British Journal of Marketing Studies

Vol.1 No 2, pp.1-16, June 2013

Published by European Centre for Research Training and Development UK (www.ea-journals.org)

THE MARKETING CHALLENGES OF HEALTHCARE ENTERPREEURSHIP: AN EMPERICAL INVESIGATION IN NIGERIA

Hart O. Awa, PhD
Department of Marketing, University of Port Harcourt, Port Harcourt, Nigeria.

Sunday C. Eze, PhD
Business and Management Research Institute, University of Bedfordshire, UK

Abstract: *This paper investigated the effects of such independent variables as technology, market segmentation and cost reduction on the delivery of the consumer-endorsed services with special interest on healthcare entrepreneurs in Aba and Umuahia metropolis. 96 questionnaires were administered randomly among medical doctors, pharmacists/laboratory technicians and qualified nurses/midwives of 12 hospitals in Umuahia and 20 hospitals in Aba metropolis. Out of the 74 copies returned, 72 were found usable for analysis. Analyzing the data using simple percentages, t-test and Pearson Correlation Coefficient, it was found that the interactions between the aforementioned independent variables and the delivery of patient-endorsed healthcare services were statistically significant. Therefore successful healthcare delivery requires the challenges of channeling competencies to market segments where competitive advantage is enduring as opposed to spreading thin across various fronts. Based on the financial setbacks of private healthcare providers and the need to further liberalize the economy, the government was advised to borrow the conspiracy theory of the Japanese. This involves the tripartite of the government, the banks and the entrepreneurs whereby the last can borrow money for a long time to acquire latest equipment and other resources with the help of government guarantee. Also, government was advised to intensify more effort on making the public healthcare providers more proficient and more humane in the delivery of patient-endorsed services since their private counterparts charge high and worst still they rarely have the necessary resources in place.*

Keywords: healthcare, entrepreneurship, marketing, and challenges.

INTRODUCTION

The world around us as shaped by great entrepreneurs and investors would have been something else; imagine how the mind of a person or a group of persons improves our life through electricity, movies and videos, automobiles, refrigerators, etc. The word “challenges” as used here refers to as the various environmentally induced inadequacies and attendant ordeals that inhibit the attainment of planned healthcare programmes and necessitate the deployment of unique personality qualities and professional skills to serve a viable market. Quite a reasonable number of dramatic changes in the medical, economic and technological environment are unfolding and converging to transform the traditional healthcare sector and to create new and/or recreate incumbent, challenges. Recent among such changes include a focus on chronic diseases,

an increase in competitive pressures, shift in providers' roles, the emergence of new service delivery models (e.g. RE-AIM model, digital healthcare, etc), rapid innovations in medical and information technology (e.g. Patient Relationship Management, on-line healthcare, caduceus MMIS, etc), changing reimbursement mechanisms, and growing demands for greater transparency. Danzon (1992) reports that expenditure on healthcare in United States in 1988 totaled $539.9 billion, or 11.1 per cent of GNP, up from 5.3 per cent of GNP in 1960; and further increased to over 13 per cent in 1992. A more recent survey observes that between 1992 and 2002, overall healthcare spending rose from $827 billion to about $1.6 trillion and that, it is projected to nearly double to $3.1 trillion in the following decades owing, in part, to advances in expensive medical technology, including new drug therapies, and increasing use of high cost services and procedures (WHO, 2004). In her most celebrated work on Consumer-Driven Healthcare (CDHC), Herzlinger (2004) opines that free market competition, consumer choice, and innovative management would determine success in the industry. Perhaps, these may be necessary because Danzon (1992) indicates the output of healthcare is in its effect(s) on health, which often is less well-defined. CDHC, according to Herzlinger, describes a new kind of health insurance and offers to give employees much greater choice of health plans and provide greater freedom to price and innovate. Thus, medical outcomes are becoming as much a function of organization performance as they are individual performance, especially in the private sector where the future of the organization depends heavily on their ability to engage in audience-endorsed diagnoses and treatments. The Harvard Business School (HBS) has developed a new Executive Education Programme- Health Delivery: Achieving Organizational Excellence- to provide insights into how healthcare delivery organizations adapt to these changes and maximize effectiveness.

These recent developments in healthcare services and advancement in medical technology resulted in the restructuring of hospitals and put the healthcare marketers in a new pedestal. They now bring the healthcare needs of the audiences into the now decision-making structure of the organization (Brugha and Zwi, 1995) and/or respond to the challenges of consumer-directed health plans, the growth of health consumerism, the chronic shortage of nurses, and the escalating competition among providers (Light, 1991). However, with the proliferation of private healthcare providers, Schiffman and Kanuk (1987) opine that supply exceeds, or seemingly exceeds, demand, thereby introducing further challenges in the industry. Medical entrepreneurship turns a solo business with huge concentration in commercial and industrial parts of Nigeria (Ogunbekun, Ogunbekun, and Orobaton, 1999) following the poor public health facilities induced, perhaps, by government cost-cutting rule(s), which, according to Abudu (1983), accompanies the economic recession and Structural Adjustment Programme (SAP) of the 1980s. Danzon (1992) observes that despite barriers to entry in most economies, the healthcare industry has become extremely competitive owing to large number of firms in most market segments, a more aggressive role of public and private players in attempting to control costs, and anti-thrust enforcement. Healthcare consumers themselves, Versweyveld (1998) notes, are likely to choose hospitals that offer customized services and appropriate programmes that correspond to their specific needs. Implicitly, hospitals need to emphasize on patient satisfaction and functional improvement.

Unfortunately, the quality of healthcare services in Nigeria is one of the lowest in sub-Saharan Africa as WHO ranked it, 187 out of 191 countries rated. This startling revelation coupled with the 2004 Human Development Report of United Nations Development Programme (UNDP) may be the chief motivator of the current reforms in the Nigeria's health sector though reforms are global events, especially in developing economies. Notwithstanding the ample external assistance given to developing economies by World Bank, UN, UNESCO, WHO, etc; Ogunbekun, Ogunbekun, and Orobaton (1999) note that public health system is poorly financed and equipped to meet patients' need; thus, offering opportunity to good quality private providers, who likely charge beyond the reach of the poor. One of the most significant explanations to this is that developing nations devote much of their budget to security at the expense of heath, education, and other areas. Various estimates put private healthcare providers' expenditure at three or four times the amounts spent by public healthcare providers (Howard, 1981). Indeed, patients of private healthcare providers may be paying for excess of providers under the banner of "de-subsidization". The fierce competition among them (providers) often encourages over supply of technologies and over-servicing in the private healthcare market with resultant under-utilization of capacities and high service charges. Culyer, Maynard, and Posnett (1995) demonstrate that demand preferences in the healthcare delivery intensify competition, which encourages "…. duplication before rationalization …." and invariably results in over-servicing, over-hiring, and over-marketing.

The trend broadens the concept of marketing (Kotler and Levy, 1969) as even the public healthcare sector engages in the convergence theory towards similarity between marketing operations of commercial sector and that of public sector enterprises though with some cautions on the grounds of differences in their corporate objectives and missions (Rao and Tagat, 1985). Modern healthcare providers have abandoned traditions and adopted marketing strategies amidst competition and changing needs of patients. While some hospitals now offer prospective patients free blood pressure and cholesterol tests, others offer free trip to Hawaii or cash rebates (New York Times, 1986) as incentive packages to build trial, switching, loyal, advocacy behaviours. Suffice it to say that health caregivers are rapidly becoming oriented to strategic market/patient planning; they now plan to take advantage of environmental changes. Schiffman and Kanuk (1987) maintain that New Jersey Hospital Association devised new advertising and marketing strategies for its member hospitals in an attempt to change the minds of some 10,000 New Jersey patients going to New York City or Philadelphia every year for hospital care. Amidst competitive environment, healthcare providers turn more combative and sophisticated in the use of consumer/patient research to respond to patients' needs, develop consistency in quality of services and segment patients' target and advertise to attract more patient audiences. This compromises the fact that patients will be willing to pay more for medical care where they perceive significant improvement in the quality of care, reflected in improved drugs supply and wellness, higher technical quality, health facility renovations, and shorter waiting times (Akin, Guilkey, and Denton, 1994). However, improvement in quality of services provided by many players in the private healthcare sector leaves much to desire; nevertheless, the inadequacies of the public health institutions continue to make more proficient private sector providers an unavoidable choice for large segments of the population in the foreseeable future.

Based on the preceding, marketing success in the healthcare entrepreneurship is strongly influenced by a clear understanding of the nature and operation of the market segment of interest, and a development of cognate marketing strategies often based on existing body of knowledge. The purpose of this study is to empirically generate useful relationships between the success of healthcare entrepreneurship and such independent variables as technology, cost reduction, and market segmentation and targeting. This will fill knowledge gap as virtually no home based survey has centered on the subject.

THE THEOERETICAL THRUST AND ASSUMPTIONS

The private healthcare sector is comprised of all commercial providers, who perhaps tailor and deliver patient focused services-diagnoses and treatments of illness and prevention of diseases. It includes large and small commercial organizations, group of professionals such as medical Doctors, National and International NGO's and individual providers and shop keepers, who provide such service facilities as hospitals, nursing, and maternity homes; clinics run by doctors, nurses, midwives, and paramedical workers; diagnoses–laboratory and radiology units; and sales of drugs from Pharmacies, patient medical dealers and general stores. Reasonable number of these enterprises exists in Nigeria though many operate without the appropriate registration with the relevant ministries and professional bodies. Much as all of these outfits may not possess entrepreneurial abilities, those who possess them, according to Webster (1976), organize, manage, and assume the risks of their enterprises. By this, the healthcare entrepreneurs are individuals who possess unique personal qualities and professional skills to identify opportunities (e.g. investing in medication for HIV/AIDS and other chronic diseases, etc) and take decisive action to mobilize the necessary resources needed to produce new and/or improved healthcare goods and services. Such persons must overcome great personal obstacles, be tenaciously persistent yet highly adapted as opportunities evolve, possesses a keen eye for identifying true opportunities, be able to form and communicate a vision as well as to enlist professional and financial support, and be able to recognize their own weaknesses while adding people who can complement their skills. Brian and Marcoux (2003) explain entrepreneurs as people who create and grow enterprises and entrepreneurships as the process through which entrepreneurs are created and developed. The National Commission on Entrepreneurship describes infrastructure or environment needed to meet skill and resource gaps faced by range of entrepreneurs (NCOE, 2001). So, if entrepreneurship development is to serve as a key to National Development or economic wellness, then the Government of Nigeria owes a duty to recognize the diversity of entrepreneurs in the various regions and professions and address questions such as:

- How would rural youths and/or unemployed graduates be exposed to entrepreneurship and its potentials?
- How would the existing business owners be encouraged to entrepreneurship?
- How would more sophisticated business services be extended to growth-oriented entrepreneurs in the rural places?

The above understanding differentiates entrepreneurial behaviour from gambling since entrepreneurship emphasizes on the willingness and ability to overcome great personal and business challenges in order to identify and successfully carry out investment opportunities in an

environment characterized by constant and continual changes. For instance, a health caregiver who dreams of exploiting all opportunities/fronts (e.g. in the areas of gynecology, pediatric, surgery, orthopedic, etc) regardless of the pros and cons and spreads and stretches thin is nothing but a gambler. Penhoet (2006) speaks to hopeful biotech entrepreneurs and advised them on sharp and narrow focus on distinctive market niche(s) because attempting to repeat plans that worked in the industry some 25 years ago would be too disastrous. A good healthcare entrepreneur follows a downward trend for in-patient admission and a shift toward specialization and often, according to Agu (2001), is motivated by the desires for economic fortunes, self-boss, achievement and survival, and fighting unemployment and frustrations of previous jobs. Creativity and risk taking are implied to be complementarily combined as Thompson and Strickland (1980) write that the archetypal-creative person is usually treated as a bohemian or elusive inventor, while the archetypal-risk taker is, of course, the compulsive gambler. As a pure type of individual of entrepreneurial sort, an equal combination of these attributes must be present. Creativity is imperative to transform into new, original, meaningful, and useful innovations in the healthcare delivery that justify risk taking. However, while it is futile to try to eliminate risk in business of any sorts and questionable to minimize it, it is essentially the right risks that are taken. The result of an effective entrepreneurial action is the capacity to take greater risks for better performance. This is ideal if one rationally chooses among risk-taking courses of action with the intention to minimize risks.

Market Segmentation and Targeting

The Japanese experience gives empirical backing to *small is beautiful* for it has shown that small, and perhaps, medium scale enterprises (SMEs) are the bedrock of industrialization or a proposed alternative strategy for developing economies like Nigeria. Studies have shown a positive relationship between levels of entrepreneurial activity and economic growth; no countries with high levels of entrepreneurship experience low levels of economic growth (Zacharakis, Bygrave, and Shepard, 2000; Reynolds *et al*, 2002). In United States, for instance, small enterprises produce most of the jobs and innovations. Stanyon (2004) reports that 90% of all American businesses employ fewer that 20 people and all small businesses account for over 40% of all jobs created in the past 25 years with recent emphases on the growth of entrepreneurship programmes in Universities and Colleges from 16 of such programmes in 1970s to over 1500 today. These progress reports, of which the healthcare sector is a part of, were possible on the grounds that decisions makers recognize that people show different responsiveness to the various marketing programmes mounted by firms. Some healthcare providers dominate market niche(s) by targeting older individuals for they take more patient days than younger people (Costello, 1985) and others reach them by targeting those who make their healthcare decisions; e. g. family members, and corporation, which provide medical benefits to older people and their spouses (Ostroff, 1986). Further, others target women of 18-40 (Elsesser, 1986) and referral professionals, such as physicians, dentists, optometrists, etc, to reach the patients (Roberg, 1986). The central issue is to sharply narrow focus to distinctively carved niche(s) for better meeting of patients' needs. Based on the foregoing discussion, hypothesis one is formulated.

Ho_1: Given that there is a growing opportunity for healthcare entrepreneurs, focus on

distinctive market segment(s) does not improve the delivery of healthcare services.

Cost Reduction

Quality healthcare ideally needs to be affordable, accessible, equitable and relevant to needs. Unfortunately, the rising costs of access healthcare impacts negatively on the audiences as more organizations change their reimbursement mechanisms and as private healthcare insurance premiums soar. This holds even as Versweyveld (1998) notes that patients consider the relationship between costs and quality of services to rarely serve as a differentiating factor among healthcare facilities. Ogunbekun, Ogunkeun, and Orobaton (1999) notice that the ineffective State regulations has meant little control over clinical activities of private sector providers while prices of medical services have, in the recent years, grown faster than the average rate of inflation. In their own view, Graham and Adams (2005) observe that one of the biggest challenges of the healthcare industry today is the need to strategically reduce costs and improve profitability and customer satisfaction. Costs, according to them, increase on the average between 13% and 17% per annum perhaps in response to reimbursement schemes, and increased operational costs, resulting heavily from competition induced expenditure on marketing. Mossialos, Allin, and Figureas (2006) posit that it may cost a pharmaceutical firm more than $800 million to bring a new medical therapy, thereby to the market and the probability of success may be uncertain.

Increasing productivity and operational effectiveness can help healthcare entities to step down steep costs increases. Massachusetts Water Resources Authority writes that healthcare providers are actively seeking for ways to reduce supply-related expenses, while assuring patients' safety and quality of care. These include aligning with trusted trading partners, measuring current process costs, implementing Process-Driven Materials Management Information Systems, engineering process to meet collective cost reduction goals, and then measuring results for continual improvement. Hospital implementation of Caduceus MMIS creates almost immediate materials management inventory cost reduction, improved efficiency, and professional staff time recovered for more patient care. Norwood Hospital observes from its operation that renovations of facility space, equipment replacement, and innovative implementation of strategies provide an opportunity for significant reduction of operating costs in the competitive areas of healthcare. Health providers and managed care organizations would prefer to invest more on case management, inpatient protocols, community education and other related items, on the grounds that they promise higher costs serving while at the same time optimizing the quality of healthcare (Versweyveld, 1998). Clark (2005) reports two approaches to reduce costs and improve efficiency. The first deals with replacing the out-model paper-based methods with streamlined digital system on the premise that approximately 70% of healthcare transactions today are paper-baesd resulting in administration costs of up to 20%. The second relates to building interactive marketing via integrated Healthcare System (IDSs) in an effort to provide a personalized (one-on-one interactions), full-friendly, one-step-shopping environment that eliminates costly intermediaries, promotes wellness, and improves healthcare outcomes. There are over 850 IDSs in US today, which, to a reasonable extent, save money through efficient operations, better decisions, patients' care convenience and customer service delivery. For pharmaceutical and

medical device companies, it improves drug discovery cycles, shortens clinical trails, accelerates approvals, increase operational efficiency, improves sales and marketing, and ability to link with research organizations, regulatory agencies, business partners, etc. And for health plans, it connotes the ability to manage effectively and acts on data flows to and from multiple sources, resulting in better management of claims payment, rate setting, pricing, care management, prescription benefits, eligibility verification, clearinghouse transactions and referrals (Clark, 2005).

A further measure toward costs reduction, though still revolves around the same interactive marketing, was posited by Philips and Panchal (2002) to be Patient Relationship Management (PRM). According to them, PRM, as drawn from the philosophy of Customer Relationship Management (CRM), is to prevent customer disconnects and to maintain a 360-degree view of the customer/patient, including enhanced referral tracking and automatic reminders aimed at reducing missed appointments. Wanless (2002) reports Halpern and Bates saying that the *costs of did* not attend is a source of increasing concern and impacts seriously on the health service's ability to plan and deliver timely care. The PRM technology identifies and anticipates diverse patient and clinical needs and preferences in order to tailor communications and programmes accordingly. It emphasizes one-on-one relationship, trust, accurate, and complete information ideals upon which co-ordinated, timely, and accessible healthcare is built, which of course reduces wastes and improves efficiency.

Our discussion so far brings us to hypothesis two below.

Ho_2: Coping with the challenges of costs reduction and customer satisfaction amidst stiff competition among private Healthcare providers does not enhance market share.

Technology

It is often argued that technology has very strong relationship with low cost attainment, especially in terms of operational efficiency and productivity levels. Unfortunately, the 5th Institution of Engineering and Technology International Seminar held in London on May 21-22, 2008 observes with dismay from WHO's report that about 95% of medical technology in developing countries is imported, and astonishingly too, 50% of it is not in use, owing to either lack of maintenance, lack of suitable training or their levels of technical sophistication. Technology itself is viewed in terms of the extent of task interdependence, degree of equipment automation, uniformity or complexity of production processes and materials used, and the degree of routines of task and supportive systems (Szilagyi and Wallace, 1980). Often described as a force for creative destruction (Kotler, 1984), technology pervasively transforms and/or restructures an industry and perhaps ushers in new cast of competitors, who use competencies developed outside the industry to exploit the leapfrogs of incumbent industry players (Cooper et al, 1974). For instance, E-Business induces changes in IT industry structure such as disintermediation and re-intermediation (Bailey and Bakos, 1997), offers new means of competing and alters competition rules via lock in (Shapiro and Varian, 1999), electronic

integration (Venkatraman and Zaheer, 1990), and brick-and-click synergy (Steinfield, Adelaar, and Lai, 2002). The technology-organization-environment (TOE) framework of Tornatzky and Fleischer (1990) leads to a conceptual model of six adoption predicators of diffusion of innovations. They are IT infrastructures, firm's size, consumer readiness, competitive pressure, firm's scope of operation, and trading partner readiness. Technology competence constitutes not only physical assets, but also intangible resources, which perhaps generate competitive advantages for innovators since skills and know-how complement physical assets (Helfat, 1997; Mata, Fuerst and Barney, 1995) and are more difficult to imitate by rivals (Teerce, 1980).

Examples of technological breakthroughs from Market Intelligence Reports of the healthcare industry are Diagnostic Equipment for Internal Imaging of the body, Computer Axial Tomography Laboratory Examinations, Cervical Smear, Ultrasound Services, Prostate Screening, and Breast Scanning/Mammographics. Most of these technological breakthroughs emphasize on improved customer/patient services and wellness, reduced medical errors, better productivity, costs saving, improved health outcomes, ensuring the collection and utilization of high quality, integrated and standardized data with appropriate granularity, etc. The Internet systems, for instance, provides about the most important dissemination vehicle to improve individual and overall public health at a reasonable societal cost (Graham and Abams, 2006) just as Caduceus MMIS principles and techniques translate directly into productivity improvements and waste reduction, and ultimately low charges for healthcare services. With breakthroughs in informatics and computer technology, Lenhart et al (2004) opine that thousands of health related Websites in the Internet now play a meaningful role in the healthcare systems and is increasingly available to those with lower income and education. Approximately, 80% of adult Internet users (estimated at 93 million Americans) have searched for health information (Fox and Fallows, 2004); majority looks for information on specific disease or conditions, and many others for information related to lifestyle behaviour change – 36% searches for information on exercise or fitness, 10% for sexual health information, and 6% for information on how to quit smoking (Graham and Abams, 2006; Fox and fallows, 2004). Hoffman – Goetz and Clarke (2002) observe that individuals living with chronic illnesses, e.g.; HIV positive or disabilities are more apt to search for health information on-line than those who are healthy (85% Vs 61%). In all, the exercise allows patients to access healthcare from their homes or outside the traditional physician's office, providing more convenience and safety. For those who do not have physical access to a healthcare provider, information and treatment resources on the Internet may represent their contact with the healthcare systems.

Hypothesis three is formulated based on our fore-going discussion.

$Ho_{3:}$ There is no relationship between technological breakthroughs and the quality f healthcare services.

The survey

The data for this study were drawn from a randomly selected sample from a population of private healthcare providers in Umuahia and Aba metropolis of Abia State, Nigeria. Through questionnaire administration, 12 private hospitals from Umuahia and 20 from Aba, within which a medical doctor, a pharmacist/laboratory technician, and a qualified nurse/widwife, were

simultaneously surveyed in order to measure their opinion on critical issues relating to the subject matter. Although Umuahia is the state capital of Abia State, Aba is the commercial nerve centre, perhaps with larger population and landmark that inform the difference in the number of private hospitals surveyed. However, the process attracted 3 respondents from each hospital, which brought a total number of questionnaire administered to be 96 and 72 usable response that formed the basis of analysis. The questionnaire was short, simply embodying alternative answers to the question, leeway to freely express one's opinions, and a five point differential scale to measure the hypotheses questions. For the last, the ranges of description of relationship strength were as follow:

Range of Coefficient	Description of Strength	Denotation
± 0.70 to ± 1.00	Very strong	1
± 0.60 to ± 0.69	Strong	2
± 0.50 to ± 0.59	Moderate	3
± 0.40 to ± 0.49	Weak	4
± 0.00 to ± 0.39	Very weak	5

Table 1: Ranges of strength of Relationship

The benchmark for choosing the population from which the sample was drawn were (1) they must be duly registered with Corporate Affairs Commission (CAC), the relevant Ministries, and their professional bodies and; (2) they must exhibit some measure of entrepreneurship at least in the areas of exploiting new opportunities and risk taking. The last condition was measured by the special cases handled and investments in space, specialist and modern technologies. Although preliminary investigation identified some critical marketing challenges that were used as independent variables to formulate the three working hypotheses, the respondents were asked to thick the most significant of the listed challenges, rate them in the above five-point scale in terms of organizational success, and to suggest other challenges not included in the questionnaire.

The first hypothesis was statistically tested with Bivariate t-test, which according to Hair, Bush, and Ortinau (2000), compares means of two groups using interval or ratio measurement scales. The second and third hypotheses were tested with Pearson correlation Coefficient. Pearson Correlation Coefficient uses interval or ratio scales to measure the strength of linear relationship between two metric variables drawn from a Bivariate normally distributed population.

Validity

In order to build trust and confidence for our findings and conclusions, this study began barely a year and six months ago with an exploratory investigation, involving collection of primary data and using an unstructured format or informal procedures to interpret them. This pilot survey shaped and guided the data collection and reporting. Even after questionnaire returns, few respondents were talked to on telephone to measure any discrepancy between their opinions. This further enhanced validity.

RESULTS AND DISCUSSION

Although it may be onerous to deal with the marketing challenges in the healthcare sector at a time, perhaps owing to dearth of specific body of knowledge and resources or something else, the three working hypotheses tested provide insight into improving managerial decisions as they unveiled the significance of the independent variables in the delivery of patient-endorsed medical care. Table 1 below shows the list of marketing challenges and their ratings by respondents. The statistical testing of H_{O1} showed that focus on distinctive market segment(s) – e.g.; on Orthopedic, Pediatrics, Surgery,

	Frequency	Percentage (%)
Cost reduction	19	26
Technological breakthrough	22	31
Market segmentation and targeting	20	28
Competition	6	8
Service package	3	4
All of the above	2	3
Total	72	100

Table 2: Marketing Challenges and their Ratings by Respondents

Gynecology, etc; improves the specific delivery of healthcare services. This finding is supported by the result data in table 3, which indicates rejecting H_O, on the grounds that the calculated value of t (18.44) > the critical $t_{0.95,70}$ (1.66). Perhaps the explanation to this follows the simple economic philosophy on division of labour and specification, which reflects on learning and experience curve, and ultimately on efficient customer service delivery. Stretching thin across various fronts involves more of gambling than professionalism and almost all the hospitals surveyed are guilty, perhaps for the sake of economic leapfrogs of the country. The hospitals explained that they often hire the services of experts/consultants from Queen Elizabeth Federal Medical Centre, Teaching Hospitals, or elsewhere, or at very best, refer

		X_1	$\left(X_1 - \bar{X}_1\right)$	$\left(X_1 - \bar{X}_1\right)^2$	X_2	$\left(X_2 - \bar{X}_2\right)$	$\left(X_2 - \bar{X}_2\right)^2$
1	V. strong	17	12	144	14	10	100
2	Strong	12	7	49	9	5	25
3	Moderate	5	0	0	4	0	0
4	Weak	3	-2	4	3	-1	1
5	V. weak	2	-3	9	3	-1	1
	Total	39		206	33		127

Table 3: test of hypotheses one

them, especially where the required technologies are not available. These worsen the stresses and the costs of acquiring quality healthcare.

The statistical testing of H_{O2} shows that costs reduction and patient satisfaction influence the market share of private hospitals, which indicates rejecting H_{O2} on the premise that tc = 9.75 > $t_{70,0.05}$ = 2.576 (two-tailed test).

		X_1 cost reduction	Y Satisfaction	$\left(X_1 - \bar{X}_1\right)$	$\left(y_2 - \bar{y}_2\right)$	$\left(X_1 - \bar{X}_1\right)\left(y_2 - \bar{y}_2\right)$
1	V. strong	26	25	18	11	198
2	Strong	9	6	1	2	2
3	Moderate	8	4	0	0	0
4	Weak	2	1	-6	-3	18
5	V. weak	1	0	-7	-4	28
	Total	49	23			246

Table 4: test of hypothesis two

$$r_{xy} = \frac{\left(X_1 - \bar{X}\right)\left(Y_1 - \bar{Y}\right)}{\cap S_x Sy}$$

Substituting the sum variation between the two variables (246) and the products of standard deviations and number of observations (317), brings r = 0.776. This level of correlation coefficient is large but the statistical significance need be determined to ascertain the extent to which the correlation is significantly different from zero. The conversion of correlation coefficient to t-test statistic informs our decision.

$$t = \frac{r(n-2)}{1 - r^2}$$

Finally, H_{O3} was rejected on the basis that the tc (3.4) > to 0.5,70 (2.576], showing that technological breakthrough contributes to the challenges of private healthcare providers. To substantiate responses in hypotheses one and two, the questionnaire asked the respondents to indicate their Websites and show how it has enlarged market share through customer satisfaction and cost reduction. Unfortunately, the respondents know about the cost reproduction and market share enlargement syndromes of integrated healthcare systems and none packaged its healthcare programmes in the Internet.

Further, the hospital recognized the cost benefits and the efficiency of service delivery through the several existing medical innovative equipment but do not posses enough finance to acquire most of them. This finding somewhat agrees with the technology-organization-environment (TOE) framework of Tornatzky and Fleischer (1990) where they note that technological diffusion and adoption largely depends on customer readiness, competitive pressure, firm's size, scope of business operation, and availability of trading partners. Thus, the technological innovations in our healthcare industry, like most other developing economies, focus more on methods of practice (human capital development) rather than on medical equipment development. For instance, the midline longitudinal caesarian operations popularly practiced by

most general practitioners is gradually giving ways for the obstetricians' pfanistian operations, which promise faster healing, less conspicuousness, and opportunity for more than three caesarian operations.

		X_1 Technology	Y Quality Service	$\left(X_1 - \bar{X}_1\right)$	$\left(y_2 - \bar{y}_2\right)$	$\left(X_1 - \bar{X}_1\right)\left(y_2 - \bar{y}_2\right)$
1	V. strong	14	15	5	11	55
2	Strong	11	12	2	8	16
3	Moderate	9	4	0	0	0
4	Weak	4	2	-5	-2	10
5	V. weak	1	0	-8	-4	32
	Total	39	33			113

Table 5: Test of Hypothesis one

However, the interaction between costs reduction and technology on optimizing qualityhealthcare, as show in table 6 below, show a very strong one with a percentage score of 71. This was not statistically tested not only because it is not one of the working hypotheses but also because has been done on how technology can result to unit cost reduction and ultimately low price.

	(X) Umuahia	(y) Aba	Percentage
Very Strong	19	32	71
Strong	7	9	22
Moderate	2	2	6
Weak	0	1	1.4
Very Weak	0	0	0
Total	28	44	100

Table 6: The interaction between cost reduction and technology.

CONCLUSION

Private healthcare providers are heavily trapped by the tremendous ordeals of reducing the costs of services and improving service efficiency because most of them are financially incapacitated to invest in the ever-changing technologies that promise that. The effective operation of private healthcare providers in Nigeria is significantly inhibited by their small size, patients' low education and un-readiness to try novelty, poor training and poor capital base, rapid technological changes, and inability to shift competitive grounds to their areas of strength. Focus on a distinctive market segment of the healthcare improves the providers' expertise and specialization, which promise building for them (the firms) a sustainable competitive advantage (SCA) or a lasting advantage that would be difficult to copy by rivals. Ideally such expertise and specialization reflect on cost of treatments and quality service, going by the Economics law of

division of labour. However, focus via costs reduction and improved efficiency as well as differentiated business is a key ingredient that improves patient-endorsed healthcare services. These are possible with the acquisition of modern technologies and well-trained and well-motivated personnel, who can harness their attributes to the benefit of mankind in a manner that carves a distinctive niche, which opponents will rarely copy or copy at a high cost.

MANAGERIAL IMPLICATIONS

The following recommendations are boldly made in the light of the preceding findings.

(1) Private healthcare providers should emphasize on distinctive market segment(s) on the grounds that specialization generally reduces task's complexities, costs and time; carves out an enviable niche; and differentiates a firm's operations from others.

(2) Since private healthcare providers are financially incapacitated to acquire most of the technologies that improve operations and save costs, the government, through the banks' facilities may offer assistance to them. This is very important for health, they say, is wealth. The Conspiracy Theory of this is that Japan's success is expressed in terms of the very high degree of industrial co-ordination amongst entrepreneurs, banks, and government. The small Japanese firms can borrow for a long period with the aid of government loan guarantees and are typically financed on a ratio of 80% debts to 20% equity. This recommendation will be workable if, like Japan, we embrace what Hazama (1981) referred to as Risshin Shusse, which means that the route to success in Japan began with a campaign to imbibe in every child of Japan the concept of rising to eminence in the world through genuine success.

(3) Private healthcare providers are encouraged to partner with technologically stronger counterparts in the Western world provided they can display transparency in the overall dealings. The various reforms introduced by the last administration of General Olusegun Obasanjo (Rtd) represent a welcome development in terms of repositioning Nigerians before the International Communities.

(4) The National Economic Empowerment and Development Strategy (NEEDS) should be comprehensively and strategically reprogrammed to assist effective private healthcare entrepreneurship, especially now that Nigerian government has come to terms that she and the giant firms cannot fully integrate the explosive labour force into the social-economic setting. This will lead to further liberalization of the economy as demanded of Nigeria by World Bank and International Monetary Fund (IMF).

References

Abudu, F. (1983) *Planning Priorities and Healthcare Delivery in Nigeria* **Social Science and Medicine** 17(24), 1995-2002

Agu, C. (2001) **Fundamentals of Small Business Management and Entrepreneurship Development.** I – O Publishers, Owerri.

Akin, J; Guilkey, D; & Denton, H. (1994) *Quality of service and Demand for Healthcare in Nigeria: A Multinomial Profit Estimation.* **Social Science and Medicine** 40(11), 1527-1537.

Bailey, J. & Bakos, Y. (1997) *An Exploratory Study of the Emerging Role of Electronic Intermediaries.* **International Journal of Electronic Commerce.** 1(3), 7-20.

Brain, D. & Marcoux, K. (2003) *Entrepreneurial Arkansas: Connecting The Dots.* **Corporation For Enterprises Development** Washington, D.C Feb http://www.wrockefeller foundation. Org/pdfs/connect the Dots Pdf.

Brugha, R. & Zwi, A. (1998) *Improving the Quality of Privately Provided Public Healthcare in Low and Middle income Countries: Challenges and Strategies.* **Health Policy and Planning** 13 (2), 107-20.

Clark, M. (2005) *The Business Of Medicine Conflict.* First Ranged Website.

Cooper, A; DeMuzzio, E; Hatten K; Hicks, E; & Tock, D. (1974) Strategic Responses to Technological Threats. Proceedings of Business Policy and Planning. **Academy of Management,** Boston.

Costello, M. (1992) Hospitals Airs Message Via Radio Infomercials **Marketing News.** April 12, 10.

Cyber, A; Maynard, A; & Posnett, J. (eds) (1995) **Competition in Healthcare: Reforming the NHS.** Macmillan Press, London.

Danzon, J. (1992) Healthcare Industry. **The Concise Encyclopedia of Economics.** http://64.233.1.

Elsesser, J. (1986) *Marketing Research Ideas: Healthcare Marketers Can Steal from the Consumer Packaged goods industries.* In Cooper, Philip (ed) Responding to the challenge: Healthcare Marketing Comes for Age. Proceedings Series of Academy for Health Service Marketing, AMA, Chicago. 30-32.

Fox, S. & Fallows, D. (2004) Internet Health Resources: Health Searches and E-Mail have become more common place, but there is room for improvement in searches and overall Internet access URL http://www. Pewinternet.org/PPF/r/95/report.

Graham, A. & Abrams, D. (2006) *Reducing the Cancer Burden of lifestyle Factors: Opportunities and Challenges of the Internet.* **Journal of Medical Internal Research.** 7(3) e26 1-17.

Hazama, H. (1981) *Determination of Japanese Success in Monte Boy's The Japanese Way of Doing Business.* **The Psychology of Management in Japan.** Prentice-Hall Inc, Englewood Cliffs, New Jersey.

Helfat, C. (1997) *Know-how and Asset Complementary and Dynamic Capability Accumulation: The Case of R&D.* **Strategic Management Journal.** 18(5), 339-360.

Herzlinger, R. (2004) Consumer-Driven Healthcare. Jossey – Bass.

Hoffman-Goetz, L. & Clarke, J. (2000) *Quality of Breast Cancer Sites on the World Wide Web.* **Can J Public Healthcare.** July – August. 19 (4) 281-284.

Howard, I. (1984) *What are the Financial Resources for 2000?* **World Health Forum** 2(1), 23-29.

Kotler, P. (1984) **Marketing Management: Analysis, Planning and Control** 5th ed. Prentice-Hall, Inc, Englewood, New Jersey

Kotler, P. & Levy, S. (1969) Broadening the Concept of Marketing **Journal of Marketing** 33 (January), 10-15.

Lenhart A; Horrigan, J; & Ramie, L. (2004). The Ever-shifting Internet Population: A New look at Internal access and the digital divide URL. http://www.Pewinternet.org/PPF/r/88/report.

Light, D. (1991) Embedded Inefficiencies in Healthcare. **Lancet.** 338, 102-104.

Mata, F; Fuerst, & Barney, J. (1995) *Information Technology and Sustained Competitive Advantage: A Resource-Based Analysis.* **MIS Quarterly** 19(4), 487-505.

Missialos, E; Allin, S; & Figueras, J. (ed) (2006) Healthcare Systems in Transition Template. WHO on behalf of the European Observatory on Health Systems and Polices.

National Commission on Entrepreneurship (2001) High-Growth Companies: Mapping American's Entrepreneurial Landscape, NCOE, Washington D.C http://www.Public foruminstitute. Org/reports/2001-high-growth Pdf.

New York Times (1987) Hospitals, Competing for Scarce Patients, turn to Advertising. April 20, 47.

Ogunbekun, I; Ogunbekun, A; & Orobation, N. (1991) *Private Healthcare in Nigeria Walking the Tightrope*. **Healthcare Policy and Planning.** 14(2), 174-181.

Ostroff, J. (1986) *Accessing Mature (Age 55+) Healthcare Consumers through Caregivers and co-operation.* In Cooper, Philip (ed) Responding to the Challenge: Healthcare Marketing comes of Age. Proceeding series of Academy of Health Services Marketing, AMA, Chicago. 48-50.

Penhoet, E. (2006) *Biotech Startups Face New Challenge in the Marketplace*. **Standard Graduate School of Business** 1-4.

Philips, J. & Panchal, S. (2002) *Meeting the Needs of Consumers with Health CRM* **Journal of Health Care Information Management.** 16(13) Summer. 35-39.

Rao, K. & Tagat, R. (1985) *Marketing and Public Enterprises: Relevance and Strategy*. **Public Enterprises** 5(3) 265-282.

Reynolds, P; William, D. Bygrave, E; Larry, W; & Hay, M. (2002) Global Entrepreneurship Monitor 2002 Executive Report, Ewing Marin Kauffman Foundation, Kansas City. http://www.emkf.org/pdf./GEM 2002. pdf.

Roberg, A. (1986) How to develop a successful Marketing Progrmme to increases referrals from physicians and other practitioner In Cooper, Philip (ed). Responding to the Challenge: Healthcare Marketing comes of Age Proceeding Series of Academy for Health Services Marketing, AMA Chicago PP_{62-64}.

Schiffman, L. & Kanuk, L. (1987) **Consumer Behaviour 3rd ed. Practice** Hall International, Inc; Englewood Cliffs, New Jersey.

Stanyon, J. (2004) Challenges of the future NRF Foundation (Resources & Education). www.retail-revival.comm

Steinfield, C; Adelaar, T; & Lai, Y. (2002) *Integrating Brick and Mortar Locations with E-Commerce: Understanding Synergy Opportunities.* In Proceedings of the Hawaii International Conference on System Sciences, Big Island, Hawaii.

Szilagyi, A Jr. & Wallace, M. Jr. (1980) **Organizational Behaviour and Performance 2nd** ed. Good year Publishing Co. In; Santa Monica, California.

Thompson, A. Jr. & Strickland, A. (1980) **Strategy Formulation and Implementation: Task of the General Manager** Business Publication Inc; Plano, Texas.

Teerce, D. (1980) *Economics of Scope and the Scope of the Enterprise.* **Journal of Economic Behaviour and Organization.** 1(2), 223-247.

Tornatzky, L. & Fleischer, M. (1990) **The Process of Technology Innovation.** Lexington Books, Lexington, MA.

Versweyved, L. (1998) Hospital Strategy Put Sharper focus on Care Management instead of cost reduction needs.

Wanless, D. (2002) *Securing on Future Health: Taking a long-term view For HM Treasuring.* April http://www.hm-treasury.gov.uk/consultations and legislation/wanless consultant walness final.cfm .

Webster, A. (1976) **Webster's Seventh New Collegiate Dictionary. G. C.** Merriam Co. Publishers, Springfield, Massachusetts, USA.

WHO (1993) *Evaluation of Recent Changes in the Financing of the Health Services* **WHO Technical Series 829** WHO, Geneva.

Zacharakis, A; Bygrave, W; & Shepard, D. (2002) *Global Entrepreneurship Monitor* (GEM) 2000 Executive Report, Ewing Marion Kaugffman foundation http://www.Entreworld.org/Bookstore/PDFS/Re-027 pdf.