

SENTIMENTAL ANALYSIS OF SPORTS CONSUMER BEHAVIOUR AND ASSOCIATED BRANDING ACTIVITIES USING PARTICLE SWARM OPTIMIZATION (PSO)

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Abstract

Nothing brings together the passions and emotions of people like sports do. Companies are increasingly apportioning a major part of their annual advertising budgets on sports. Sponsoring tournaments, teams, or sports stars, companies in essence buy the rights to use those properties for their benefit. As title sponsor of the T20, mobile wallet company PayTM spent Rs 5-6 crores for two matches. In return, a huge blue coloured logo appeared across the stadium and on field. In 2015, home grown mobile behemoth Micromax was outsmarted by this start-up PayTM for Board of Control for Cricket(BCCI) four-year title sponsorship. It was for domestic and international cricket matches at home. This work highlights sentimental analysis using PSO to trade off the sponsorship analysis between the product and the sport along with the heights of overall benefits that reflects in game and the brand.

Keywords: Brand building, Sentiment analysis, PSO, Consumer behavior, Brand Psychological

I. INTRODUCTION

In 2015, sports sponsorship industry in India was at Rs 5,185 crs- a jump of 12.3% from the previous year and accounted for 10.4% of total media spends. Source: GroupM's ESP Properties and SportzPower, Table 2 below. Professional sporting leagues, starting with Indian Premier League in 2008 to recent Kabbadi League, Football ISL, Wrestling, as well as Tennis, Badminton, and Hockey leagues have altered the sporting landscape. Sports federations, team owners, broadcasters and advertisers- all have rolled on vigorous marketing in their strides.

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Marketing efforts or not, fans get emotionally connected to their favourite sports, favourite team and favourite personalities. They become passionately loyal, what every marketer wishes to achieve. Gluing to sports allows brands to build awareness and get exposure. Chinese smartphone maker Vivo landed to win IPL title sponsorship, after PepsiCo nudged away.

In the same vein, TCS sponsored the New York and Amsterdam city marathons. Ostensibly, the objective was to generate visibility in key US and European markets. In 2016, Edelweiss, Amul, Tata Salt, Li Ning, Herbalife and a few other companies contributed Rs 10 crores in sponsorship revenues for Indian Olympic Association. Edelweiss wanted to market its retail products. In addition to sponsorship fees, through Edelweiss Tokio Life Insurance- extended a life insurance cover of Rs 1 crore for each of 118 athletes representing India. Edelweiss distributed fliers giving the Olympic schedule, marking the days when India was scheduled to play a particular sport. They wanted fans to watch and cheer the players.

The company JSW started JSW sports Excellence programme with the intent of India doing better at Olympic. They own Bengaluru FC, an ISL franchise and Bengaluru Yodhas of the PWL. The sum is goodwill generated out of the game that ultimately benefits the brand. Sport therefore, has to be deep, eventful, involving souls just like a brand does for its loyals. Olympic games draw millions of viewers around the globe. Radio, internet, print media all expand the sport's media reach. In effect, targeting these huge pools of audience is no easy task and demands a thorough understanding of sports consumption behavior. First, we examine the strategic perspective of sports marketing. Second, by delving into literature, we go into the motivations and try to see what rules the roost. Third, we test empirically a set of data to validate our hypotheses. Last, we offer managerial implications for marketing sports so as to enthrall spectators.

In India, while cricket dominates overall sponsorship when compared with the sponsorship fund raised in trade of with other sports is also on the rise. On opinion sponsorship was up by 300% in Kabbadi, a local sport of athletics and chase, 90% in football, 50% for marathons and 32% in Tennis. In 2015, the IPL generated revenue of Rs 450 crores for its broadcaster Star India. Individual sports events are coming up- shooting, wrestling, archery, boxing, badminton, and tennis. Coca-Cola is partnering with Tennis and Football.

Corporate houses like Hero Moto Corp, previously synonymous with cricket is now covering Golf together with hockey besides being title sponsor for Indian Super League. DHL, closely associated worldwide with Formula 1 and Rugby, has come on board as associate sponsor of the Indian Football Tournament. ISL mentioned above is the third most watched/ attended football tournament in the world, and largest in Asia. Besides opting for sports that stress on its brand values—speed, passion, and teamwork—DHL hopes the partnership will connect it to a larger audience through brand visibility in stadiums, publicity, and official communication.

STRATEGIC MARKETING

Marketing from a strategic perspective, therefore, holds up the ways to balance the other sports along with its growth and development. The impact of marketing places a vital role especially in sports sector in order to make that specific sport to compete with other sport segments. The majority of sports sponsors include Nike, Adidas,

Puma and Spalding formulates the acquisition-based strategies with their resources. Responsibility in sports is scattered based on individual governing bodies that acquires talents based on capabilities and considerations that adds more values to that particular sports. The diversified clubs of sporting systems enhances the product promotions based on that sports that makes huge revenue in product delivery along with its promotions. It involves variety of strategy implication in the system of delivery that implies both sports and the products.

The product attracts many consumers based on the sports and it acquires more revenue based on the sport promotion along with the brand, as both the sports and products are linked in parallel. The sporting contents ignite the brand to high level at the time of game schedule and the sponsor will get massive response at the time of sporting event.

The emotion in parallel is linked with sports that add fuel to the fire in brand promotion. Sports are the universal language and it attracts diversity audience all over the globe and makes the brand promotion globally.

It reaches diversified cultures and provides huge opportunities that link various cultures and its heritage. In simple words, sports are the unique term that crosses any boundaries and it is widely accepted globally. The sports also invoke different zones that have different marketing perspective. It also involves huge media response and does free publicity. Free is always cost effective in terms of marketing. Plenty of dollars are saved when wide ranges of sporting events are organized by big sponsor.

II. LITERATURE

Kotler et al. (2006: 386) put up definition of a product as being ‘anything that can be offered to a market for attention, acquisition, use or consumption that might satisfy a want or a need’. In addition, a product is a problem-solver in that it is purchased due to benefits provided. In essence, consumers buy benefits, not the product. Quality is another feature of perceived product benefits. Perreault and McCarthy (2002: 249) define quality, from a marketing perspective, as ‘the ability of a product to satisfy a consumer’s needs or requirements’. In sport, the product is easily discernible; however, the quality of the core product is something over which the sport marketer has no control. This is an unique aspect of sport and sport marketing.

An upshot of this is to pursue a broader definition of the product than simply the game. Mullin (1985a) identifies playing of the game as the core product, and all the related activities—such as food and beverage, merchandise, half-time entertainment, video screens and the facility itself—as product extensions. Ultimately, once players have agreed to play in the Australian Open for example, there is little organisers can do to ensure quality matches. Even matches receiving ‘top billing’, such as Federer vs Nadal or Ivanovic vs Sharapova, do not always formally assure quality contests. The quality of the supporting product extensions, however, can be guaranteed. It is at this point that similarities are observed between the importance of quality service provision and quality product extensions. Often, most product extensions possess an element of service provision, and hence quality is

discerningly important. As a consequence, product extensions have the capacity to ensure that spectators at the tennis or cricket or other sports events have an enjoyable day irrespective of on-court results.

CONSUMER BEHAVIOUR

Funk et al. (2000) through a model explored the nexus between sport marketing and consumer behaviour. Pouring into the social psychology repertoire, they determined that understanding attitude formation enables the sport marketer to better decipher factors that contribute to consumer loyalty and advocacy. Funk and James (2001) stretched this perspective by establishing the Psychological Continuum Model (PCM), a concoction from various academic disciplines to understand sport consumer behaviour. The PCM takes a vertical frame to characterise various psychological connections that individuals form with sport objects or games. It goes along four general boundaries of awareness, attraction, attachment and allegiance. The frame explains the job of attitude formation that channel behaviour across a variety of sport consumption activities:

Awareness stage: Knowledge and realisation that a sport object exists . I know about the IPL matches.

Attraction stage: Satisfy needs and receive benefits through sport objects like IPL matches

Attachment stage: Collective functional, emotional and symbolic meaning of sport object: I am an IPL Fan

Allegiance stage: Stability and impact of loyalty and devotion to a sport object live example, for the IPL Fanfolk

UNDERSTANDING THE SPORT CONSUMER

As the consumer progresses upwards to the Allegiance stage, the psychological connection becomes incrementally stronger. First comes the awareness stage based upon knowledge and realisation that a sport object exists. Awareness reflects the statement 'I know about the IPL League', indicating that an initial connection with the team has formed. The attraction stage speaks of the formation of a psychological connection based on whether a sport object provides opportunities to satisfy needs and receive desirable benefits. This is reflected by the statement 'I like the IPL Matches', indicating that movement upward has occurred. Although the connection in the attraction stage is stronger than in awareness, it is still relatively weak and unstable.

The attachment stage suggests the psychological connection when a sport object has become stronger and more meaningful. Attachment indicates an individual now places functional, emotional and symbolic meaning on the sport object. This is reflected by the statement 'I am an IPL fan', and highlights the sport object is part of the self-concept and aligned with important values. The final stage of allegiance is the strongest psychological connection. That creates loyalty and devotion to the sport object. Allegiance indicates a level of formation that is stable and impacts the individual as reflected by the statement 'I live for the IPL matches'. Allegiance represents a connection that is enduring in terms of persistence and resistance, and has greater impact on cognitive processing activities and is consistent with behaviour. Models such as the PCM are important for the sport marketer as they allow for tracking of sport consumers, both upwards and downwards, as well as determining the threshold limit.

Mullin et al. (2000) suggest models of consumer behaviour should depict a process rather than a prescriptive formula. In other words, sport consumption experience sparks off varied levels of psychological involvement, and understanding the process help chalking out marketing activities. The PCM framework is unique in that it focusses on the psychological connection process. It is called the Psychological Connection Model due to its stage-based developmental progression. A person may move upwards or downwards, or stay at a certain floor. Although a person may not skip a floor, the amount of time spent on a specific floor or the speed of movement between floors depends upon the mechanism called internal processing-- internal processing is the lever that controls movement of the sports fan between floors. Movement is based on the outcome of individual and social situational factors that work independently and collectively to form various psychological connections. Internal processing represents an evaluation procedure of need and benefit recognition, pre-activity and information search, comparing alternatives, and intended and actual behaviour. As a result, internal processing influences the formation of the psychological connection and directs the type and frequency of behaviour.

The PCM is considered theoretically sound for understanding active and passive forms of sport consumer behaviour (Beaton and Funk, 2008). Funk and colleagues have used the framework to examine sport spectators, participants, general consumers and internet sites in Australia, Greece, Japan and the United States (Neal and Funk, 2006). Other models explaining consumer behaviour, such as Awareness, Interest, Desire, Action (AIDA), are also premised on first being aware of the product, being focussed on product benefits and having an intention to purchase.

Inputs: Personal, psychological and environmental

Cognitive processes comprise motivation, learning, perception, memory, experiences and attitudes. Outputs are Psychological and behavioral

The input phase represents a number of internal and external factors that influence the evaluation of the sport object in the second phase. The second phase is actually a motley of unobservable cognitive processes. These cognitive processes are the internal mechanism that evaluates the sport object by deciphering the relative meaning of inputs. This evaluation runs through a number of processes, including motivation, perception, learning and memory to influence the outcome phase. The outcome phase represents psychological and behavioural outcomes. Psychological outcomes indicate the magnitude of attitude formation towards a sport object, such as awareness, attraction, attachment and allegiance. Behavioural outcomes depict the frequency and type of behaviour. Within the PCM framework, behaviour unfolds from non-existent to simple and sporadic in the awareness stage to complex and consistent for the allegiance stage.

SPORT MOTIVES

This reflects unique quintessential desires for experiential and emotional benefits. Sport consumer researchers have uncovered a number of motives that drive sport consumer behaviour. Attempts to ascertain motives have created a proliferation of different scales. Past research has identified a number of discrete motives for both spectators and participants. Wann (1995) examined eight motives for spectators: eustress, self-esteem, escape,

entertainment, economic (gambling), aesthetic, group affiliation and family. Others have examined interest-related factors like marquee player, specific team, head coach, entertainment value, success, players as role models, service quality, use of technology, management practices, community pride, logo design, promotions and price (Mahony et al., 2002; Zhang et al., 1995). Madrigal (2006) examined a spectator's desire for fantasy, flow, aesthetics, camaraderie, vicarious achievement, performance evaluation, physical attraction and celebrity attraction. Madrigal (2006) looked into a spectator's desire for fantasy, flow, aesthetics, camaraderie, vicarious achievement, performance evaluation, physical attraction and celebrity attraction.

Excitement represents a desire for intellectual stimulation as individuals are motivated to seek a sport event experience due to opportunities for mental action and exploration from the atmospheric conditions created by the uncertainty of participation and competition and the spectacle of associated activities. Esteem constitutes a desire for competency as individuals are motivated to seek a sport event experience due to opportunities for achievement and challenge that produce a sense of mastery and heighten a sense of personal and collective self-esteem. Diversion means a desire for mental well-being as individuals are motivated to seek a sport event experience due to opportunities to escape and remove themselves from daily work and life routines that create stress. These inputs form core psychological benefits received by an individual for engaging in a sport consumption activity. From a marketing perspective, these benefits should be taken into account when constructing marketing content to communicate the benefits of consuming a sport product or service. In addition, the various motives uncovered for a specific sport setting can also provide a more specific level of analysis and augment core inputs. The psychological inputs operate independently or in conjunction with personal inputs to influence the evaluation process.

Personal inputs represent person-specific factors or dispositional characteristics that influence the sport consumption decision-making process. Sport consumption can allow for the expression of important individual characteristics (Funk and James, 2004). An important consideration in the pursuit of any sport or consumption-related activity is an individual's physical characteristics. Individual factors related to gender, body and personality characteristics and ethnicity influence the evaluation of a sport object. Female participation in sport and exercise tends to be motivated more by socialisation, enjoyment and body-related concerns. In contrast, male participation is driven more by competition and ego-related concerns (Recours et al. 2004). Dietz-Uhler et al. (2000) determined that women were more likely to think of themselves as sport fans if they attended events with family and friends, while men more usually considered themselves fans if they played the sport.

Sport participant researchers have explored motives related to getting away from everyday demands. It encompasses facilitation of social interaction, the prestige of travelling and visiting a destination others want to come, the desire to experience the culture of a foreign destination, and an urge to gain knowledge and to explore (Funk et al., 2007). Marketers need a more specific, measurable tool to distinguish between general motives for coming and watching sports. Kim, Andrew, and Greenwall(2009) examined motives behind sport interest- vicarious achievement, aesthetics, national pride, athlete interest, violence, adoration, and drama.

BRAND FORMATION

Motives, individual or social, congregate and together hold up a brand. But brand advocacy and resulting loyalty remain an elusive concept. No study has comprehensively dealt with issues of loyalty; instead it has gone into motivations, internal and external and the gamut of experiences. Loyalty from established concepts emanates from brand equity. Perhaps, in spite of deliberations, authors differ on what is sport or a sporting event meant for marketing brands. Another characteristic of sports not similar to other forms of entertainment is that sport is spontaneous, uninhibited or comes without any external stimulus. The outcome is also not known depending on whether the game is interesting or a dull game. A sport marketer, therefore, has to deal with rock-hard, rigid form of challenges while sponsoring an event for the sake of a brand in particular.

Brands must be framed, construed, or assembled on differences in images, meanings and associations. Brands dish out instant recognition and identification, alongwith a stamp of quality, taste, or size, or psychological satisfaction. So brands add value to both the producer (sponsor) and the consumer. Sports teams play with the backdrop of a huge number of consumers (followers) from different media channels, quite often with sold-out tickets, upscaling and enjoying a peak level of brand equity. As branding is about creating differences, marketers converge on the task of brands in sponsoring sports marketing. Through branding, marketing managers contrive to boost up product image. Product development activities are carried out to enhance value offering to fans and followers of games.

Short-term measures abound like firing a coach, hiring a star player in the mid-season, or signing a free agent to a million dollar contract due to adverse result of games. These short-term tactics do not allow long term steady revenue flows. Sports managers, therefore, take on different brand management strategies understanding that winning is only one side of the consumer experience.

The ecosystem comprises Fans, Media, Brands, and Clubs-the central part is leagues. Figure below reproduces this fact.

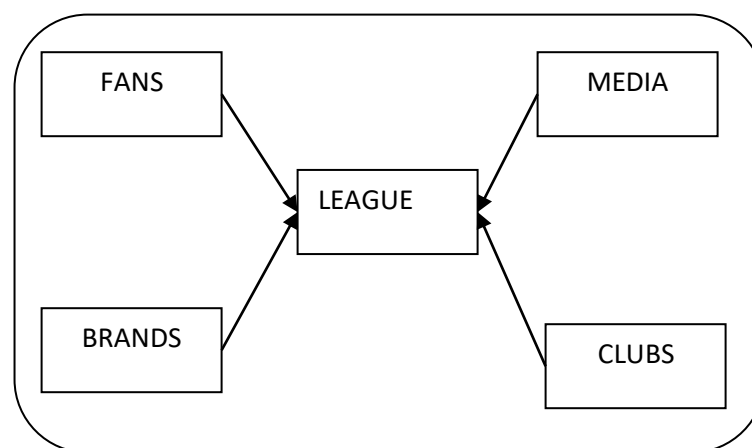


Fig 1: Ecosystem

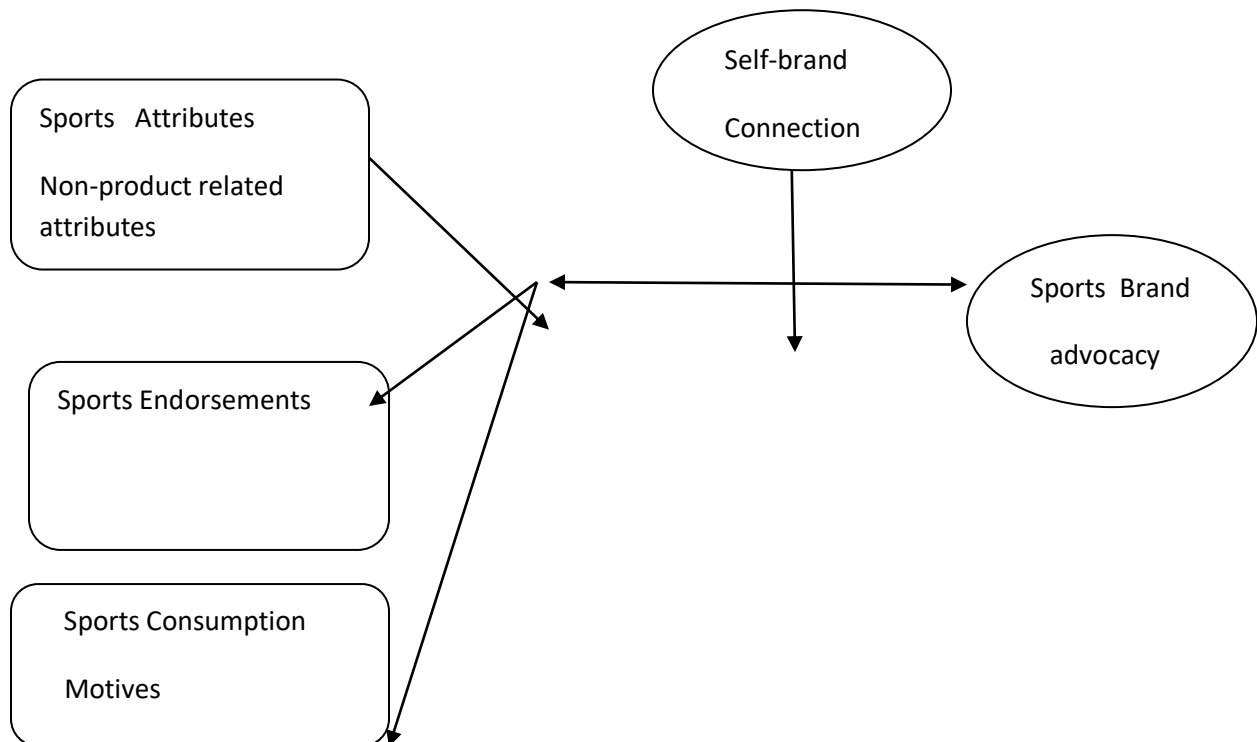
Customer-based brand equity results when customers are familiar with the brand and hold favourable, strong, and unique brand associations in memory. Keller elaborates on three parts: differential impact, brand knowledge, and consumer response to marketing. Eventually, perceptions, preferences, and behaviour related to all facets of the marketing of the brand elicit differential responses by consumers that lead to brand equity.

Keller proposed a model of brand equity consisting of brand awareness (brand recognition and recall achieved through marketing stimuli) and brand image. Brand image comes from favourability, strength, uniqueness, and series of brand associations held by the customer. In his model, Keller formulated various types of brand association: attributes, benefits (functional, experiential, and symbolic) and attitudes.

Krishnan and Hartline, 2001, suggest that Keller's model directly measures brand equity whereas Aaker goes for an indirect measurement of brand equity. Keller wanted to measure the value added by a brand to a product while Aaker wanted to delve into potential sources of brand equity. Drawing on viewpoints of both the exponents of brand equity, the frame proposed in this study delineates the relationship between sports brand Attributes, Brand Endorsements, Motives, and consequent Brand advocacy. Brand symbolism euphemistically called Self-brand connection is this paper's contribution to sports marketing literature. Brand symbolism and warmth issue have not been touched before by researchers when millions of sports fans create hype for a brand and an entire franchise is built. Media takes over with wishful thinking and prescient glimpses into the future of a sport or a sporting nation. Other sports leagues also spring up like bambooshoots in India like Volleyball franchise under ' Mashal'.

However, personal motivations and individual proclivities present a narrow perspective. It ignores the social side of sports which is itself an institution. This relates to structural-functional paradigm of society. Sports maintain existing social structure by reifying important social values together with norms.

Figure 2 Conceptual Model- Attributes, Endorsements, and Motives Continuum



Research suggests that consumers use brands not only for the quality of their products and services but also because brands can depict desired identities (Belk, 2013). It is a means of self-expression. Identities are dynamic, malleable, and are highly susceptible to situational cues. Not all brands can serve as identity signals. Brands differ in the aspect of symbolism. Researchers have found that a brand takes on more symbolic meanings when brand associations exert more effects. White and Dahl (2006) showed that consumers avoid products and brands that enjoin them with dissociative reference groups. Brand symbolism, therefore, can germinate warmth and so intention to advocate a brand. Symbolically, consumers communicate warmth to others by endorsing sports brands. Here, warmth rather than competence plays a major role. Typically, sports brands elicit more warmth surpassing their competence by virtue of their association with fans or followers.

Consumers look for human-like characteristics of brands, called brand anthropomorphism. It refers to intentions, emotions, motivations, and mind to brands. This leads to consumer's positive product evaluations culminating in brand love seeding brand warmth. The following hypotheses are in order then:

H1. Sports attributes are positively related to sports brand advocacy.

H2. Sports endorsements positively affect brand advocacy.

H3. Sports consumption motives have a positive relation with sports brand advocacy.

III. OTHER CONSTRUCTS

BRAND ADVOCACY

Brand advocacy is the core of a brand's equity which signifies a measure of attachment that a customer has to a brand. A company invests in loyalty building programmes like sponsorships considering it an asset. That can aid to bolster brand equity. Brand advocacy is different from the other constructs qualitatively because it is tied to user experience and cannot exist prior to buying and consumption experience.

Oliver posits that ultimate customer loyalty is a function of perceived product superiority, personal fortitude, social bonding and their synergistic effects. Others focus on brand advocacy as a favourable attitude, and combination of motives that stimulate purchase towards a particular brand. Consumers may exhibit associations to particular brands and activities. In professional sports, brand loyalty is defined as the ability to attract and retain customers. Motivation may proceed additively or multiplicatively to yield an overall level of loyalty. Team identification and its related relationship with a team, sport, or player add to brand associations and eventual brand advocacy.

SELF-BRAND LINK AS A MODERATOR

Personality measures explain only a small portion of overt behaviour (Goldsmith et al, 1995). Self-brand link bridges a broader context for brand advocacy and personality traits. This can be either individual –level or group-level connections purportedly with the aim of projecting self-brand concept. Brands, in this manner, can project social connections like family, community, groups and reference groups. Further, brands can assert self-concept, a link between the brand and the self. Self-brand link is taken to be an important determinant of consumer-brand relationship (Swaminathan et al, 2007).

Research has indicated that a high level of self-brand link encourages higher advocacy and discourages negative information (Swaminathan et al, 2007). They are active brand advocates akin to 'worshippers' of a brand. This self-brand connection, therefore, appropriates brand associations, brand image, and so brand symbolism and project belongingness.

In comparison, fans with low levels of self-brand connections may engage in brand advocacy due to social belongingness and group affiliations. Here, advocacy is not due to the brand in question, but sociability confers such scope. So the hypothesis is

H4: As self-brand connection increases, the effect on advocacy for a brand decreases. The reverse is also true.

This is in contrast to established research. As such, this a new corroboration of facts and interpretation.

IV. METHODOLOGY

410 students were selected who were sports fans and who regularly went for matches. 54% females, and 46% males. Average age reported was 22 years. A simple random sampling procedure was employed selected from management graduates passing out every year. 42% said they played sports on a very frequent basis. Table 2 depicts these scales in 7 point Likert scale responses varying from 1= strongly agree to 7= strongly disagree. 6% responses were inadequate and were not considered. First was product attributes put together under 'self-expression'. Second was endorsements(Companies endorse a sports when there are more fans followers; It makes little difference which team wins or loses despite endorsements; companies bring prestige to the nation at large) consisting of three items. Coefficient alpha for the first was 0.77, followed by 0.80 for endorsements, consumption motives was 0.89.

Confirmatory Factor Analysis was performed to assess construct validity and to find out the fit of the measurement model. Model fit was acceptable. Factor loadings, with values of 0.74 or greater were all significant and above the threshold of 0.6. Composite reliability and average variance extracted indexes rendered the scales reliable. Table 2 shows the indexes.

Correlation estimates support discriminant validity as portrayed in Table 3.

Table 1 List of items, descriptive and confirmatory factor analysis

Scales	Factor loadings (t-value)
Brand Attributes (SCR=0.94, AVE=0.75)	
I speak favourably about brand X	0.93 (35.57)
I tell others brand X gets excitement	0.95(36.77)
I recommend brand X to friends and others because it brings joy when they ask me	0.90 (33.64)
I feel passionate about the sports brand X	0.76 (23.21)
Brand sponsorship (SCR=0.74, AVE=0.59)	
A company sponsors brand X due to popularity among fans	0.78 (24.02)

The company upholds prestige of the sport by sponsoring	0.57 (16.28)
Sponsored brand X connotes the nation	0.79(25.01)
Brand Consumption motives (SCR= 0.86, AVE= 0.77)	
I disclose my emotions and thoughts through brand X	0.86 (27.76)
Sports brand X is a means of expressing myself	0.67(23.48)
Through X, I connect to reference groups	0.70(22.67)
Self-brand connection (SCR=0.91, AVE= 0.76)	
Brand X reflects who I am	0.79(31.93)
I consider brand X to be 'me'	0.80 (27.87)
I feel a personal connection to brand X	0.88(33.29)
I consider brand X to 'me'	0.78(27.66)

Table 2 Correlation estimates among constructs

Construct		1	2	3	4
1	Sports attributes				
2	Sports sponsorship	0.53***			
3	Sports Consumption	0.34***	0.70***		
4	Self brand connection	0.61***	0.40***	0.34***	

Table 3 Ordinary Least Squares (OS) regression estimates

	Unstandardised coefficients	Standardised coefficients	Sig.
Constant	6.746	0.288	0.000
S Attributes	0.309	0.035	0.461
Sport sponsorship	0.029	0.451	0.000
Sports consumption	0.564	0.086	0.011
Low selfbrconnectn	-0.168		
Advocacy X SelfBConnectn.	-0.043		
R2 (Adjust. R ²)	0.395 (0.371)		
F (F-probability)	103.710 (0.000)		

MODEL TEST

Hypotheses were tested by estimating the equation below using ordinary least squares regression:

$$BAdv = \beta_0 + \beta_1 Attr + \beta_2 Spon + \beta_3 Consump + \beta_4 Selfbrand \times BAdvocacy + e$$

The actual variance inflation factor was 2.79, far lower than the cut-off value of 10 (Neter et al, 1990). The model seemed to fit the data $R^2 = 0.391$.

In parallel with H1, a positive effect was found between attributes and advocacy. Table 4 shows $\beta_1 = 0.309$; $t = 3.215$, $p < 0.000$). The data do not validate existence of positive direct relationship between sponsorship and brand advocacy ($\beta_2 = 0.029$; $t = 0.766$, $p > 0.10$). So H1 is supported but H2 is not.

Direct effect of self-brand connection on brand advocacy instead of being positive, is negative and significant, ($\beta_4 = -0.043$, $t = -2.430$, $p < 0.01$). It supports H4. Direct effect of consumption motives on brand advocacy is, by contrast, is positive and significant ($\beta_3 = 0.564$; $t = 10.245$, $p < 0.000$). H3 is supported. However, the

effect of low self brand connection is more pronounced than the effect of high self brand connection (-- 0.168; t= -- 5.49, $p < 0.000$).

Attributes, sponsorships, and consumption motives all form an ecosystem where customers (spectators) can integrate and act as co-creators of brands. They also multiply messages. Marketing managers can further identify attributes and motives to target messages. Prior research has given attention to motivations and typical attributes of sports customers. But less focus has been given to self-brand factor where personal-social dominant characteristics come to play.

This premise is derived from social behaviour research, where the need to belong rules the roost (Baumeister, 2012). Individuals propel towards social interactions, and thereby social inclusions. Need to belong signifies the difference in life that individuals try to make up. This need pulls individuals to make contacts and talk to other fans for a particular sport. Conversations, messages not only delve into personal points but also exchanging opinions about brands. Thus group approval is sought by choosing the same brands as others do. Though self connections may not foreclose the tale, actual incidents may also drive social belonging behaviour. Then the behaviour diverts from personal gaps, thoughts and experience dissemination to other flows notably factual information to produce social ties.

The social behavior belongings are subjected to Particle Swarm Optimization. The fitness value is measured based on the optimized value considering personal gaps, thoughts and experience.

$$Fitness(p) = a/A - b/B \quad (1)$$

Fitness function for personal gaps

$$Fitness(n) = a/A \quad (2)$$

Here in this formulae 'a' is the classification based on personal gaps, thoughts and experience

This fitness value was applied in the behaviour diverts. This process is the optimization phase, to find the root cause optimization of social ties.

The optimization phase were described by

$$\pi(i, j) \leftarrow \eta(i) + \eta(j)/2 \quad (3)$$

$$\sigma(i, j) \leftarrow h(i) \times \pi(i, j) \quad (4)$$

Marketing managers, therefore, are well advised not to overinvest in branding initiatives when individuals have strong affiliation needs, which is more personal in character.

Sports brands are numerous and accordingly, behaviour may not be uniform across all categories. It is not product purchase and gratification. It is self-involvement to gain recognition or acceptance of other spectators. Sports creates excitement, and more research is needed to identify specific traits or behaviour in national sports or in international settings. Negative behaviour is not a part of this study which can be pursued further. People with positive behaviour may be more than negatives. Need to be unique may elicit negative opinions (Chelminski and

Coulter,2011), but its effect on brand advocacy is not apparent. So the interaction between need to belong and need to be unique deserves study throwing more light. So fans may follow two competing needs.

V. IMPLICATIONS

Traditionally, managers were targeting brand evangelists. This study turns the coat by incorporating those who may not be well involved with a brand. Marketing strategies should have two planks: need to belong, and the propensity towards brand symbols and brand warmth. In general, marketing activities should sprout relationships and interactions to stimulate need to belong and the need to be brand-warm. Brand communities could be developed even virtual communities. There people may express their thoughts, premonitions, misgivings about sports activities thus expressing personalities.

Managers need to initiate actions which an address these thoughts. Instead of creating opinion leaders, managers may identify individuals with a high disposition for self-disclosures. Ultimately, sports must generate a rational and emotion-laden experience akin to a holistic charge to satiate needs.

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