Examining the relationship between Marketing Intensity and Firm Value: The National Culture Moderating role

Abstract

About one fourth of the studies on the relationship between marketing intensity and firm value, show negative values or insignificant relationships. We propose an alternative theoretical framework according to the efficient market hypothesis, in an international environment. Marketing intensity can impact firm value, directly or indirectly, through the firm's performance as a mediator. Also, we include three of Hofstede's cultural dimensions as moderators. The results confirm the mediation and significance only for two of the moderators, uncertainty avoidance and power distance. Finally, we discuss the implications for the theory and Latin American managers, limitations, and future research suggestions.

Keywords: Firm value, marketing intensity, Hofstede, culture dimensions

Introduction

UNILEVER CEO Paul Polman comments on savings programs like 5-S in investment in brands and marketing, and the productivity improvement in brand investment and marketing with Zero-based budgeting (Unilever, 2018). Another major marketing and advertising investor like P&G cut hundreds of millions of dollars in digital advertising last year, but online fraud, invisible inventory, and bot traffic announce that still there is room for further reduction (Neff, 2018).These anecdotal comments demonstrate the beginning of a marketing and advertising budget cut trend, where very few CEOs will resist the suggestion of business consultants that they may be overspending and promise that a review will only cost a portion of any savings " (Handley, 2018) .

Marketing intensity is defined as the effort a firm makes to create, promote, and maintain its brands, and marketing actions for distribution. A perspective of management in which marketing intensity is considered exclusively an expense in the current period naturally will drive them to decrease it. However, marketing intensity effect lasts for the following periods, so it generates value for the firm and as a consequence for the shareholders. The value of the firm has been defined as the valuation that a stock market assigns to it through the share price. Thus, the effect of intensity of marketing on the value of the firm is assumed positive, and it has been shown that in most cases the positive effect prevails over the negative, and most studies have reported positive effects; however, some studies have shown negative effects (Edeling, & Fischer, 2016). According to Edeling & Fischer (2016), it is notable that 23% of all observations

are negative, suggesting that investors occasionally weigh the cost of expenses on marketing intensity more than the increase in profits and sales, or that these companies in these studies are overinvesting. Howeveer, this argument has not been empirically proven yet.

Conchar, Crask & Zinkhan (2005) suggest the importance of exploring the decision process of investors when buying shares; thus the simple correlation between advertising and returns of the stock market has caused criticism, based on the "distance" between these variables and that there must be "something" in the middle, possibly omitted connections, or intermediate variables. The literature has focused on the study of relationship between variables; rather than on the mechanisms that drive the presence or absence of returns to shareholders (Luo, & de Jong, 2012). Most studies have provided consistent evidence that advertising persuades, but some have failed to find an effect of advertising on the value of the firm (McAlister, Srinivasan, Jindal, & Cannella, 2016). This represents a gap in the investigation. Furthermore, economists have divided opinions. Some of them think advertising influences only current sales (view of advertising as informative), whereas some think it influences current and future sales (view of persuasive advertising). The view of advertising as informative suggests that advertising increases recovery because consumers cannot buy a product if they do not know it. The second view suggests that advertising must persuade consumers, build brand loyalty, and create intangible assets that influence current sales and future sales. Thus, empirical studies have found conflicting results between industries (McAlister, Srinivasan, Jindal, & Cannella, 2016). Furthermore, literature presents very little research outside the US. Moreover, these international papers have negative values or insignificant relationships between marketing intensity and firm value (Chen, Cheng, & Hwang 2005; Han and Manry 2004; Lu and Beamish 2004). The scarse research outside the United States represents the second opportunity for research in this paper. Although the positive effect of advertising and marketing intensity on the firm's value has been demonstrated in most cases, there have been cases in which this effect is negative or not significant. This lack of consistency of results suggest the possible presence of moderating factors, and represent a research gap. So we formulate the following research question: What are the factors that mediate and moderate the relationship between marketing intensity and the firm´s value in an international context?

To answer this question, we propose a model based on the Efficient Market Hypothesis (Fama, 1970) and make three contributions to the international marketing literature. First, we show contradictions between the relationship marketing intensity and the firm's value. We propose firm's performance is a partial mediator; because there are markets in which investors do not perceive the marketing intensity as a source of value (McAlister et al., 2016). However, there

is abundant evidence that the firm's performance is always taken into account to evaluate the firm's value (Rao et al., 2004). Second, there are very few international studies of the relationship between marketing intensity and firm value. Therefore, we study a sample of five countries in Latin America and the United States. Third, when including several countries, each country's investors evaluate the relationship differently, therefore, we propose that culture moderates this relationship, and we use cultural values (Hofstede 2020) as moderators. Consequently, this allows us to broaden the border of the theory by empirically demonstrating the influence of culture on investor decisions. Next, we present the literature review of negative and non-significant relationships between marketing intensity and firm value to show the literature´s gap.

Literature Review

The two meta-analyses found that more than 20% of the studies of the relationships between marketing intensity and the firm's value present negative values or are non-significant relationships (Conchar et al., 2005; Edeling, & Fischer, 2016). These results represent an opportunity for investigation. Thus, this literature review focuses on these contradictory results, which should show positive and significant relationships. We also include the explanations exempted by the authors.

Lustgarten & Thomadakis (1987), in a sample of manufacturing companies, evaluate the market structure and the specialization of the company, in three periods and obtain positive and significant relationships between the intensity of advertising and the firm's value. In the first period between 1964 and 1967, the authors found a negative and non-significant relationship; the authors explain this result using a note indicating that a large number of zero values were found in this period, which meant that the values were very small or not reported. Likewise, the negative relationships in the other models presented, which included interactions between the variables that were not significant.

Similarly, Chauvin & Hirschey (1993) confirm the relationship between the intensity of advertising and the value of the firm, for companies of different sizes and industrial sectors; however, they find negative values in two industrial sectors, that of restaurants ($b = -5{,}980$, $p < 0.05$) and transportation equipment ($b = -4{,}016$, $p < 0.05$). They measure the value of the firm through the capitalization value of the company in the stock market, and used sales raised to 1.5 as a deflator of the dependent and independent variables. They justify its use because it is the ratio that minimizes the “log-likelihood”, without an adequate conceptual or methodological

explanation. Also, the authors do not make any reference to negative values. As it follows, there are cases in which the authors do not explain these values.

Barth et al. (1998) relate the valuation of a sample of brands with the firm's value. In one of the models presented, they obtain a negative relationship between the intensity of advertising per share and the value of the share in the stock market ($b = -0.85$, $p < 0.05$), however, in other models they find positive values. The authors suggest that these negative values are explained by the investors' perception of advertising, a part of the marketing intensity, as an expense that does not generate a future benefit.

In this same venue, Krasnikov, Mishra & Orozco (2009) find a negative relationship between the firm's value, measured as Tobin's q, and the quotient of the firm's advertising spending and the industry's advertising spending ($b = -0.56$, ns); however, the relationship is not significant. The authors' explanation of the negative values is the possibility that there is an optimal level of advertising efforts. Expenses beyond the optimal level lead to diminishing financial returns. Businesses lack the right tools to determine the optimal level of marketing spending; therefore, businesses would be over-investing in advertising.

Heiens, Leach & McGrath (2007) found the relationship between advertising and firm value negative and not significant; the authors propose that firms advertise to increase sales and market share, and it does not appear to have a long-term effect on shareholders return, this statement contradicts the abundant research on the long-term effects of advertising. Heiens, Leach & McGrath (2007) found the relationship between advertising and firm value negative and not significant; propose that firms advertise to increase sales and market share, and it does not appear to have a long-term effect on the return of shareholders, this statement contradicts the abundant research on the long-term effects of advertising.Meta-analyzes deserve special attention. Conchar et al., (2005) in the meta-analyzes they carry out find that in 77% of the studies, the effects of intensity of marketing on the value of the firm are positive; however, 21 of the 88 studies show negative effects in this relationship. The authors explain that these negative results happened because, in these cases, investors consider marketing intensity exclusively an expense in the current period; but not the effect in subsequent periods. Another explanation is that the effect of marketing intensity on the firm´s value should be positive in most cases because the positive effect prevails over the negative; however, some studies report the prevalence of negative effects (Edeling & Fischer, 2016). Likewise, in the meta-analysis of Edeling & Fischer (2016), it is notable that 23% of all the relationships studied are negative or not significant. The authors explain that investors occasionally evaluate the expenses originated by the marketing intensity strategies; in this case, they are higher than the increase in profits

and sales, or in other words, these companies are over-investing. However, these efficiency or investment hypotheses have not been empirically proven, apart from a post-analysis of results. Finally, it can be deduced from this review, the absence of a common explanation from the authors. Most of the explanations are associated with the perception of investors about the intensity of marketing, which is somehow associated with the theory of the Efficient Market Hypothesis (Fama, 1970).

The Efficient Market Hypothesis (EMH)

This theory states that the flow of information from the company's administration to shareholders constitutes a signal for the capital market. This signal can be good or bad news that provoke the capital market's reaction. It suggests that investors react quickly when "good news" arrive and reward a firm's share price with a higher price, and punish the firm by lowering the share price if the news are bad (Srinivasan & Hanssens, 2009).

Fama (1970) defines an efficient market as "a market in which prices always fully reflect the available information." This theory is based on two main assumptions: the first is that investors follow a rational decision process, the second that investors have complete knowledge of the laws of the economy. For these reasons, as a result of new information, they have the capacity to estimate the new discounted flow at the new risk rate of the company (Ganesan, 2012). Although these two assumptions are regularly taken into account and reviewed by research papers, it is now generally accepted that investors generally use heuristics to evaluate the new share price (Ganesan, 2012). The value of a firm refers to the share price of the company given by the shareholders in the stock market, also called market capitalization (Srinivasan & Hanssens, 2009

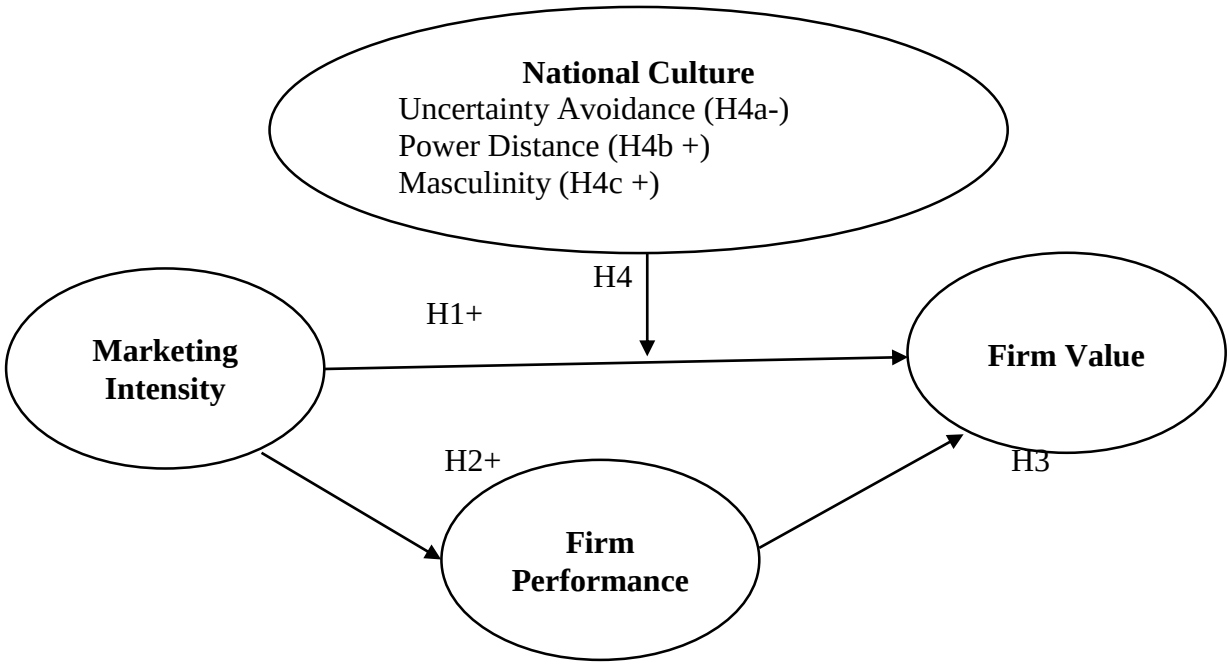
Theoretical Framework

Our theoretical model proposal is as follows and is presented in Figure 1.

Our model proposes that if stakeholders obtain information on marketing intensity in the international context, they can directly assess it. Nevertheless, if the information is not available to shareholders, they will use the firm's performance as an alternative to evaluate the share price, which is a mediated indirect route. Therefore, the performance of the company acts as a partial mediator in the relationship between the marketing intensity and the firm's value.

The direct route without mediation between the marketing intensity and firm's value has been the subject of several studies (Edeling & Fisher, 2016; Conchar et al., 2005) verifying the most positive effect. Consequently, according to the Efficient Markets Hypothesis, if the information on the intensity of marketing is available to the shareholders, it becomes a positive signal of

Figure 1. Proposed Conceptual Model



future sales and profit increase, which influences the share prices and, consequently, the firms's value. (Srinivasan & Hanssens, 2009). Therefore, we posit a direct non-mediated route with the following hypothesis:

H1: The higher (lower) the marketing intensity of a company, the higher (lower) the value of the company.

There are few studies outside the USA presented in the recent meta-analysis (Edeling & Fisher, 2016) of the relationships between marketing intensity and firm´s value; and Lu & Beamish (2004) in Japan and Han & Manry (2004) in Korea studies show negative values. Likewise, in his study at Taiwan, Chen et al. (2005) report non-significant effects. Besides, the meta-analysis of Edeling & Fisher (2016) shows 23% of the data on the relationship between marketing intensity and firm value negative or not significant. Unlike these prior results, an increase in marketing intensity is the good news of future returns, and according to the efficient market hypothesis (Fama, 1970), the relationship with the firm´s value should be positive.. In essence, it is argued that the relationships between marketing intensity and firm´s performance (Capon, Farley & Hoenig 1990) and the relationship between firm´s performance and firm´s value (Rao et al., 2004) were studied as separate relationships, not together as one process.[JT1] From the studies presented, we posit that negative and non-significant values according to the efficient market hypothesis are because the information on the marketing intensity does not reach the

shareholders correctly and directly; and there is an indirect alternative mediated route that the information arrive to them through.

Previous studies have demonstrated the effect of marketing intensity on company performance. An earlier meta-analysis study finds a positive relationship between advertising and sales (Assmus, Farley & Lehmann, 1984). Positive short-term effects also appear in later periods (Sethuraman, Tellis & Briesch, 2011). An increase in marketing intensity in promotions also has a positive impact (Fisher & Albers, 2010). Beyond these cited studies, Capon, Farley & Hoenig's (1990) meta-analysis finds that investment in marketing positively determines the firm's financial results as the company's performance.

H2: The higher (lower) the marketing intensity of the company, the higher (lower) the performance of the company.

We base the link between a firm's performance and its value on the efficient market hypothesis, where shareholders assess whether the information represents good or bad news for the company's future performance. Shareholders then determine whether the company has improved its performance and estimates whether it will generate higher future cash flows, which is expressed as the net present value of future flows, discounted at the cost of capital-WACC risk rate (Fama, 1970). This relationship has been established in prior marketing studies and similar nomological contexts, with empirical evidence of positive and significant relationships between performance and company value (Rao et al., 2004); however, as an individual relationship, not as a process.

In conclusion, an indirect mediated route is proposed, in which the marketing intensity information reaches the shareholders through the firm's performance. The goal is a general understanding of the whole phenomenon in an international context. However, it is postulated that the performance of the company will partially mediate the relationship between the intensity of marketing and the value of the company; when the information does not arrive directly and clearly, or when the management does not show a change in the intensity of marketing, the information will not reach shareholders directly, it will do so indirectly through the company's performance. Therefore, the following hypotheses are proposed:

H3: The higher (lower) the performance of the company, the higher (lower) the value of the firm.

We base the moderating effects on the national cultural dimensions of Hofstede (Hofstede, 2020), which influence the perception of investors in a country, and therefore the heuristics

when evaluating firm's information. Uncertainty avoidance is the cultural dimension that represents "the extent to which people feel threatened by ambiguous situations and have to create beliefs and institutions that try to avoid them" (Hofstede, Hofstede, & Minkov 2010).

In marketing literature there are studies that support positive and higher moderation effects of the uncertainty aversion which are similar to our research. In societies with lower uncertainty aversion show higher effects of direct marketing and advertising on the frequency of purchase and the contribution margin (Kumar & Pensari, 2016); higher effects of brands on the performance in the market (Talay, Towswn, & Yeniyurt 2015); also, in this societies there are higher effects of new product lunching on firm's value (Talay et al., 2019).

Investors in high-uncertainty-avoidance cultures are more risk-averse and less tolerant of ambiguity and search for precise signals. An increase in marketing intensity is a risky and ambiguous situation because the immediately tangible effects are difficult to perceive because the impact of marketing is in the future (McAlister et al., 2016). Consequently, this increase in marketing intensity in cultures high in uncertainty avoidance investors will see risky and ambiguous signals because it is good news but with risk. His valuation for a share price may be conservative and lower than an investor from a culture that tolerates this ambiguous and risky situation. Thus, we posit the following hypotheses:

> *H4a: Marketing intensity has a weaker (higher) positive impact on the firm's value when companies operate in countries with a culture of strong (weak) uncertainty aversion.*

Power distance is defined as "the extent [that] less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally" (Hofstede, Hofstede, & Minkov 2010). In countries with large power distance, hierarchy reflects the existential between higher and lower levels, and whoever holds power is right and good (Hofstede, Hofstede, & Minkov 2010). Investors in these countries expect companies to be more powerful; in consequence, less powerful people should dependent on them (Hofstede, Hofstede, & Minkov 2010). A firm´s action increasing market intensity may be a right and good signal of power, then investor perceives a firm raising its marketing intensity as a good signal. They will expect higher returns, so they raise shares price and there will be a higher positive impact on the firm´s value. We propose the following hypothesis:

> *H4b: Marketing intensity has a higher (lower) positive impact on firm's value when companies operate in countries with a national culture with higher (lower) levels of power distance.*

A masculine society "will be driven by competition, achievement, and success, with success being defined by the winner / best in the field. A Feminine society is one where the quality of life is the sign of success and standing out from the crowd is not admirable. The fundamental issue here is what motivates people, wanting to be the best (Masculine) or liking what you do (Feminine)" (Hofstede, 2020). Masculine societies emphasize success, ambitions, and achievement (Kumar & Pensari 2016). Also, they are overconfident that generally causes individuals to engage in more risk-taking because they are convinced of their talent (Kim 2020). An investor in a masculine country may perceive a marketing intensity raise as a success, and possibility perceive less risk. In consequence, it is good news that produce higher price shares. Therefore, we posit the following hypothesis:

H4c: Marketing intensity has a higher (weaker) positive impact on firm's value when companies operate in countries with a higher (lower) level of masculine national culture.

Methodology

Sample

In this study the sample of 1,806 (firm-years) corresponds to companies that list their shares in the financial markets of Latin America; Brazil, Chile, Colombia, Mexico, Peru and also the US market. The data comes from nine years, from 2009 to 2017. The companies in the sample belong to a wide range of sectors: Discretionary consumption (24%), consumer staples (22%), materials (17%), industrial (10 %), public services (9%), information technology (8%), health (3%), energy (3%), telecommunications (2%) and others (2%). The sample composition by country is Brazil (35%), USA. USA (17%), Peru (17%), Chile (16%), Mexico (9%) and Colombia (7%).

Model Specification

We formalize the model using the following equations

(1) $FVALUE_{i,t} = \beta 0 + \beta 1\ MKT_{i,t} + \beta 2\ PERFORM_{i,t} + \beta 3 IIMKTxUNCAVOID_{c,t} + \beta 4 IIMKTxPOWDIST_{c,t} + \beta 5 IIMKTxMASCUL_{c,t} + \beta 6 UNCAVOID_{ct} + \beta 7 POWDIST_{c,t} + \beta 8 MASCUL_{c,t} + \beta 9a COMPETI_{i,t} + \beta 9b FINFLEXI_{i,t} + \beta 9c SIZE_{i,t} + \beta 9d SALES_{i,t} + \beta 10e DIVID_{i,t} + \varepsilon 3_{i,t} +$

(2) $PERFORM\ i,t = \beta 11 + \beta 12\ MKT_{i,t} + \beta 13a SIZE_{i,t} + \beta 13b SALES_{i,t} + \beta 13c COMPETI_{i,t} + \varepsilon 2_{i,t}$

Where i is the firm, t the year and c the country; FVALUE i, t is the firm´s value in the year t, PERFORMi, t is the firm´s i performance in year t, MKTi, t is the firm´s i marketing intensity in year t; UNCAVOIDc, t, is the aversion to the uncertainty of a country c in year t, POWDISTc, t is the power distance of a country c in year t, MASCULc, t is the masculinity of a country c in year t; ε1t and ε2t are the errors, and represent variations in other variables not included in the model. Furthermore, the moderators are: IIMKTxUNCAVOIDc, t of the uncertainty aversion of country c at time t; IIMKTxPOWDISTc, t represents the moderating effect of the power distance of country c at time t; IIMKTxMASCULc, t represents the moderating effect of masculinity of country c at time t. Controls are COMPETit is the competence of company i in year t, FINFLEXIit is the financial flexibility of company i in year t, SIZEit is the size of the company i in year t, SALESit is the sales of the company i in year t, and DIVIDit are the dividends of the company i in year t. Also, the coefficients β1, β2, β3, β4, β5, β6, β7, and β12 are the parameters of the slopes of each primary variable, and β0 and β11 are constant. The coefficients β9a, β9b, β9c, β9d, β9e, β13a, β13b, and β13c, are the parameters of the slopes of each control variable. The hypotheses will be supported if the coefficients are significant and with the proposed sign.

Measurements

We present the measurements of the variables in Table 1.; in which we have the name of the variable with its initials, the type of variable in the model, the measurement that we used, and the literature supporting the measurement.

Estimations and Results

Table 2. presents the results of the correlation between the model variables. The results show that all variables correlate at the univariate level, which indicates the possibility that the model is met at a multivariate level; however, the danger of collinearity. The estimators we will use can eliminate the collinear variables. In the same way, we present the variable descriptive information of the model in Table 3. these will use to graph the moderators.

Subsequently, we estimate the model with the SUR (seemingly unrelated regressions) estimator, which allows us to find the parameters for a system of equations. We perform a SUR estimation with the complete model with the standardized variables Model 1, presented in Table 4. The estimator preserves all the variables, which indicates that there is no collinearity problem. The result of Table 4 Model 1 confirms the relationship between the

Table 1 : Description variables used in the model

Variable	Type	Measurement	Support
Marketing Intensity (IMKT)	Independent	Total Marketing Spending / Total Assets	(Kurt, & Hulland 2013)
Firm Value (FVALUE)	Dependend	Tobin´s q = (Share Price x N°shares + debt) / Total assets book value	(Srinivasan, & Hanssens 2009)
Firm Performance (PERFORMANCE)	Mediator	EBITDA / Total Assets	(Rao, Agarwal, & Dahlhoff 2004)
Uncertainty Aversion (UNCAVOID)	Moderator	Index 1 to 100	(Hofstede 2020)
Power Distance (POWDIST)	Moderator	Index 1 to 100	(Hofstede 2020)
Masculinity (MASCULIN)	Moderator	Index 1 to 100	(Hofstede 2020)
Competition (COMPET)	Control	Lerner Index = Sales – Operating Expenses / Sales	(Fungáčová, Shamshur, & Weill 2017)
Financial Flexibility (FINFLEX)	Control	Total Debt / Total Assets	(Kurt, & Hulland, 2013)
Size (SIZE)	Control	Log (Total Assets in USD)	(Malshe, & Agarwal, 2015)
Sales (SALES)	Control	Total Sales / Total Assets	(Srinivasan et al., 2009)
Dividends (DIVID)	Control	Total Dividend / Total Assets	(Ohlson 1995)

Table 2 : Bivariate correlations between model variables

	FVALUE	IMKT	PERFORM	POWDIST	MASCULIN	UNCAVOID
FVALUE	**1.0000**					
IMKT	0.3756	**1.0000**				
PERFORM	0.4751	0.3120	**1.0000**			
POWDIST	-0.4009	-0.0463	-0.1025	**1.0000**		
MASCULIN	0.2523	0.0836	0.1439	-0.1173	**1.0000**	
UNCAVOID	-0.4914	-0.0764	-0.1396	0.8136	-0.5651	**1.0000**

Table 3: Descriptive information of model variables

Variables	Observations	Media	Std. Desv.	Min	Max
FVALUE	1,806	1.743	1.376	.285	12.040
IMKT	1,806	.084	.102	.00006	.911
PERFORM	1,806	.127	.115	-.982	1.587
POWDIST	1,806	63.181	11.486	40	81
UNCAVOID	1,806	75.132	13.887	46	87
MASCULIN	1,806	49.366	12.541	28	69

intensity of marketing, and the firm's value is significant and of the expected sign H1 (β = 1. 472, p <.001).

Then estimate the Breusch-Pagan Test to determine if there is any problem of heteroskedasticity. The results show that there is no correlation between residuals (chi2 (1) = 0.000, p> .10), we cannot reject the null hypothesis Ho of no correlation between residuals and independence; therefore, we do not have a specification problem.

To ensure the results' consistency, we estimated with the 3SLS (regression of least squares in three stages). The results in Table 4 allow us to indicate that 3SLS estimation is similar to the SUR estimate parameters, at significance and sign. Therefore, there is consistency between the estimates, finding no estimation biases. Finally, to ensure consistency between SUR and 3SLS and heteroscedasticity problems, the Hausman test was performed (chi2 (12) = 0.000, p> .10),

Table 4: SUR and 3SLS estimation of the model (standardized)

	Model 1 SUR	**Model 1 3SLS**	**Model 2 SUR**	**Hypoteses**
Depend. Var. FVALUE (Equation 1)				
IMKT (H1)	1.472***	1.472***	2.645***	Supported
PERFORM (H3)	.282***	.282***	4.325***	Supported
SALES	.087***	.087***	.174**	
COMPET	.097***	.097***	.574***	
FINFLEX	-.003	-.003	-.060	
DIVID	.219***	.219***	4.195***	
SIZE	-.056**	-.072**	.306***	
IIMKTxUNCAVOID (H4a)	-1.817***	-1.816***		Supported
UNCAVOID	-.405***	-.405***		
IIMKTxPOWDIST (H4b)	.869***	.870***		Supported
POWDIST	.042	.042		
IIMKTxMASCUL (H4c)	-.419**	-.419**		Not Supported
MASCULIN	-.056	-.056		
Chi-square / F	2107***	161***	991***	
Depend. Var. PEREFORM (Equation 2)				
IMKT (H2)	.303***	.303***	.343***	Supported
SALES	.116***	.116***	.026***	
COMPET	-.256***	-.257***	-.069***	
SIZE	.124***	.124***	.018***	
Chi-square / F	433***	108***	432***	

and since could not be rejected the null hypothesis (difference in coefficients is not systematic), we did not encounter a problem of systematic errors, ruling out some problem of endogeneity. Therefore, the results are consistent and reliable.

Results of the mediation of the firm's performance

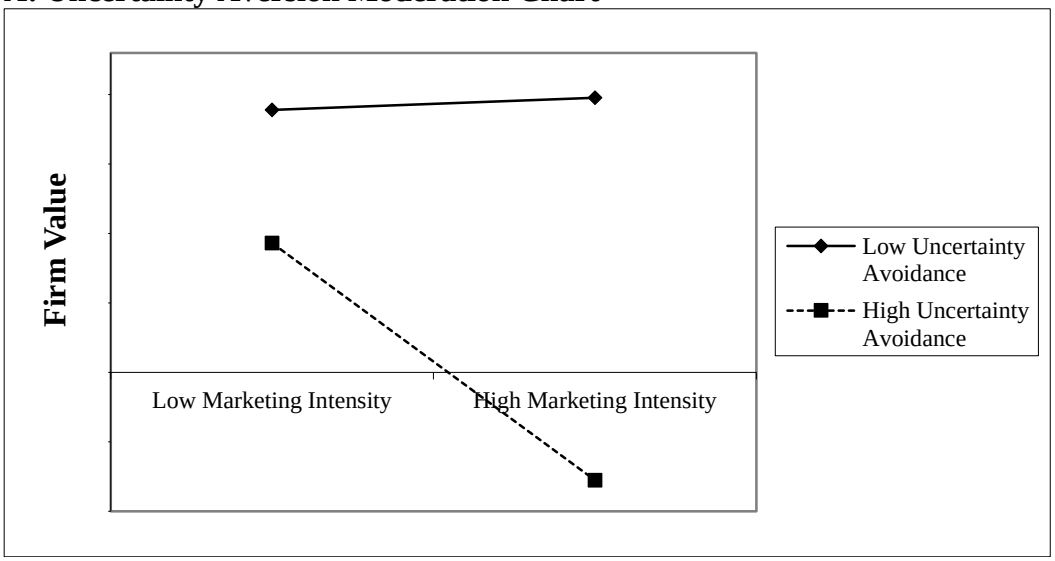
As proposed, on a mediated indirect route by which marketing intensity information reaches shareholders through company performance. To verify the mediating firm's performance role in the relationship between marketing intensity and firm's value, the hypotheses H2 and H3 must be confirmed. The parameter estimates in the complete model (Table 4 Model 1 SUR) of the relationship marketing intensity with the firm's performance H3 (β = +. 303, p <.001) and the relationship of the firm's performance and firm's value H2 (β = + 0.282, p <.001) are positive and significant, which validates hypotheses H2 and H3. Furthermore, the direct relationship between marketing intensity and company performance H1 (β = +. 303, p <.001) is significant, revealing a partial mediation of company performance.

Moderator effect results

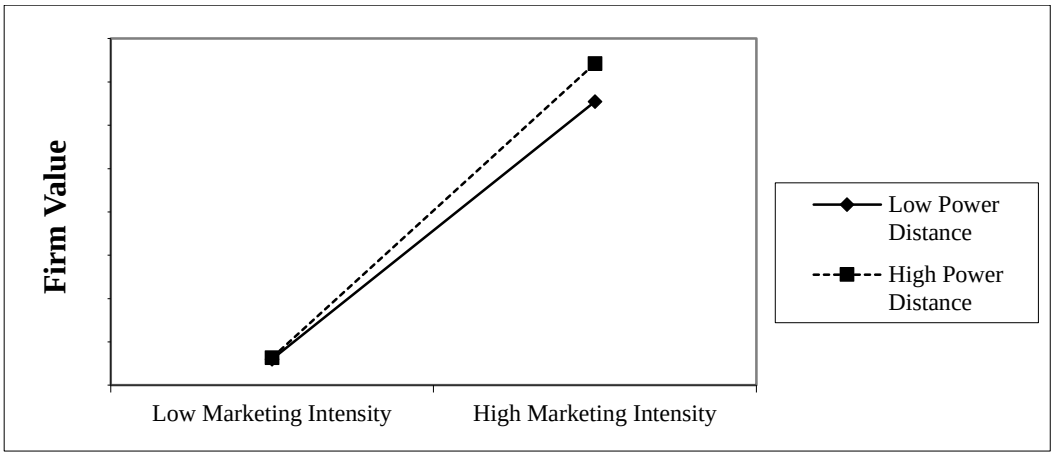
The results of the complete model Table 4 indicate that the marketing intensity with the interaction with the cultural dimension of aversion to uncertainty has a smaller effect on the firm's value H4a(β = -1.817, p <.001) and is negative and significant, which provides empirical support for hypothesis H4a. Similarly, the results show the impact of marketing intensity on the firm's value is higher in countries with more power distance H4b(β = .869, p <.001), so the parameters are positive and significant; therefore H4b is supported. Finally, this third moderator is the masculinity cultural dimension. As stated, in countries with a greater masculine culture, marketing intensity has a weaker effect on the firm's value. The parameter estimation (β = -.419, p <.01) is negative and significant; these findings do not support Hypothesis H4c because the sign is contrary to the expected. Besides, the estimation of the complete model with the three moderators (Table 4 Model 1) shows an improvement of the fit for equation 1, with moderators the R2 of .538 increased from R2 of .354 of the model without moderation (Table Model 2) and confirms the moderation effects. For a clear interpretation of the moderating effect, we present the graphs of the Marketing Intensity vs. firm's value relationship, with each moderator's effect in Figure 2. From the visual analysis of the equations' slopes, we deduced the effect of the aversion to uncertainty from Figure 2-A, the moderating effect of the power distance in Figure 2-B, and, finally, the effect of the moderator masculinity in Figure 2-C.

Figure 2: Moderation Graphs

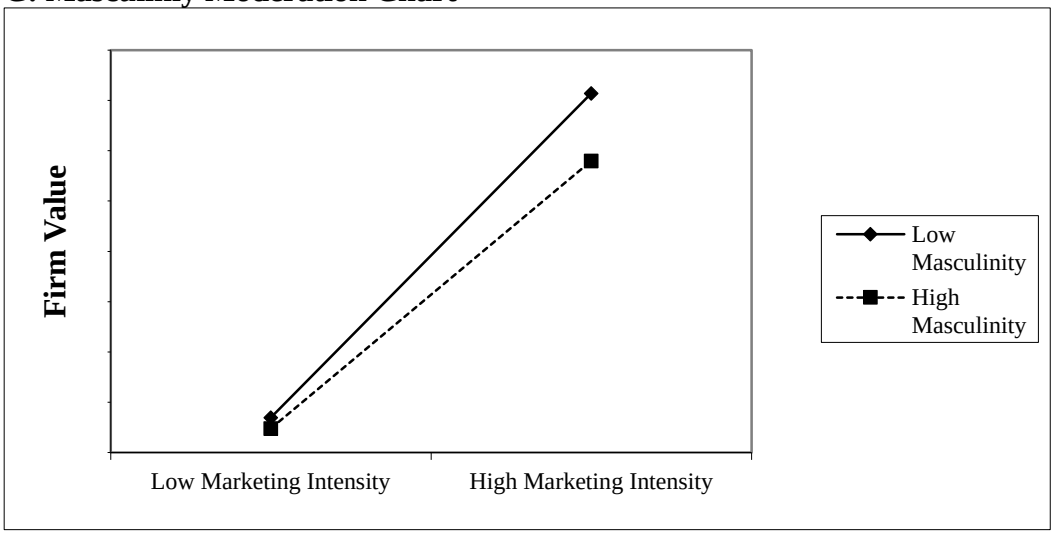
A: Uncertainty Aversion Moderation Chart



C: Power Distance Moderation Chart



C: Masculiniy Moderation Chart



Discussion, implications, limitations and further research

The direct relationship between marketing intensity and firm value has been extensively studied (Edeling & Fisher, 2016); however, one fourth of the relationships found are negative or insignificant, and there are few international studies. Also, the relationship between a firm's performance and the firm's value has been studied extensively (Rao et al., 2004) independently. Likewise, the relationship between marketing intensity and the firm's performance with meta-analysis (Assmus et al., 1984; Fisher & Albers, 2010). Although these relations have been studied before, they were independently examined simultaneously.

[JT2]We propose in an international environment, an alternative theoretical framework according to the efficient markets hypothesis (Fama, 1970) where the signals from management to shareholders based on marketing intensity can be direct or indirect through the firm's performance as mediator. In this work, we confirm hypotheses H1, H2, and H3, and make evident an indirect influence; the mediating role of the firm's performance is positive and significant. This result helps to explain the contradictory results in previous studies (Chen et al., 2005; Edeling & Fisher, 2016; Han & Manry, 2004; Lu & Beamish, 2004), which only present a direct relationship and confirm our theoretical model.

Our theoretical proposal also includes national culture as a moderating factor. We consider that the cultural dimensions of Hofstede's uncertainty aversion, power distance, and masculinity influence the investor's perception when heuristically evaluating the effect of a variation of marketing intensity on the price of a share and, therefore the firm's value, according to the efficient markets hypothesis (Fama, 1970). The moderating effects of the cultural dimensions (Hoftede, Hofstede, & Minkov 2010) are significant for uncertainty aversion H4a and power distance H4b as hypothesized. For the cultural dimension of masculinity H4c, although the relationship is significant, it does not agree with our hypothesis.

The results are in agreement with similar marketing studies, that show positive and higher effects in societies with weak uncertainty aversion, (Kumar & Pensari, 2016; Talay, Towswn, & Yeniyurt 2015; Talay et al., 2019).

This work also shows a higher positive effect of marketing intensity on a firm's value. In countries with higher power distance also there is higher effects of brands on market performance (Talay, Towswn, & Yeniyurt 2015). Similarly, this work also shows a higher positive effect of marketing intensity on firm's value in high power distance countries.

This research has implications for Latin American managers. A reduction in marketing intensity will also be perceived by shareholders, either directly or indirectly, due to its effects on performance; consequently, a hidden action to reduce marketing intensity to increase profits

temporarily would not be successful because of a detrimental effect on the firm's value. On the other hand, seeing a positive increase in marketing intensity, it will have positive effects according to each country. Thus, Brazil (UA = 76), Colombia (UA = 80), and Mexico (UA = 82) that have a slightly lower dimension value in uncertainty aversion (UA) would have a higher effect on firm's value compared to firms. in Chile (UA = 86) and Peru (UA = 87). It should also be taken into account that Mexico (PD) has the longest power distance (PD) than the rest of the countries (PD = 63 to 69); therefore, the effects will be strongest on firm's value. Consequently, a regional manager would have to consider these cultural differences between Latin American countries when making reductions or increases in marketing intensity.

As any other research work, this study also has limitations. One limitation is based on the assumption of the homogeneity of the efficiency of the firms; however, there are always variations. This limitation is prevalent in database studies, so future specific research is required to examine and simulate the effects of efficiency in the most common models investigated. Another limitation is the simplification that all investors in a country have a homogeneous culture; Although there is evidence through validations of homogeneity in the case of the Hofstede dimensions. We do not know if this effect applies to individual specific segments in our case, investors, it is undoubtedly a very common simplification; therefore, are required cultural studies of the different population segments associated with business studies. Finally, the present work is from 6 countries, so to expand its external validity, studies with a larger number of countries are required.

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