An Exploration of Emotional Intelligence and Market Segmentation, Targeting and Positioning in Selected Central Business Districts in Nigeria

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Abstract

Organizational politics, consumers' behaviors and buying process coupled with utter ignorance of the benefits derivable from the profound insight and knowledge of emotional intelligence to market segmentation, targeting, and positioning triggered this investigation. 1,500 questionnaires were administered and nine hundred (900) retrieved, representing 60%. Psychometric properties were tested and improved upon using exploratory, descriptive, confirmatory factor analysis, analysis of internal consistency and reliability. Three models and hypotheses were developed and tested at p< 0.05, and regression analysis used to determine the coefficient of $r^2 \times_1 ji$, $r^2 \times_2 ji$ and R^2 respectively. The streams of hypotheses tested buoyed credence to the empirical consequences of the correlationship with emotional intelligence predisposing an effective mechanism for market segmentation, targeting and positioning in the Nigerian four geo-political regions.

Nonetheless, the low values of 47%, 49% and 26% regression is a corollary for the impecunious applications of the skills and competencies embedded in emotional intelligence prepared for marketers to launch segmentation, targeting and positioning (STP) as marketing strategies.

Keywords: Central business districts, Demographic, Emintel, Geographic, Psychographic, STP

1. Introduction

Understanding how consumer preference, consumer choice, consumer learning, consumer behavior and buying process evolve over time is the kernel and heart of strategic marketing. A marketer can rarely satisfy everyone in a market because needs pre-exist marketers. Marketers based on consumers needs accompanied by other social factors influence wants and demands using several promotion tools or mixes, therefore, marketers start by dividing the market into segments and targets pursued (Kotler and Keller 2009.53). For marketers to get to the bottom of these seeming challenges, the application of emotional intelligence model to identify and profile distinct groups of buyers who are likely to require varying products, services or ideas mix which is the

examination of demographic, psychographic and behavioral differences among buyers becomes irresistible (Etzel, Walker and Stanton 2001.150).

So what is emotional intelligence and what is its association with market segmentation, targeting and positioning (STP) strategies? Emotional intelligence (Emintel) according to Goleman (1995.4) describes the ability, capacity and skills to identify, assess, manage and control the feelings of oneself, of others and of groups. These feelings include joy, anger, mood, mental state, likes, dislikes, anguish and sadness. Several related studies conducted on emotional intelligence (emintel) correlated positively that emotional intelligence is not only critical in laying solid foundation in literacy, computation, building strong personal qualities, interpersonal and intrapersonal relationship, social and personal competencies, but in developing, influencing and sustaining effective relationship management, customer relationship management of people, events and activities and group relationship, (Cherniss and Goleman in Bennis, et al. 2006.400 and Dattner 2005).

Bradberry and Greaves (2009.219) posited that emotional intelligence is the instinctive capacity to accurately identify and understand one's own emotional reactions and those of others with respect to areas of responsibility, accountability, self-esteem, sociability, self-management, probity, integrity and honesty. Bar-on and Parker (2009.41) reiterated what Gardner (1983) and Tjosvold (1993.217) described as the ability and capacity to regulate one's emotions, using them effectively to make good and sound judgment. Emotional intelligence provides the bedrock for many workplace performance effectiveness and competency, including those applied in influencing others, connecting them, understanding their feelings and managing our own emotions (Ogunyemi 2010; Nwokah and Ahiauzu 2009; Petrides, Pita and Kokkinaki 2007.15; Mikolajczak and Leroy 2007.76; Salovey and Grewal 2005.29; Adeyemo and Ogunyemi 2002).

These assertions lead us to James-Lange theory of emotions which William James and Carl Lange postulated that emotion begins when we perceive a scenario of a sort (Gleitman, Fridlund and Reisberg 2004.450, Darwin 1872 and Thorndike 1920). James-Lange theory of emotions states that emotions are interpreted based on physiological reactions to events such as events → arousal → interpretation → emotion. This theory was then replaced by Cannon-Bard theory stating the opposite. According to Ellsworth (1994) the later theory stated that physiological changes are caused by a bilge of emotions. The third theory of emotions was Schachter-Singer two factor theories that states cognitions are used to interpret the meaning of physiological reactions to outside events (Johnsen, Tranel, Lutgendorf, and Adolphs 2009).

1.1 Statement of the Problem

In this investigation, the researchers suspect that part of the solution to STP marketing strategies, and unsuccessful hard sell resulting to some identifiable marketing failures is to examine marketer's critical success and failure variables. Emotional intelligence of marketers may be a veritable weapon for problem solving and impecunious market performance crisis resolution.

So far, these researchers are unaware of any existence of research works related to this study carried out in Nigeria. However, those available deal with occupational stress (Aremu, et al 2011 and Ogunyemi, 2010); marketing effectiveness and efficacy (Nwokah and Ahiauzu 2009, Adeyemo and Ogunyemi 2002). Others are Cherniss and Adler (2000), Davis, Stankor and Roberts (1998), Gardner (1983), Goleman (2001), Salovey and Mayer (1990), Steinberg (2002) and Thorndike (1920) have been reviewed for the purpose of this study.

Hence, this study can heuristically examine three strategic core concepts in marketing: **segmentation**, **targeting** and **positioning** (STP) under the following:

- 1) Whether marketers fully understand the concept of emotional intelligence and its application to market segment, target, and positioning, and
- 2) Whether application or non-utilization of emotional intelligence can in way contribute to improving marketers' performance and competency.

1.2 Research Questions

- 1) To what extent is emotional intelligence a determinant factor of the choice of market segmentation?
- 2) What emotional intelligence factor influence market targeting?
- 3) To what extent can emotional intelligence variables impact on market positioning?

1.3 Research Hypothesis

Ho₁ There is no significant relationship between an emotionally intelligent marketer and the choice of market segments.

Ho₂ Emotional intelligence has no significant relationship with market targeting.

Ho₃ There is no significant difference between emotional intelligence and effective market positioning.

2. Theoretical Paradigms

2.1 Emintel Evolution

In recent time, warnings about capitalist threat are more likely to come from business men and women than politicians. This is due to the magic of the marketplace to democratic societies and new massive wave of democratic agitations across the globe. Consequent on this premise, marketers ought to effectively strategize using every available methodology to optimize profitability and market efficiency.

The origin, development and influences of emotional intelligence (Emintel) and market segmentation, targeting and positioning is vague. However, Dattner (2005) posited that concepts of intelligence have evolved over the last 100 years. His work revealed that in the 1900s, Alfred Binet administered tests to French school children to determine their IQ. In 1918, the first large IQ tests were administered to US Army recruits. In 1930s, Thorndike postulated social intelligence. In the 1940s Wechsler put forth the theory of non-intellective, intelligence and between 1950 and 1958; Wechsler moderated Ohio state studies on "task" versus "consideration" and developed Wechsler Audit intelligence scale (WAIS). In 1983, Howard Gardener's "Frames of Mind" was published. And from 1990 to 2003, there have been a flurry of publications. Salovey and Mayer (1990) and Goleman (1995) conducted studies on emotional intelligence.

However, in 1966, Leuner conducted a study of emotional intelligence and its effect on job performance. In 1985, Wayne Payne dissertation was on "A study of Emotion: Developing Emotional Intelligence". This work threw more light on emotional intelligence; though, Leuner (1966) had done some work on emotional intelligence. Later on, in 1989, Greenspan presented emotional intelligence model, Salovey and Mayer (1990), Goleman (1995 and 2000). Salovey and Mayer (1990) postulated the three main models of emotional intelligence including:

- → Ability emotional intelligence
- → Mixed emotional intelligence, and
- → Trait emotional intelligence

AMT Emintel model

Goleman's work further identified five models of emotional intelligence consisting of:

- → Knowing your emotions
- → Governing your own emotions
- → Motivating yourself
- → Recognizing and understanding other people's emotion's and
- → Managing relationships, i.e. the motions of others.

(Mayer, Caruso and Salovey 2000.338, Steinberg 1985.285, van Velson, Taylor and Leslie 1993.263, Walton and McKersie 1965.249, Druskat and Wolf 2001.119, Copper and Sawaf 1997.308, and David, Stankor and Roberts 1998.112).

To Rahim and Psenicka (2002), emotional intelligence is a model that can be applied in resolving organizational conflicts. Adeyemo and ogunyemi (2011) study stressed that under stressful situations in organizations, some preventive strategies to enhance employees stability is emotional intelligence and self–efficacy. They concluded that this include helping staff develop competencies of perception, appraisal and expression of emotion that will facilitate sound thinking, understanding, and improving their knowledge to reduce occupational stress.

Ogunyemi (2010) established that the EQ is skills-oriented cluster concept and that these skills should be learned at elementary schools. He identified the skills to include self-control, zeal, persistence and self – motivation.

On emotional intelligence and marketing effectiveness, Nwokah and Ahiauzu (2009) found a strong association between emotional intelligence and marketing effectiveness especially corporate organizations in Nigeria.

In a separate study conducted by Aremu, Parkes and Johnston (2011), the research results corroborated the data gathered and analyzed that emotional intelligence could effectively moderate attitudinal measures on police corruption and the verdict was that emotional intelligence as a catalyst can be used to promote integrity—based policing in Nigeria.

2.2 Structure of Emotional Intelligence

According to Goleman (1998) emotional intelligence refers to the capacity for recognizing our own feelings and those of others, for motivating ourselves and for managing emotions well in ourselves and our relationships.

Managing emotions of others, according to Salovey and Mayer (1990) as emphasized by Goleman (1998) requires two key skills: personal and social competence. Self–awareness and self-management are regulated by personal competence and social awareness and relationship management is governed by social competence. It is the latter that inform this study. Empathy, organization awareness, service orientation, inspiring leadership change catalyst, influence, conflict management, teamwork and collaboration fit into market segmentation, targeting and positioning (STP) strategies.

2.3 Market Segmentation, Targeting and Position (STP) Strategies

Any market strategic planning process flows from a mission and vision statement to the selection of target markets and the formulation of specific marketing mix and positioning objective for a product, service or idea (Kotler and Keller 2009. 268 and Porter 1985. 231)

Market segmentation is adaptive strategy capable of shaping the configuration of the value chain. Nwokoye (2000) agreed with Agbonifoh, Ogwo and Nnolim (1998) that through marketing strategy, firm provide higher value to customer by developing a market mix that addresses specific needs and concerns of the segment. In other words, the firm creates monopolistic or oligopolistic market conditions and utilizes various curves of demand for a specific product category which explains Bertrand's model of reaction curves and price and output determination under joint profit maximization scheme (Ahuja 2010 and Jhingan 2003.463). Based on this theory, price is broadened to include all 4ps. A flurry of literature supports the argument that segmentation process consist of:

- → Segment identification,
- → Segment selection, and
- → Creation of marketing mixes for target market

Once a market segment is selected, a generic competitive advantage strategy should be adopted. According to Kotler (1994.293), the only sustainable generic strategy is market differentiation, competitive advantage and low cost strategies geared towards customer value, provide perceived value and should be made difficult to copy. It is after selecting this market target Gunter and Furnham (1992) prescribed that market positioning in the minds of value customer can be developed. According to Aakar (1996), positioning is the part of the brand identity and value proposition that is to be actively communicated to the target audience and that demonstrates an advantage over competing brands, including brand objectives, target marketing and brand vision. (Aaker 1992), Kotler and Keller (2009) posited that positioning is the point where the bundles of attribute join to form one irresistible concept capturing the essence that target audience seek in the product category.

3. Methodology

This study spotlight key central business district (CBDs) in Abuja, Kano, Lagos and Port Harcourt cities of Nigeria where the bulk of our subjects or respondents do businesses.

A descriptive survey research design was employed. Data for this study were collected from a randomized sample drawn from banks, insurance houses, factories, oil, gas and other allied companies.

The sampled population was drawn from Akpangbo, Lagos main island, Lekki, Victoria Island, TransAmadi, Bonny Island, Okirika, Brass, Garki, Wuze Zone II, Gwagwalada, Bompai, Kano, and so on, Nigerian towns and cities of Abuja, Kano, Lagos and Port Harcourt. These populations are homogenous and therefore reflected the Nigerian territorial geography. Abuja →Central; Kano→North; Lagos→West and Port Harcourt→East of Nigeria for research convenience.

A simple, purposive stratified randomization was used to select 1,500 of 5,476 populations. One thousand five hundred (1,500) questionnaires were mailed, 900 of the questionnaires were retrieved, i.e. 60%. 13% came from Abuja (n = 117); 25% from Kano (n = 225); 43% from Lagos (n = 387) and 19% from Port Harcourt (n = 171).

Average biological age of the respondents in the four regions ranged between 35.68-46.86 (SD = 6.09 - 12.34). Their average full-time work experience in years ranged between 8.45 - 15.23 (SD = 5.06 - 11.42). The percentage of male respondents in the four regions ranged between 52.3% - 91.6%. Average full-time work experience (in years) of the respondents with their present supervisors fall between $3.44 \rightarrow 9.85$ (SD = 3.21 - 5.43).

The five dimension of emotional intelligence was measured with a carefully crafted **EMINTEL STP** using 13 – **item instrument**. It was designed by the researchers and validated by three Professors in the Faculty of Education and one Professor in Modern Languages who are psychometric experts. They did a critique on item-by-item basis using difficulty, ambiguousness and inconsistency criteria which were dropped, reframed or rephrased. The EMINTEL was designed using Likert 4 – point scale options. 4 = Strongly Agree (SA), 3 = Agree (A), 2 = Disagree (D) and 1 = Strongly Disagree (SD). Respondents' options elicited iterative process of exploratory and confirmatory factor analyses of the 13 – item instrument. Considerable attention was devoted to the study of published works on emotional intelligence on one hand and the core marketing strategies of segmentation, targeting and positioning on the other hand. Our sample is (n = 900).

4. Analysis of Data

Four successive exploratory factor analyses were performed to pick: Decision Making Managers (DMM) = 128 (15%) Employed Supervisors/Operational Managers (ES/OM) = 213 (24%) Employed Senior Managers (ESM) = 286 (32%) and Responsible Personnel/Managers (RP/M) = 273 (31%). After each factor analysis, the item that loaded or weighed less than 0.05 or and uninterruptable were either dropped or rephrased to arrive at the 13 – item instrument based on the following table:

The analyses in **table 1** scrutinized the mixed models of Goleman (1998.61) which identified self-awareness, self-management, social awareness and relationship management. The relationship management exudes the ability to inspire, influence, develop others, connect and manage conflicts. Bar-On (2006.118) agreed that emintel is concerned with effective understanding of oneself and others, relating well with people and adapting to and coping with the immediate surroundings to be more successful in dealing with environmental (marketing) demands (Nunally 1978.441, Joshua 2005.170, Lucy 2002.153 and Rahim and Psenicka 2002.308).

Using the given regression equation, a further analyses from the field work extracted from the questionnaire, the researchers determined separate multiple regressions and coefficients of determination to established the significant level at P <= 0.05.

- 1) Study the influence of emotionally intelligent marketer in relation to choice of market segment.
- 2) Investigate the relationship between emotional intelligence and market targeting, and
- 3) Examine the difference between emotional intelligence and effective market positioning.

4.1 Interpretation

 $\gamma^2_{XIj} \Rightarrow$ implies that 47% of the market segment is obviously influenced by emotional intelligence (emintel) of marketers in designated centers (Abuja, Kano, Lagos and Port Harcourt) for this study.

 $\gamma^2_{X2j} \Rightarrow$ implies that there is significant relationship between emotional intelligence and market targeting even though respondents had little or no knowledge of what emotional intelligence and the utilization of its skills can do in scooping target or concentrated audience.

 $R^2 \Rightarrow$ This implies that most marketers are unaware and have not leverage on the competencies, skills and knowledge of emotional intelligence to select segments, target and position in the hearts, minds and strategically or conspicuously site where customers must necessarily locate you and do profitable market effective businesses.

5. Summary and Conclusions

The underlying implications of this study and the consequence is that, by using emotional intelligence, marketers can study, develop and acquire some competencies to encourage, craft and sustain own emotions, others emotions and group emotions and apply it to divide and select market compartments, target audience and position goods in the minds and hearts of the potential consumers (Gardner 1983 a and b and Goleman 1995.7).

Self-regulations, self-awareness, self-motivation and that of group emotions correlate proportionately to market segmentation, targeting and positioning as empirically corroborated by (Mayer, Caruso and Salovey 2000.334; Nwokoye 2000.143; Rahim and Psenicka 2002.330 and Copper and Sawaf 1997.285 and substantiated by Curran, West and Finch 1996.26).

In the course of this investigation, thirteen factors: geographic, demographic, psychographic, behavioral/attitudinal, affluence/socialite group, market attractiveness, need based, access, product differentiation, product undifferentiating, market concentration, market cannibalization and perceptual mapping were advocated, and this directly correlated with the impact of marketers job effectiveness when applying emotional intelligence (emintel) in market segmentation, targeting and positioning (STP) marketing strategies

(Cateora and Graham 2007.610, Banga and Sharma 2008.814, Kotler and Keller 2009.53 and Berkowitz, Kerin and Rudelius 1989.196).

Therefore, the challenge for the contemporary marketers who aspire to remain relevant in the competitive and globalised market as this study has empirically established a high-low 47%, 49% and 26% respectively, is to buy into the managerial concept of emotional intelligence to influence choice of market segmentation, targeting and positioning (Cherniss and Adler 2000; Adeyemo and Ogunyemi 2002; Nwokah and Ahiauzu 2009; Aremu, Parkes and Johnston 2011).

Marketers should sharpen their skills of problem solving, haggling tactics, bargaining strategies, communication proficiencies, and improving marketers' education with specific job related manpower development techniques (Aremu, Parkes and Johnston 2011; Adeyemo and Ogunyemi 2002; Bar-On and Parker 2000 and Aakes, 1992).

Marketers need competency training that are focused on the needs of customers and that these needs are excellently geared towards increasing job performance. These allusions support what Busari and Abass (2007.40) recommended that emotional intelligence training programme as an intervention strategy in curbing sexual anxiety and stress problems among fresh university students in South Western Nigeria is efficacious. The implications of the study findings, according to Adeyemo and Ogunyemi (2011.9) reinforces Akinboye, Akinboye and Adeyemo (2002.65) conclusions that emotional intelligence facilitate rationality, good thinking, understanding, empathy, and analyses feelings, passion and sensations, improving marketers' self-efficacy, using vicarious experiences, verbal plausibility, persuasion, active domain, market audience selection, anxiety management, market positioning in the hearts and minds of consumers that may lead to a sharp rise in sales revenue, profitability, market effectiveness and market stress-free operations.

Emotional intelligence - Emintel (inbound-focused) and market segmentation, targeting and positioning (STP) strategies (outbound-focused) are different yet complementary efforts with the objective of maximizing sales revenues, market shares, market efficiency and effectiveness and profit margins (Griffin and Hauser 1993; Burchill and Brodie 1997; Kahn 2005 and Bradly 2007).

The direction for future research of a related topic should unravel emotional intelligence and body language factors for effective communication to increase sales and revenue volume of corporate organizations with marketers in their employ in developing markets like Nigeria.

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Table 1. Confirmatory factor analysis of questionnaire by location

S/N	Variable	Ratio	Abuja	Ratio	Kano	Ratio	Lagos	Ratio	Port-Harcourt	Ratio	Aggregates
			n=117		n=225		n=387		n=171		n=900
1.	DMM	2.22	20	3.33	30	5.67	51	3.00	27	15.00	128
2.	ES/OM	3.00	27	6.56	59	9.56	86	4.56	41	24.00	213
3.	ESM	3.56	32	7.89	71	14.89	134	5.44	49	32.00	286
4.	RP/M	4.22	38	7.22	65	12.88	116	6.00	54	31.00	273

Source: Field work

Table 2. Confirmatory factor analysis of the 13-item in split samples

Item	Variables	Analysis	Samples	Holdout	Sample
		Loading	t	Loading	t
β1	Market Segmentation				
1.	Population density should be considered when marketing.	2.2266	274.00	20.0366	3007
2.	Income level guide marketers	1.5244	250.00	13.7195	2743
3.	Lifestyle of people should inform you where to market products, etc.	1.6553	272.00	14.9268	2985
4.	Market audience should be hard-core brand loyalist.	1.4379	236.00	12.9512	2500
β2	Market Targeting				
5.	Audience should be enlightened.	1.5000	246.00	13.5000	2700
6.	Avoid uninformed audience.	1.3289	218.00	11.9634	2392
7.	It is more reliable dealing with tested market ground.	1.5000	246.00	13.5000	2700
8.	Unaware audience may not be loyal.	1.2561	206.00	11.3049	2260
βз	Market Positioning				
9.	Do product differentiation.	1.4146	232.00	12.7317	2546
10.	Cannibalize by dropping unprofitable product line.	1.4756	242.00	13.2805	2656
11.	Strategically win the hearts and minds of consumers.	1.7439	286.00	15.6951	3139
12.	Need to emphasize products attributes.	1.5853	260.00	14.2683	2853
13.	Need to expressively appeal to focused audience.	1.6585	272.00	14.9268	2985

Source: Field work

Table 3. Confirmatory model fit statistics

S/N	Index	Analysis sample	Holdout sample
1.	Chi-square X^2 (df = 898)	19690.24	35560.98
2.	Root mean square error of approximation (RMSEA)	0.6124	0.8202
3.	Goodness-of-fit-index (GFI)	0.9632	0.94
4.	Adjusted Goodness-of-fit index (AGFI)	0.9124	0.87

Table 4. Factor analyses correlations

EMINTEL STP Sub-variables	1	2	3	4
Core market values	1.00	.79(19.9)	.65(31.8)	.95(36.7)
Consumer markets	.86(45.2)	1.00	.88(42.76)	.79(29.9)
Classic stratagem	.72(33.2)	.76(31.9)	1.00	.74(33.8)
Managing one's emotions	.79(38.4)	.81(36.84)	.92(32.6)	.81(36.7)
Managing relationship	.94(56.5)	.93(47.41)	.75(27.9)	1.00

Note: t – values are in parentheses Source: Analysis of field work

Table 5. Means, standard deviations and Cronbach α internal consistency, reliability across the four geographical regions in Nigeria

Factor	Abuja			Kano			Lagos			Port – Harcourt		
	_X	SD	A	_X	SD	α	_X	SD	α	X	SD	A
1) Geographic	4.5	.86	.97	4.05	.69	.83	3.20	.79	.86	4.7	.06	.90
2) Demographic	3.35	.29	.95	3.45	.97	.87	3.1	.86	.97	3.9	.62	.84
3) Psychographic	3.0	.28	.93	3.15	.77	.67	3.3	.64	.64	3.7	.23	.80
4) Behavioral/Attitudes	5.95	.37	.90	3.75	.89	.78	3.3	.76	.96	3.9	.33	.90
5) Affluence/socialite group/class	4.52	.29	.97	3.06	.58	.77	3.8	.72	.92	4.1	.43	.87
6) Market attractiveness	3.61	.39	.86	3.65	.83	.70	4.0	.47	.62	4.3	.55	.85
7) Need-based group	3.5	.51	.95	3.65	.91	.68	3.7	.38	.76	4.1	.38	.81
8) Access	3.4	.17	.96	3.12	.71	.60	3.6	.83	.90	4.1	.05	.88
9) Product differentiation	3.39	.26	.94	3.16	.33	.72	3.3	.73	.93	4.0	48	.86
10) Product undifferentiating	3.95	.27	.95	3.08	.70	.84	4.6	.74	.83	4.5	.03	.87
11) Product concentration	3.24	.28	.91	3.18	.78	.73	3.9	.58	.91	3.7	.16	.80
12) Market cannibalization	3.24	.29	.87	3.35	.93	.70	3.7	.68	.94	3.4	.46	.79
13) Perceptual map	3.61	.30	.90	3.12	.85	.51	4.1	.86	.95	2.9	.48	.86

Note: Abuja = Capital City of Nigeria (Central Nigeria), Kano = Far North of Nigeria, Lagos = Nigeria Commercial nerve centre (West of Nigeria) and Port Harcourt = Seat of Oil and Gas (East of Nigeria) were purposively sampled for questionnaire administration and research convenience. There are states created by the Federal Republic of Nigeria and entrenched in the 1999 constitution.

Table 6. Analysis of questionnaire

S/N	Factors/Item	Segmentation	Targeting	Positioning
1.	Geographic	251	223	219
2.	Demographic	311	210	102
3.	Psychographic	221	304	165
4.	Behavioral	180	127	291
5.	Affluence	310	118	196
6.	Attractiveness	137	270	145
7.	Needs-Based	148	172	303
8.	Access	161	91	270
9.	Differentiation	293	150	145
10.	Undifferentiating	142	165	306
11.	Concentration	162	200	362
12.	Cannibalization	145	185	329
13.	Perceptual map	150	195	344

Source: Field work

Table 7. Determination of separate regressions given eqn (1)

ITEM	Y	Y^2	χ1	χ_1^2	χ_2	χ_2^2	$\chi_1 y$	χ2У	$\chi_1\chi_2$
1.	251	63001	223	49729	219	47961	55973	54969	48837
2.	311	96721	210	44100	102	10404	65310	31722	21420
3.	221	48841	304	92416	165	27225	67184	36465	50160
4.	180	32400	127	16129	291	84681	22860	52380	36957
5.	310	96100	118	13924	196	38416	36580	60760	23128
6.	137	18769	270	72900	145	21025	36990	19865	39150
7.	148	21904	172	29584	303	91809	25456	44844	52116
8.	161	25921	91	8281	270	72900	14651	43470	24570
9.	293	85849	150	22500	145	21025	43950	42485	21750
10.	142	20164	165	27225	306	93636	23430	43452	50490
11.	162	26244	200	40000	362	131044	32400	58644	72400
12.	145	21025	185	34225	329	108241	26825	47705	60865
13.	150	22500	195	38025	344	118336	29250	51600	67080
·	2611	1149439	2410	489038	3177	866703	480859	589365	568923

Note: For Regression y on χ_1 (Emotional Intelligence: Market segmentation).

$$b\chi_{1j} = \frac{n\Sigma\chi_{1j}y - \Sigma\chi_{1j}\Sigma y}{n\Sigma\chi_{1}^{2}j - (\Sigma\chi_{1j})}$$

$$= \frac{13 \times 480859 - 2410 \times 2611}{13 \times 489038 - 2410^{2}}$$

$$b\chi_{1j} = \frac{6251167 - 629250}{6357494 - 5808100} = \frac{41343}{549394}$$

$$b\chi_{1j} = 0.08$$

$$\alpha\chi_{1j} = \frac{\Sigma}{n} - \frac{b\chi_{1j}\Sigma\chi_{1j}}{n}$$

$$= \frac{2 \times 611}{13} - \frac{0.08 \times 2410}{13} = 200.85 - 14.83$$

$$\alpha\chi_{1j} = 18.602$$

The regression equation for the influence of emotionally intelligent marketer with choice of market segment is:

$$y\chi_{1j} = \alpha\chi_{1j} + b\chi_{1j} \chi_{1j}$$

= 186.02 + 0.08

The coefficient of correlation for this influence is

$$\gamma_{X1j} = \frac{n \sum x_{1j} y - \sum x_{1j} \sum y}{\sqrt{n \sum x_{1j}^2 - (\sum x_{1j})^2} \times \sqrt{n \sum y^2 - (\sum y)^2}}$$

 $n\Sigma y^2 - (\Sigma y)^2$ is already established above.

$$\begin{split} n\Sigma y^2 - (\Sigma y)^2 &= 13 \times 1149439 - 2611^2 \\ &= 11494390 - 6817321 = 4677069 \\ \gamma_{X1j} &= \underline{755101.2} \\ \sqrt{549394} \times \sqrt{4677069} \\ &= \underline{755101.2} \\ 16029.8236 \\ &= .471060 \end{split}$$

 $\therefore \gamma_{X1j}^2 = .471060$ i.e. the coefficient of determination for y: χ_{1j}

Furthermore, the regression y on χ_{2j} (emotional intelligence: market targeting) is determined resulting in:

$$y_{x2j} = \alpha_{x2j} + b_{x2j} x_{2j}$$

$$= \alpha_{x2j} - b_{x2j} x_{2j}$$

$$\underline{\Sigma y} - b_{x2j} \Sigma_{x2j} \Rightarrow \underline{2611} + 4.712 + \underline{3177} \\ 13$$

$$= 200.84615 + 0.249097x_{2j}$$

$$= \gamma_{x2}^{2}_{j} = 0.008525$$

This present a two – dimension scattergram for three variables, in figure 1 as follows:

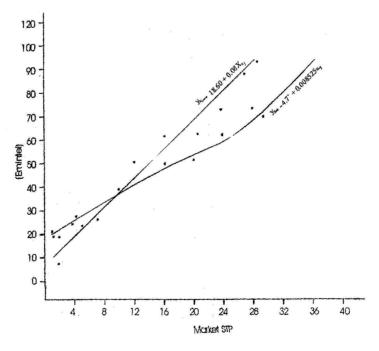


Figure 1. Scattergram of Emintel influence on choice of market segment and relationship with market target and positioning $(y:x^1j, x_2j)$

Appendix

Further analysis of data

The multiple regression: $y:\chi_{1j}$ and χ_{2j} used the three factors in normal equations and data in table 7 above, thus:

$$2611 = 13a + 2410b1j + 3177b2j$$

$$480,859 = 2410b_{1i} + 489,038b1j + 568,923b2j$$

$$589,365 = 31774 + 568,923b2j + 866,703b2j$$

Apply standard simultaneous equations to derive coefficients values from the equations

$$y = a + b1X1 + b2X2$$

$$y = 18.60 + 0.08\chi_{1j} + 4.710 + 0.08525\chi_{2j}$$

To test the hypothesis of influence of emotional intelligence with choice of market segment

$$y = 18.60 + 0.08 x$$
 13 $= 2611$

= 49.47% emintel influence over market segment in Abuja, Kano, Lagos and Port Harcourt respectively.

Using R² (coefficient of multiple determination)

$$R^{2} = (18.6 \times 2611) + (0.08 \times 480,859) +$$

$$\frac{(0.08525 \times 589365) - 2611^{2}/13}{1149,439 - 2611^{2}/1}$$

- = .2578225614
- $\approx 26\%$ relationship at p < 0.05

Summary of coefficients determination

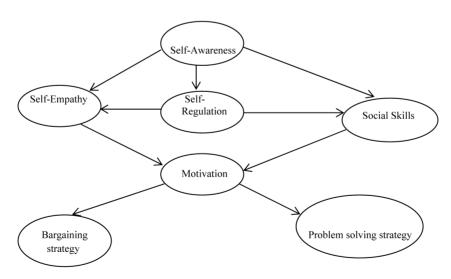
$$\gamma^2_{X1i} = 0.47106$$

$$\gamma^2_{X2i} = 0.494$$

$$R^2 = 0.2578$$

Model of emotional intelligence and market Segmentation, targeting and positioning (STP)

Model 1

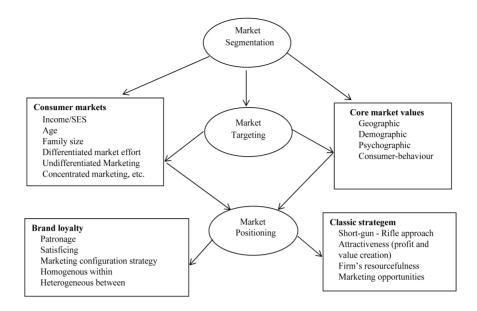


Source: Adapted from Rahim and Psenicka (2003).

Based on Rahim and Psenicka's model, the third model was developed by these researchers, thus:

Emotional intelligence and market segmentation architecture model

Model 2



Model 3

The third model defines the variables of interest using a popular regression equation derived from Rahim and Psenicka above thus

$$Y = b_o + b_1 \chi_{1j} + b_2 \chi_{2j} + b_3 \chi_{3j}$$
 Eqn(1)

Where Y = Emotional intelligence (Emintel)

 χ_1 = Market segmentation

j =Geographic (nations/cities)

- 1) Demographic (SES, family size, age, etc.)
- 2) Psychographic (lifestyle, values, personality, patronage, brand loyalty, etc.)
- 3) Consumer behavior (attitudes, loyalty, readiness, post-purchase consonant)

 χ_2 = Market Targeting

J = Wealthy group, retired group, risk preference group, socialite group, needs-based group, market attractiveness, market opportunities, growth and access.

 χ_3 = Market Positioning

J = Product differentiation, market undifferentiating and concentration,

- 1) Market cannibalization
- 2) Key consumers perception, unique and customized attributes and judgment,
- 3) Perceptual map, conservation and expressive appeal.

 $b_1 \dots b_3$ = Regression coefficients

 $e_1 = Error term$

The linear equation model with multiple regressions was chosen based on the effective strength of the coefficients of multiple determinations and the number of significant variables.