:	Male-	Female-	
6. Main Occupation:			
7. Supplementary Occupation:			
8. Land size:			
Small	Marginal	Big	
9. Use of land:			
Agriculture			
Poultry			
Fishery			
Dairy			
Others			
10. Occupation wise:			
1. Agriculture:			
a. Crops Types:			
b. Farming Methods:	Organic	Inorganic	
11. If organic:	a.Total Input	b. Total Output	c.Profit
12. If Inorganic methods:	a.Total Input	b. Total Output	c.Profit
13. Others:	a.Total Input	b. Total Output	c.Profit

## REFERENCES

Agricultural statistics at a glance, Govt. of India (2003).

Agricultural statistics at a glance, Govt. of India (2017), Directorate of Economics and Statistics, Department of Agriculture, Corporation and Farmer Welfare, Minister of Agriculture, Corporation and Farmer Welfare, Government of India.

Agricultural statistics at a glance, Govt. of India (2016), Directorate of Economics and Statistics, Department of Agriculture, Corporation and Farmer Welfare, Minister of Agriculture, Corporation and Farmer Welfare, Government of India

Alston, Julian M. et al., (2000), "A Meta-Analysis of Rates of Return to Agricultural R and D: Ex Pede Herculem". Washington, D.C. International Food Policy Research Institute.

Banerjee, A, (1995), Togetherness in Dairying, Indian Dairyman, Vol. 47 No. S.2-3, pp. 10.

Crosson, Pierre. (1995), "Soil Erosion and Costs, science 269:5223", pp 461-63.

Counting on Agroecology: (2015), Why We Should Invest More in the Transition to Sustainable Agriculture, union of concerned scientist, www.ucsusa.org

Department of Agriculture, Uttarakhand, Tenth Five-Year Plan 2002-07, and Annual Plan 2002-03.

Etienne, G. (1993), "Indian Village and Districts Revisited, The Issue of Economic Growth and Poverty", Indian Journal of Labor Economics, Vol. 36, No-2, April-June.

Economic Survey, Government of India, (2001), Ministry of Finance, Economic Division pp 150-155.

PSK Sudheer. (2013) Economics of organic versus chemical farming for three crops in Andhra Pradesh, India P. Sri Krishna Sudheer Tata Institute of Social Sciences, Tuljapur, Maharashtra, India. *Journal of Organic Systems*, 8(2), 2013 ISSN: 1177-4258, Page 36-49 <https://www.organic-systems.org/journal/82/8205>.

Ghosh, Souvik; Panda, D.K.; Nanda, P. and Kumar Ashwani. (2011). Links between irrigation, agriculture and level of living. *Indian Research Journal of Extension Education*. 11 (3): 32-36.

Hindustan Times, New Delhi, April 13, 2003

Hayami and Ruttan, (1970), "Agricultural Productivity: Difference Among Countries", *American Economic Review*. December, 60:S. pp. 895-911.

*Indian Journal of Extension Education*, (2004), A Major Success Story, S. Shanugarundaram Irrigation Management ICAR, RCER, Patna 28 September-7th October 2004. *Yojana* November 2001, pp.42

Joshi. P.K. (2010), "Conservation Agriculture: An Overview", *Indian Journal of Agricultural Economics*, 66(1): 53-63.

Kumar and Mathur, (1996), "Agriculture in Future: Demand-Supply Perspective for the Ninth Five Year Plan", *Economic and Political Weekly*, Vol. 31, No. 39, pp. A 133-139.

Kalam and Rajan, (2008), A vision for the New Millennium.

Organic Farming for Sustainable Agriculture: Global and Indian Perspective, (2014), Global Journal For Research Analysis, Volume: 3, Issue: 2, Page-57, -ISSN No 2277-8160, Feb-2014.

Ruttan, Vernon W. (1956), "The contribution of technological progress to farm output 1950-1975", Review of Economics and Statistics, pp 61-69.

R.K. Datta, Director (1996), "Central Sericulture Research and Training Institute", The Hindu Survey of Indian Agriculture, pp 127.

Singh, N. (2017). Economic Aspects of Diversification of Farm Sector: A study of India. Archives of Business Research, 5(4), 35-42

S. Ayyoppan, (1997), "Towards a blue revolution, Central Institute of Freshwater Aquaculture", Kausalyaganga, Bhubaneswar, Orissa, The Hindu Survey of Indian Agriculture , pp. 118-119.

Singh P.K. (2002), "Next Phase of Economic Reforms: Strategies for Agriculture", Arth-Vikash, pp. 21-26, January-June.

Seeds of the Future: How Investment in Classical Breeding Can Support Sustainable Agriculture (2015), union of concerned scientist, [www.ucsusa.org](http://www.ucsusa.org)  
The Hindu Survey of Indian Agriculture (2004), pp. 107

The Hindu Survey of India Agriculture, (1996), pp. 123

The World of organic agriculture Statistics & Emerging Trends (2017)  
[www.fibl.org/en/themes/organic-farming-statistics.htm](http://www.fibl.org/en/themes/organic-farming-statistics.htm)

Xavier Irz, Lin Lin, Colin Thirtle, Steve Wiggins (2001), "Agricultural Productivity Growth and Poverty Alleviation", development Policy Review: 19:4. pp. 449-466.

Yojana November (2001), pp. 22 and pp. 42.

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# **INFLUENCERS AS ENHANCERS OF THE VALUE CO-CREATION EXPERIENCE**

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## **ABSTRACT**

*The figure of the influencer is slowly getting recognized in marketing literature. The importance of their opinions, how they present them to their audience and the level of interaction that this exchange generates represents a powerful channel for organizations to communicate products' characteristics and attributes. The concept of value co-creation, first proposed by Prahalad & Ramaswamy (2004) explored how the value of a product can be increased through the interaction between an organization and their customers, thus increasing the quality of the experience. It is through the creation of original content that the influencer sets the stage that fosters interaction to explore and sometimes deepen the level of detail with which an influencer expressed their opinion and it is through interacting with their audience that the value assigned to a product or service is increased. Though value co-creation measurement and assessment has been done through a variety of instruments, the dimensions provided by Verleye (2015) will be used as the basis for this analysis, due to the all-encompassing nature of this structure with which to evaluate the complete value co-creation experience. Interviews conducted with 13 influencers engaged in the beauty industry provide the data with which this analysis will be performed.*

**JEL:** M310, M370

**KEYWORDS:** Influencers, Marketing, Value Co-creation, Brands, Communication Channel, Advertising

## **INTRODUCTION**

**C**urrent changes in the marketing strategy of an organization respond to the increased immediacy that the customer expects in terms of access of information, its availability and reduced time allowed to organizations to answer requests and offer solutions requested by the customer. The speed at which these answers are expected put pressure on an organization to be as efficient and prompt as possible to meet those expectations and keep customers satisfied. Additionally, online channels have provided customers with added avenues and forums to interact with organizations and among each other, thus fostering a sense of closeness and familiarity which in turn foster bidirectional communication between the customer and the organization.

An increase in communication channels, the ease of access to them via multiple devices such as smartphones or tablets, and the closeness with which these interactions can occur has provided customers with power to improve on their experience with the products and services they consume. Understanding how customers experience these interactions with the organization and the impact it can have on their perception of the product and the organization are of the utmost importance, because it provides organizations with a better understanding of what the customer perceives as valuable features and how a product or service can be improved to better suit their needs.

One of the actors in these new channels through which organizations can become closer to customers, both current and potential, are influencers, which are defined as “an individual who through their

expertise in a specific topic creates original content and offers their unbiased opinion to an audience gained through word-of-mouth communication that voluntarily has determined them to be a referent and trust their opinion” (Morteo, 2017). These individuals provide customers with an interactive stage that benefits from the use of social media platforms and the direct interaction with an individual that shares their interests. The audience of an influencer makes them an ideal outlet for organizations to share information with current and potential customers, due to the interest their audience has in their perspective and opinions. One of the main characteristics of an influencer is that their audience is voluntary and has been acquired by word-of-mouth communication, thus it is assumed that the audience takes the content they share into consideration to evaluate products and/or services that the influencer shares with them.

The purpose of this paper is to explore how the interaction between an influencer and its audience enhances the value co-creation experience. Interviews conducted with influencers active in the beauty industry in Mexico provide the data which will be used to explore how the influencer actively engages with their audience and expands on the experience that current and potential customers can have with a product and how it can increase its value. This study expands on the evidence found by Verleye (2015), in their analysis of the mechanisms present in a value co-creation experience. The structure of this paper first presents a literature review on which this analysis will be based, followed by details on the data used and the methodology followed to analyze the available information. Results of the analysis and conclusions are provided next, closing with final comments and suggested future lines of research to expand on this research line, as well as the limitations of the current study.

## LITERATURE REVIEW

The current study is framed on the principles of Parasocial Interaction Theory (PIT) which state that individuals develop a sense of closeness with fictional characters based on their agreement with said characters’ behavior and decisions (Rubin & McHugh, 1987). An expansion on the reach of PIT is the consideration of a development of a relationship between individuals active in interactive media, such as social networks. Those principles support the relationship that has been identified to develop between bloggers and their audience, thus validating the argument in favor of influencers establishing a relationship with their audience (Colliander & Dahlén, 2011). Previous studies on the characteristics that determine the impact of the information shared on social networks have considered such elements as type of content of the post or the degree of approval from the audience in the form likes or comments that the post generates (de Vries, Gensler, & Leeﬂang, 2012), in an effort to aid managers in determining what type of content can be most interesting to their audience.

### Influencers

The definition of influencer previously provided emphasizes the main features that identify a regular individual who creates and shares content with other individuals connected to them in the wide variety of social networks currently active and available, from an individual who has acquired an audience, with the main distinction of being considered a referent in the specific topic about which said individual has developed expertise. The relevance of this distinction lies in the potential effect on behavior that an individual with credibility has acquired, which in turn can be translated into changes in behavior from their audience.

Identification of who those influential individuals are and what their main characteristics are has been the focus of research aimed at uncovering their behavior patterns in an effort to consider them into an organization’s communication efforts with their audience. One of such studies focused on determining how to identify such individuals (Trusov, Bodapati, & Bucklin, 2010), and identified a few relevant factors that pinpoint more influential individuals, such as gender, where females have greater influence

over male users; or usage behavior, where users who have longer been active on a specific social network tend to have established relationship with influential individuals.

As evidence of the importance that consumers place on recommendations when considering their options before purchase, Senecal and Nantel (2004) analyzed the online shopping behavior of more than 450 subjects and obtained evidence that supports this argument, finding that consumers tend to more frequently lean towards a recommended product rather than a product for which they obtained no information. Even though analysis on the type of content published provided to be inconclusive as to the effects on post popularity (de Vries, Gensler, & Leeflang, 2012), it shed some light on the importance of remaining focused on the content that has proven to appeal to the audience, which should remain related to the brand.

As for incorporating social media into the marketing strategy of an organization, Hassan, Nadzim, and Shiratuddin (2015) proposed its implementation based on the principles of the AIDA model (considering the elements of attention, interest, desire and action) in small business firms in Malaysia, citing the benefits that social media could yield for organizations facing limitations such as monetary constraints or lack of experience from their employees, as well as the threat posed by bigger organizations. The main benefit of using social networks is allowing the audience the possibility of creating content (Hensel & Deis, 2010). Based on this premise, the use of social networks provides the organization a platform to interact on a direct and reciprocated manner with their audience.

#### Value Co-creation

The concept of value co-creation was first explored by Prahalad and Ramaswamy (2004), highlighting this process as a next step in the evolution of consumer – organization interaction, proposing four building blocks of interactions on which to base this process, namely Dialogue, Access, Risk-Benefits, and Transparency, and emphasized the character of uniqueness that each customer was to assign to the experience they created with the organization.

Though the concept was the object of intense consideration and scrutiny (Leclerq, Hammedi, & Poncin, 2016), its conceptualization lacked the basic quality of consensus. The review of the concept and previous research provided by Leclerq, Hammedi, and Poncin (2016) provides a summary of the evolution of the concept, its relevance in the context of current marketing practice and emphasizes the need to continue exploring this concept in the context of digital marketing literature. The current research is focused specifically in this context, where a variety of new marketing strategies are finding to expand on the dynamic between customers and organizations, shifting from a unilateral exchange of information from organization to customer in the form of product characteristics and features, to a bilateral discussion on expectations and requirements that reach the organization via the direct interaction with their customers, both current and potential.

The dimensions of the co-creation experience used to frame this research are provided by the study performed by (Verleye, 2015), who proposed five dimensions to explore the depth of the experience experienced by an active participant on a dynamic. Said dimensions are hedonic experience, cognitive experience, social experience, personal experience, pragmatic experience, and economic experience. The relevance of this dimensions lies in their dissecting qualities to the value co-creation experience: it allows for a deep exploration of the composing elements of the value co-creation experience in terms of the events, interactions and even emotions involved in experiencing a product or service.

#### **DATA AND METHODOLOGY**

As previously mentioned, in depth interviews conducted with 13 influencers active in the beauty industry in Mexico are used to provide evidence of their influence to the value co-creation experience of current

and/or potential customers, based on the structure of dimensions of the value co-creation experience provided by Verleye (2015). The interviews were conducted with the purpose of acquiring a general understanding of the influencer's characteristics, such as their emergence, main activities, how they decide which products to feature, how they define their identity, the types of interactions between them and organizations and who is responsible of the content they publish. The fact that the interviews were not focused or intended to uncover value co-creation mechanisms increases the validity of their finding.

Generally, the purpose of the interviews was to understand how influencers work. Among the inquiries set were which activities were considered into their regular tasks, how they interacted with brands and how collaborations came to be, as well as how they chose the products and type of content they would create, the way in which they interact with their audience, and ultimately, obtaining an all-encompassing feel of how an influencer acquired their identity. This extensive line of questioning provided a rich amount of detail that allowed to form a detailed map as to the everyday activities and challenges faced by those who acquired an identity as influencers, which in the end, is not a self-imposed label but rather is earned and validated through an increase of the audience to which they appeal.

Interviews were conducted during the summer of 2017, either face-to-face or remotely via audio or videoconference, and were being recorded with the knowledge and approval of the subjects. The number of interviews allowed to reach theoretical saturation, with the answers being overall consistent among all participants.

The influencers interviewed, as previously stated, were active in the beauty industry, creating original content that they shared throughout their various social networks. The most common platforms used were Facebook, Instagram and Youtube, to which tailored content was published. Each influencer had a specific objective depending on the platform and type of content they shared, such as sharing pieces that were aimed at creating a conversation, in which case they were more frequently shared on Facebook, which is where they felt it was most appropriate to that purpose. As for Instagram, since the latest update allowed the publication of content as well as live broadcasts and ephemeral content in the form of stories, it had become a network in which a significant amount of content was shared.

Instagram also provides the influencer with immediate feedback on the performance of their shared content, such as the amount of views that the stories get and the approval or agreement with their more permanent content in the form of photographs. Since interacting with their followers is a critical part of the activities that they carry in the fulfillment of their self-imposed responsibilities as influencers, the possibility of having live interaction ends up being a determinant feature of the preferred social networks. Finally, the publication of Youtube content ends up being the most time consuming, because of the requirements and expectations set by the audience in terms of content relevance and quality. The creation of content for this specific network requires a heavy dose of time investment, which is divided between the selection of the topic to be discussed, the specific content to be shown whether it be a product review or a tutorial for example, and finally, the end product which generally requires editing and uploading to be published.

For the purposes of this paper, analysis of the 13 interviews is done through the identification of the activities carried out by them that conform to the characteristics of each previously mentioned dimension of the value co-creation experience. Evidence to support each of the dimensions of the value co-creation experience is provided in the form of quotes extracted from the interviews and discussed, with the purpose of exploring the characteristics of said activities, which appeal to a specific dimension of the value co-creation experience and detailing how it can influence strategic marketing decisions by organizations in their efforts to connect with their current and potential customers.



## RESULTS AND DISCUSSION

The main finding of this research is that through the creation of content that satisfies their own interests and criteria, the influencer expands on the main characteristics of a product, thus providing evidence for each of the value co-creation experience dimensions previously described. Companies can benefit from this content by fostering an honest and unbiased evaluation of their products, thus generating a discourse among users and potential customers that shed a light on the products' characteristics and even their flaws and shortcomings so that the expectations of consumers can be known and taken into consideration for improvement.

Next, activities mentioned by influencers related to each of the dimensions of the co-creation experience are detailed, so as to explore whether there are shared perceptions among the influencers that were interviewed. By identifying which activities are encompassed in each dimension, it will be easier to understand what types of activities are involved for each specific dimension of the experience and if there are specific traits or characteristics shared among them, allowing organizations to focus on that kind of activities depending on the dimension of the value co-creation experience they would be interested to improve or work with, depending on their intent in the value co-creation experience with their customers.

### Hedonic Experience

The dimension of hedonic experience is composed by the motivations which support the influencer's desire to create and publish original content, which is mainly because the topic that they work on is considered by them as a hobby. It is relevant to emphasize that the influencers consider this as a significant factor into the level of effort that they are willing to put into the frequency and quality of the content that they publish.

*My purpose was never to, to (receive an) income – I01*

*I started as a hobby or, I don't know, because I wanted to talk about the things I liked, but it was rather by chance that my friends were like, like they didn't care that much about all this things related to makeup – I02*

*...Once I went to the border and bought makeup and I said to myself, well, it would be really cool to be able to share this – I05*

### Cognitive Experience

This dimension highlights the abilities and knowledge that the influencer acquires in the course of performing the tasks inherent to their work. It is relevant to emphasize that the work they do is voluntary, and most of the effort that they are willing to exert is in response to a self-set level of expected quality. The acquisition of abilities and skills required to increase the quality of their content is the guideline with which they decide where to focus on.

*It makes my creativity fly, because like I told you, the topic is "whatever, what am I going to do, if they are like, clouds, I don't want them to be just clouds – I06*

*You have to be like, very self-taught, so that's how I started, watching tutorials to understand what this thing about YouTube was – I07*

*This is what makes a good influencer, having knowledge about what it is they are talking about – I10*

### Social Experience

This dimension responds to the most relevant aspect to the work of an influencer which is to connect with other people with whom they share their passion and interests. For the case of this particular sample, the main topic in common consists of fashion and beauty related products, and the interaction with their audience is based on the exchange of opinions and perceptions to specific products which are featured in the influencer's published content.

*I wanted to help people, that if I bought a product, like, giving them my opinion whether the product was really worth it or not, if it was worth buying them or not... so that they have some parameters to evaluate them with – I07*

*So I have favored now staying true to what I have, and to create a community little by little – I11*

*...Who am I creating content for? It's for them, right? So, to be thanked I think is the most satisfying thing – I13*

### Personal Experience

Related to the social experience dimension is the personal experience dimension, which gives the influencer an additional boost to work on the quality of their content, as well as maintaining a periodic frequency of publication, or type of content which may require additional levels of expertise or skills, in the form of recognition by both their audience and the companies with which they can establish collaborations. These collaborations can be in the form of getting their original content published in the company's social networks or receiving requests to create special content specifically to the company or to a product. The mechanism through which the influencer interprets or assigns this interaction the character of receiving recognition is when the organization approaches the influencer recognizing the quality and relevance of the content they have published and are interested in collaborating with them in a more direct manner.

*(On acquiring an organic audience) Those I believe are the most important because it's when the brands realize how much your work is worth, that people listen to you – I05*

*Once people see that brands are reaching out to you that means you've got something, right? Something good, something valuable, something important, that, that your work is relevant - I08*

*You have to be constant because acquiring subscribers can be done by anyone... but you have to be constant to maintain them (interested) – I12*

### Pragmatic Experience

This dimension is composed by the activities that the influencer perceives to allow them a better use and understanding of the features and qualities of the products they are trying out. The relevance of expanding their experience with a product on this dimension lies in the increased alternatives for its use and the appeal they can achieve to the multitude of profiles that can be found among their audience.

*(When collaborating with brands) I will tell, them, "honestly, this does not work with me, but this does, I know my audience very well" – I03*

*If you do your research and start to go deeper, you will find an immense number of alternatives of new brands, of unknown brands that you had no idea about... - I07*

*For example, I try to, in every photo, to give as much information about the product as possible – I11*

#### Economic Experience

The final dimension on which an influencer can expand their experience of a product is the economic dimension, which influencers are not considering to be transcendental to their decision of investing time and their own resources to the creation of content that satisfy the needs, expectations and requests set by their audience.

*That's just in case we get paid, which are, it's a few brand which end up paying you – I01*

*...and they invited me to a campaign, they told me "we won't pay you anything, not even one peso..." – I04*

*...and I told them, I am not interested so much in the monetary aspect of it... I'd rather be paid in kind – I13*

There are relevant implications and practical applicability of these findings. First, knowing which kind of activities impact which dimensions of a value co-creation experience allows management to focus efforts to align with the purpose of the communication towards their audience. Additionally, there can be differences on which dimensions of the value co-creation influencers appeal the most, this translates into the possibility of selecting between influencers which could establish a better connection towards the specific market that the organization might be interested in reaching through the use of influencers. Finally, dissecting each of the dimensions of the value co-creation experience, it is possible to observe that the activities that the influencer performs as part of their creation of original content naturally appeal to the expansion of the characteristics that a brand presents when presenting the characteristics of their products. On the other hand, allowing users that have a captive audience explore this characteristics without restrictions offers a brand with content that feels unbiased and thus, can be trusted more.

#### **CONCLUDING COMMENTS**

As was previously stated, the purpose of this paper was to explore how influencers interact with their audience and how this interaction expands on the value co-creation experience of the potential consumer. So as to fulfill this purpose, interviews with 13 active influencers in the beauty industry were analyzed, and dissected based on the dimensions proposed by Verleye (2015), which are hedonic, cognitive, social, personal, pragmatic, and economic.

Evidence supporting the dimensions comprising the value co-creation experience proposed by Verleye (2015) namely hedonic, cognitive, social, personal, pragmatic, and economic were presented based on in depth interviews of 13 influencers from the beauty industry. This analysis provides managers with vital information on the relevance of identifying and sharing content that is created by independent individuals that are willing to share their experience with a specific product and engage in conversation with an audience who share their interests.

Following the previous analysis, it is important to highlight that these findings are based on the influencer's own experience of the content creation labor that they perform and the authors interpretation of those activities. One of the main limitations of this paper is that the subjects interviewed were active on a specific industry thus these results could not be applicable to other industries, where influencing mechanisms could require other types of validation, in terms of the profile and credentials that the influencer is expected to bear in order to be taken into consideration.

An initial avenue for continued understanding of this phenomenon would be to confront influencers with the previously explored dimensions and expand on their interpretation of the relevance of their work, such as the effect that it can have when they are aware of the dimensions that conform the value co-creation experience and how it ends up affecting the appreciation that their audience has of a specific product. This awareness can improve the quality of the content they produce and in turn offer increased benefits to the brand which consequently could be more willing to establish a more productive relationship with the influencer.

A relevant expansion of this study would be to explore the perception of the audience of an influencer, in terms of their appreciation of the content generated by the influencer, and whether or not it does in fact provide them with additional information that allows them to improve their experience while using a specific product or service. To begin this analysis, it would be relevant to identify the characteristics of the content that receive better feedback and generate a more intense response from the audience, such as type of content whether it be video, a live feed, a series of photographs, or still images.

A useful starting point to this categorization, would be to identify all the distinct types of content published by influencers, taking into consideration details such as the specific social media where it is published, time, day of the week, among others, factors which have already been explored (Senecal & Nantel, 2004), but focusing now on the effect these factors have on the influencers' audience perception and purchase behavior. Following this understanding, a dissection of level of response provided to the various types of content would allow researchers to focus on a specific type to determine which features incite a response from the audience. It would be relevant to make a distinction to the type of response, whether positive or negative, and the grounds to such a response: did the audience agree with the stance of the influencer or not? Did it trigger a specific type of behavior?

Following this dissection, companies should be more attentive to the content published by influencers and determine whether the product is being positively received by the intended market segment or if a distinct segment is taking interest in it, what characteristics of the product are more valued and which features are not taken into consideration towards the evaluation of the performance of the product or if there are aspects to be improved.

## REFERENCES

- Colliander, J., & Dahlén, M. (2011). Following the fashionable friend: The power of social media. Weighting publicity effectiveness of blogs versus online magazines. *Journal of Advertising Research*, 51(1), 313 - 321.
- de Vries, L., Gensler, S., & Leeftang, P. S. (2012). Popularity of brand posts on brand fan pages: An investigation of the effects of social media marketing. *Journal of Interactive Marketing*, 26(2), 83-91.
- Hassan, S., Nadzim, S. Z., & Shiratuddin, N. (2015). Strategic use of social media for small business based on the AIDA model. *Procedia - Social and Behavioral Sciences*, 172, 262-269.
- Hensel, K., & Deis, M. H. (2010). Using social media to increase advertising and improve marketing. *The Entrepreneurial Executive*, 15, 87-97.
- Leclercq, T., Hammedi, W., & Poncin, I. (2016). Ten years of value co-creation: An integrative review. *Recherche et Applications en Marketing*, 31(3), 26-60.
- Morteo, I. (2017). To clarify the typification of influencers: A review of the literature.

Prahalad, C. K., & Ramaswamy, V. (2004). Co-creation experiences: The next practice in value creation. *Journal of Interactive Marketing, 18*(3), 5-14.

Rubin, R. B., & McHugh, M. P. (1987). Development of parasocial interaction relationships. *Journal of Broadcasting & Electronic Media, 31*(3), 279 - 292.

Senecal, S., & Nantel, J. (2004). The influence of online product recommendations on consumers' online choices. *Journal of Retailing, 80*, 159-169.

Trusov, M., Bodapati, A. V., & Bucklin, R. E. (2010, August). Determining influential users in internet social networks. *Journal of Marketing Research, 47*, 643-658.

Verleye, K. (2015). The co-creation experience from the customer perspective: its measurement and determinants. *Journal of Service Management, 26*(2), 321-342.

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