WHAT IF THE BRAND CAPITAL WAS ALIVE?

PROPOSAL OF A DYNAMIC MEASURE THROUGH SOCIAL NETWORKS.

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WHAT IF THE BRAND EQUITY WAS ALIVE?

PROPOSAL OF A BRAND EQUITY DYNAMIC MEASURE THROUGH SOCIAL NETWORKS.

Purpose: There are two major trends in the literature regarding the evaluation of a company's brand equity: the customer-based brand equity (CBBE) and the financial approach (FBBE). However, the resulting findings point out that the "consumer" approach is difficult to generalize for a population as a whole and that the "financial" approach is incomplete. (Aaker, 1996; Ailawadi *et al.*, 2003; Keller, 1993; Simon and Sullivan, 1993.) If CBBE give the root cause of brand equity, and allow one manager to take direct action in order to influence brand equity (Keller, 1993; Keller & Lehmann, 2003), research that tries to link CBBE to FBBE are rare and most of the time these subjects are treated separately in scholar community. FBBE capture the value of a brand equity from a global point of view. Criteria that evaluate FBBE are broad, some are purely mathematical (Simon & Sullivan, 1993), based on sales, marketing expenditure, market share, etc. while others include some specific: worldwide location, social media presence, etc. and some are given pseudo arbitrary like the ISO 10668, or some goodwill value in business state-of-results (Lander & Reinstein, 2003). The main goal of brand equity financial value is to classify a brand in a market, get a "pure" value of the brand and most important, determine who's the strongest. It is evident that brand equity is changing at any moment based on multiple factors and that brand marketing agency only gives annual rankings but in reality, it is possible to get an update more often. Since the root cause of brand equity is the consumer and their perception of a brand (CBBE), wouldn't be easier to directly capture what they think broadly and then, classify brands? A new measure of brand equity based on consumer interaction on social media won't be able to give a financial value of a brand but could replace the FBBE for most of its purposes, except, giving a value to a brand. Some recent studies have proven that some concept of CBBE (mostly Keller and Aaker concept of CBBE) can be captured throw social media (Handayanto, 2016; Karamian et al., 2015; Sasmita & Mohd Suki, 2015; Seo & Park, 2018; Virvilaite et al., 2015).

Methodology: An algorithm has been developed to measure brand equity from Twitter. Twitter is the ideal social media because it's the favorite social media use by customers to talk about or to a brand (Jansen et al., 2009; Parmar, 2015). The algorithm captures and analyzes all of the tweets (8,500,000) from 23 companies included in the Dow Jones Index over an eight-month period. Tweets have been captured worldwide. Data science techniques have been applied to the data set.

Findings and discussion: In summary, the differences in stakeholder valuation reflect the intangible and speculative nature behind the establishment of the value of brand equity. The consumer approach captures the differential effect of brand knowledge on the consumer's response

to the marketing mix. All of the effects together are the foundation of brand equity valuation using the financial approach. This approach captures the intangible value resulting from the difference between the acquisition price and the value of a company. This difference is dependent on all of the consumers' actions and perceptions. At the same time, the living character of the brand according to consumers and marketing actions has received little attention in the majority of marketing research that provides a picture of brand equity at a given time. In order to address these issues, this research proposes the following definition: The brand is a living concept that evolves according to consumer's perception and companies' marketing actions. Therefore, the best way to account for the life of the brand is to analyze the interactions between consumers and businesses. Results show that social media approach of brand equity is correlated with the different rankings of brands carried out by marketing agencies. Ranking brands by number of users that tweet about it is highly similar to the average rank giving by brand marketing agency. Brand awareness seems to be the main criteria to evaluate brand equity. **(See table 1)** Brand awareness is therefore the most important factor in order to attribute a value to brand equity (Romaniuk et al., 2017). Some indicators also have a significant correlation with the company's stock market performance. Social media is the ideal place to capture brand awareness and engagement toward a brand (Bilgin, 2018). The "number of single tweets" (awareness) about a brand is correlated with its stock market "variation %" **(See table 2).** In order to obtain this correlation, only tweets that where post during the open days of the stock market where collected. Therefore, weekends and public holidays where excluded. Other social media (Facebook and Instagram) have been used to compare the results and see if results could be reproduced with others social media. Only Twitter has correlated variables with the stock market performances and give results highly similar to what other agency's presents **(See table 3).** The reason why Twitter gives better result is mainly due to the ability to extract interaction from a precise period of time. Other social media give a sum of the total like or interaction. As a result, a new valid measure of a brand's living equity was born, covering both the consumer and financial perspectives at the same time. The dynamic nature of brand equity can be captured by intraday variation of the popularity it has on Twitter and can be used by managers to evaluate and understand brand equity. This research has made it possible to demonstrate the intrinsic link between consumer perception and the financial value of brand equity. In connection to what Simon and Sullivan (1993) have put forward, and Mortanges and Van Riel (2003), the awareness level influenced by marketing actions is much more significant than expected in establishing the value of brand equity.

Research limitation: First only the brand that generates a high level of online discussion, precisely on social media, has been studied. From the Dow Jones index (compose of the 30 largest companies in the U.S.A.) only 23 companies that generate online discussion has been selected. This study is more of a proof of concept that social media could help in order to study brand equity deeper. In order to validate this approach, more research should be carried more specifically explore this approach by industry. This new way of measuring brand equity required to get some level of discussion on social media.

Originality, impact, managerial recommendation: Having a new way to measure brand equity in real time could benefit most managers. First it could help measure the impact of business new, or new marketing campaign. Also, it could help managers get instant feedback on management or marketing actions. In order to improve business brand equity itself, companies should be present on social networks in order to monitor trends that affect them or their industry (Vernette et al., 2012). Following the work of Dessart et al. (2015) and Sasmita et al. (2015), strategic monitoring of interactions on social networks makes it possible to increase the level of consumer engagement and therefore the level of awareness. As argued by Bruhn et al., (2012), communications issued by consumers do not need to be positive in order to positively increase brand awareness.

Table 1: Findings of the ranking of companies by the consumer approach

	(Interbrand, 2019)	(Forbes, 2019)	(Time, 2019) (Agence: BrandZ)	(BrandFinance, 2019)	Average rank	Ranking by number of tweets
Business	**Top 100**	**Top 100**	**Top 100**	**Top 500**		
Apple	1	1	2	2	1	**1**
Microsoft	4	3	4	4	2	**2**
Mcdonald's	9	10	9	43	3	**4**
IBM	12	20	13	40	4	**7**
Nike	16	14	21	41	5	**3**
AmericanExpress	23	27	33	53	6	14
Visa	55	25	5	52	7	16
Verizon	∅	19	11	9	8	**8**
Cisco	15	15	42	72	9	**10**
Walmart	∅	26	32	11	10	5
HomeDepot	∅	32	19	22	11	**11**
Chase	25	56	67	37	12	**12**
Intel	∅	13	36	50	13	9
Boeing*	∅	∅	∅	42	14	6
Chevron	∅	∅	∅	99	15	21
JNJ	86	∅	∅	120	16	**18**
GoldmanSachs	53	80	∅	174	17	**15**
ExxonMobil	∅	∅	80	129	18	**17**
3M	64	∅	∅	209	19	13
Caterpillar	76	87	∅	262	20	**22**
Pfizer	∅	∅	∅	421	21	**20**
UnitedTechnologies	∅	∅	∅	464	22	**23**
P&G	∅	∅	∅	∅	23	19

∅ : If a company is absent from a ranking.
In bold: Significant data.
Boeing was in the middle of a scandal during the period when the data was collected. This is why its ranking score is not valid.

Table 2: Correlation between social media brand equity and the financial data.

Business	Pearson's correlation	Sig. (2-tailed.)	N
3M	0.07587818	0.0010	2070
AmericanExpress	-0.020285	**0.3961**	2070
Apple	0.1130566	0.0000	2070
Boeing	0.25648826	0.0000	2070
Caterpillar	0.09034649	0.0001	2070
Chase	0.14926792	0.0000	2070
Chevron	0.05536049	0.0175	2070
Cisco	0.20770553	0.0000	2070
DowJones	0.14590286	0.0000	2070
ExxonMobil	0.03770512	**0.0952**	2070
GoldmanSachs	0.18210879	0.0000	2070
HomeDepot	0.0780588	0.0008	2070
IBM	0.14183073	0.0000	2070
Intel	0.06515194	0.0034	2070
JNJ	0.20483879	0.0000	2070
McDonald's	0.10160074	0.0000	2070
Microsoft	0.13290215	0.0000	2070
Nike	0.02149211	**0.3410**	2070
P&G	0.10654835	0.0000	2070
Pfizer	0.26562563	0.0000	2070
UnitedTechnologies	0.05564265	0.0246	2070
Verizon	0.05214439	0.0249	2070
Visa	0.02684891	**0.2258**	2070
Walmart	0.07719352	0.0008	2070

In red = Not significant.

The correlation tests were conducted with the daily market change of the Dow Jones index.

Weekends and public holidays were excluded from this analysis, i.e.: 2070=90 days * 23 companies.

Table 3: Other social media

Business	Number of tweets	Number of « likes » on Facebook official page.	Number of « fans » on Instagram	Number of publications associated with the # of the brand of Instagram.
Apple (1)	906,815	12,772,426	23.6M	32,968,395
Microsoft (2)	484,439	13,962,723	2.7M	3,289,366
Mcdonald's (3)	326,903	80,576,999	3.8M	7,664,661
IBM (4)	149,811	1,097,548	353K	372,193
Nike (5)	395,798	35,111,718	120M	10,4569,999
AmericanExpress (6)	65,284	7,928,683	409K	203,200
Visa (7)	57,328	22,786,154	NA	NA
Verizon (8)	134,473	7,284,696	226K	339,500
Cisco (9)	91,551	NA	386K	455,934
Walmart (10)	299,228	34,216,050	2.4M	3,253,714
HomeDepot (11)	74,315	5,154,401	1.1M	880,906
Chase (12)	91,810	3,981,759	176K	1,578,182
Intel (13)	92,790	37,441,783	1.5M	955,242
Boeing (14)	193,746	1,471,428	1.4M	5,387,130
Chevron (15)	26,894	1,189,108	44.1K	1,270,503
JNJ (16)	48,255	826,504	27.2K	112,420
GoldmanSachs (17)	65,221	244,773	133K	53,649
ExxonMobil (18)	58,935	3,107,882	63.8K	47,098
3M (19)	74,099	4,295,226	169K	1,995,601
Caterpillar (20)	26,770	1,796,271	625K	2,534,488
Pfizer (21)	29,470	373,477	35.8K	46,809
UnitedTechnologies (22)	19,721	43	7K	1,349
P&G (23)	29,710	5,649,153	146K	7,696

In parentheses (), the position number from top 100 publish by brand marketing agencies.

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