Innovation, Networking and Emerging Markets

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ABSTRACT- Network markets are quite widespread in the 21st century and remind us of the information age brought by revolution in information processing. Industrial revolution had earlier taught generations of how to compete in markets. Today, organizations need to understand the dynamics of a digital networked society and find new ways of marketing. This research paper attempts to outline basic concepts relevant to facing competition in these markets and sell products and services. The prominent characteristic of network markets is that the value of the product increases with the number of adopters through networking. The marginal increase in value that these adopters attain when one more person joins the network is called a network effect. In short, the size of the network (installed base) creates a benefit, which is independent of any product features, quality, or even the image of the product—and this changes the nature of competition. Net working creates a force of customer response and accelerates the effect through the net work. The present research paper addresses this emerging area of knowledge and focuses on technological innovation as a strategy in these markets, particularly product and systems innovation. The challenging, unpredictable, and often cutthroat competition in emerging markets is literally a challenge for the emerging network markets

Key Words- ***Network marketing, information processing and digital technologies, early adopters, competition, and technological innovations and strategic marketing.***

I. INTRODUCTION

Currently, most studies of network markets have focused on the dynamics of competition in emerging markets. While some network theories assert that incompatible technologies compete intensely in emerging markets, but when consumers expect one technology to become larger than any other, they adopt that technology en masse, abandoning any other. That point where consumers expect a technology to win is called a tipping point because the market tips to adopt that technology to the exclusion of any other. One of the most noticeable aspects of competition in these markets is that it becomes a do or die, proposition. Competition is particularly intense because just one technology remains adopted. If one firm has proprietary access to that technology, the end result is one monopoly and monopoly profits. The other competitors are vanquished and retain virtually no market share. Moreover, such a monopolistic position appears quite sustainable, since network effects deter others from competition. As a result, these monopolists have been considered invulnerable. Thus, the term winner-takes-all characterizes this type of competition. The winning firm, that which owns the most popular technology, takes "all" the profits.

Figure 1: Progress Toward Digital Literacy And Inclusion In Emerging Markets.

Michael Porter's work is particularly relevant here because he built upon economic theory to produce a framework for strategy formulation that has proven remarkably durable. Some have suggested that network markets challenge that framework. Porter (2001) himself, however, demonstrated that his models apply to Internet and information-related markets. His frameworks clearly provide valuable insights to any industry. Traditional strategic frameworks simply do not address the unique facets of competition in network markets. They fail to capture the essence of competing in these markets. Like the "dark side" of the Star Wars series, the "demand side" of competition—the demand-side economies of scale that characterize network markets—are unfamiliar to many and present unique challenges.

We know some of the basic dynamics of competition in emerging markets, but far less about how to compete in markets that have already tipped. We know something about competing through compatible standards—and open systems—but far less about competing through incompatible and radical innovation, particularly in monopolized markets. Finally, we need to know more about how characteristics of demand and supply affect competition in these markets. In 2014, the usage and purchase of mobile devices overtook desktop computers as the most common digital platform in the United States. A

similar trend has been observed in developing countries. Despite limited fixed-line Internet access and relatively high costs associated with computer ownership, mobile usage in developing countries has increased by more than 20 percent in five years, quickly becoming the primary way people engage online. This expansion of mobile Internet has revolutionized the way people interact and do business.

In a digital age, the ubiquity of mobile Internet creates tremendous opportunities for individuals and communities. But unlocking these social and economic opportunities requires mobile designers to constantly prioritize the underlying cultural context of the products they design.

II. OBJECTIVES AND METHODOLOGY

Current business environment is throwing up several challenges to marketing and sale of products and services. That the marketing has become a competitive field is also nothing new. But the real challenges today are the game changing nature of Technologies and Innovation. In the information age, as they call the present age of mobiles and hand held devices which are proliferating all the computer applications and making technologies obsolete overnight by something new, the pace of change has become uncontrollable and corporate managers are toying with several ideas to find solutions to this game changing environment. Innovations are always welcome to the general public because they make their lives that much easier. But along with it comes the competitive pressure to absorb new technologies and participate in the process of making profits. With these environmental challenges business wants to go on as usual. Because of the availability of digital technologies the information gets transmitted at a fast pace due to the mobile culture and texting. Markets are evolving, marketing strategies are rewritten, and on the whole there is not a single day that passes of as ordinary or eventless. However for the purpose of the current research paper following limited objectives has been identified for further exploration:

1. Environmental changes bringing innovations and net working.
2. How the focus has changed to innovative marketing strategies.
3. The role of networking in evolving strategies in the current environment.
4. A brief review of how companies are facing to the current challenges.
5. Conclusions and recommendation.

Though network markets are not new, the challenges posed by current environment particularly with digital technologies are unprecedented. Today, most of the companies and players in the market have caught on to the realities of the digital revolution. Each company and competitor tries to impress their customers through better ways of presenting the product and positioning them. Apart from being no-nonsense in their approach, every company wants to create a better impression of their offerings. Presently in the information age and wide spread usage and availability of several digital devices and their interconnectivity through modern technologies, the challenge is who will run faster and find new ways to captivate customer. This is the central theme of this research paper. Several methodologies like a field survey were considered, but ultimately this was reduced to the current method of an extensive desk survey and research. Sufficient literature was available and the only challenge that remained was to collate the information and do the data analysis. This has been done satisfactorily to arrive at the conclusions and recommendations.

III. REVIEW OF LITERATURE

To redirect demand, your customer value proposition (CVP) must solve a problem more effectively, simply, accessibly, or affordably than the alternatives. In developing markets, we have found, the components of a CVP that matter most are affordability and access. Western companies know that they need to come up with lower-cost offerings in emerging markets, but they too often limit themselves to providing less for less. In 2001, for instance, a 300 ml bottle of Coke cost 10 rupees—a day’s wages, on average, and a luxury the company estimated only 4% of the population could afford. To reach the other 96%, it introduced a 200 ml bottle and cut the price in half, shaving margins to make Coke more competitive with common alternatives such as lemonade and tea.

A far more robust approach to creating an affordable emerging market offering is to trade off expensive features and functions that people don’t need for less-expensive ones they do need. To get that right requires a clear understanding of the context in which the offering will be sold—which calls for further fieldwork, preferably of a collaborative rather than a merely observational kind. This is good product-development advice in any market. In fact, it applies to indigenous players operating close to home, like Godrej, as well as to Western companies confronting the unfamiliar. Godrej company team designed and built a prototype cooling unit from scratch and tested it in the field with consumers. Then, in February 2008, more than 600 women in Osmanabad, a city in India’s Maharashtra state, gathered to participate in a co-creation event. Working with the original prototypes and several others that had followed, they collaborated with Godrej on every aspect of the product design. They helped plan the interior

arrangements, made suggestions for the lid, and provided insights on color (eventually settling on candy red).

The result was the 'Chotukool' ("little cool"), a top-opening unit that, at 1.5 x 2 feet and with a capacity of 43 liters, has enough room for the few items, users want to keep fresh for a day or two. With only 20 (rather than the usual 200) parts, it has no compressor, cooling tubes, or refrigerant. Instead it uses a chip that cools when a current is applied and a fan like those that prevent desktop computers from overheating. Its top-opening design keeps most of the cold air inside when the lid is opened. It uses less than half the energy of a conventional refrigerator and can run on a battery during the power outages that are common in rural villages. At just 7.8 kilograms, it's highly portable, and at $69, it costs half what the most basic refrigerator does. Because it's the right size for the job, easier to move, and more reliable in a power outage than a conventional fridge, it surpasses the higher-end offering on the performance measures that matter most to these consumers.

Accessibility was the key to successful marketing of this product it is not surprising that portability is important to potential ChotuKool customers, given that they move frequently. And because populations in emerging markets tend to be dispersed, obtaining goods and services can be more difficult than in the West. This creates opportunities for companies that solve challenges of access. Targeting this market has two great advantages. First, it's easier to upgrade the solution to a job people are already trying to do than to create sufficient customer demand where none yet exists—as would-be vendors of purified water and other seemingly essential offerings have found to their dismay. Second, it's easier to reach people who are already spending money to get their jobs done. That's essentially what Ratan Tata did with the $2,500 Nano. He didn't ask, "How can I get people who've never bought any form of transportation to buy a car?" He asked, "How can I produce a better alternative for people who hire motor scooters to transport their families?" The goal is to redirect existing demand by offering a clear path from an unsatisfactory solution (through innovation) to a better one. Tata Electric car is proposed to be re-launched soon.

Network markets are arguably much more prevalent this century, given the central role of new communication and information processing technologies in our lives; many of us have had to choose among mobile phone operators, for example. Whether innovation in a network market is likely to capture share and profits clearly depends on several factors. Prominent among these are (a) market structure—whether the market remains competitive or is dominated by a monopolist; (b) the position of the innovator—peer, challenger, or monopolist; and (c) the type of innovation—the extent of compatibility and improvement it provides relative to competitors' products. Radical innovation provides large improvements and incremental innovation, small ones.

Figure 2: Tata NANO – an affordable car/ the proposed electric car

As we review what we do and do not know about competing through innovation in network markets, we find challengers may be better off adopting more risk, not less. Both incompatible and radical innovation can offer higher expected returns than compatible and incremental innovation, respectively. Such prescriptions underestimate the powerful role of innovation as a strategy and the competitive process by which new technology periodically replaces the old. Fax machines, for example, are now largely replaced by "scan and send" technologies in computer systems. Network effects clearly raise the bar for challengers, and they may confound some of what we know about competition, but they do not negate the entire body of knowledge that management scholars and economists have painstakingly accumulated.

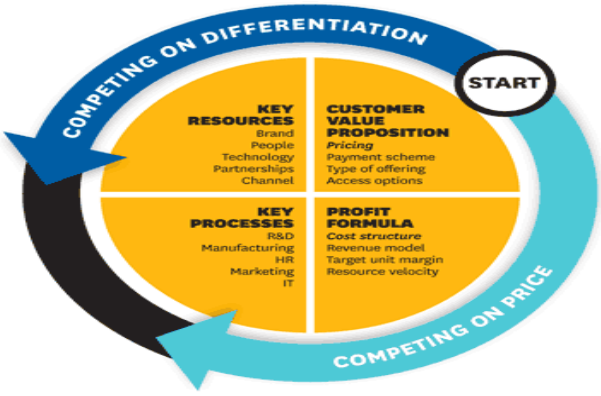

Figure 3: Competing strategy in emerging markets

Our knowledge of how to compete in emerging network markets has clearly progressed, as described earlier. However, management scholars have paid far less attention to competition in network markets. These markets have a very high barrier to entry, since network effects amplify traditional barriers such as economies of scale and capital requirements. Innovation is a way of competing in these markets that appears to have been underestimated. New entrants and fringe competitors can topple the incumbent to capture significant market share, but the way they do this—the extent to which innovation is not only compatible, but also radical—matters. Moreover, we need a more comprehensive review of market characteristics—consumer value and production functions—to understand how challengers can compete. The properties of network markets are simply more complex than initially envisioned. More in-depth analyses can bridge the gap between critiques of network externalities theory and its potential to help firms compete.

Consistent with these critiques—which point to omitted variables—firms need to analyze additional characteristics of markets and technologies when formulating a strategy to "take back" a network market. In combination, these characteristics render some types of innovation far more likely to succeed than others. Such analysis can help challengers determine whether their product should be compatible with the dominant firm's product and the extent of improvement they should provide—how much additional product benefit.

When consumers expect a product will attract the most consumers, they will buy that product, which causes the market to tip and that product to have the largest installed base. In competitions between systems that exhibit indirect network effects, consumer expectations about the availability, price, and quality of some components can be determinative when other components must be bought first. If consumers do not expect software components to be available, for example, they will not buy hardware components and, hence, the overall system. Expectations regarding these components determine which technological system wins the market. As a result, firms have strong incentives to build expectations about their own products and tear down expectations about rival products. Some of the legitimate ways firms build expectations are through sources of competitive advantage such as established reputations, well-known brand names, and visible access to capital. Firms without the previously mentioned sources of competitive advantage are more likely to pursue an open systems strategy in which technological specifications are made available to encourage compatible product development and larger networks. These firms are more likely to prefer to compete through compatible products. Compatibility has been broadly defined as the ability of a product to work well with another. We come across a phenomenon that plays a big part in adoption decisions: the fear of being stranded. If consumers adopt the losing technology, their prior investments in learning, skills, hardware, and software libraries lose substantial value. They will not be able to access future improvements associated with the winning technology.

In the last decade of the last century, the prevailing thought was that all was won or lost after a network market tipped to a dominant firm. Challengers—those fringe competitors with tiny shares and new entrants—could not compete. This is where 21st-century scholars have their work cut out for them: How can firms compete through innovation in network markets after a winning firm has become entrenched and network effects amplify barriers to entry? Some of the more visible network markets are those in which the size of the network benefit has clearly overwhelmed the size of product benefits that challengers have tried to compete with (the market for desktop operating systems, for example, which Microsoft has dominated). However, history indicates that—even in these markets— innovation that provides an overwhelming advantage over existing technology can topple incumbent dominance and establish a new network. Video communications, for ex-ample, can topple the dominance of telecommunications networks, and so forth. Product benefits, and strategies such as product differentiation, are still relevant in network markets. They merely have a higher threshold to overcome; large rather than incremental improvements must often be provided. Differentiation is a strategy that can work in network markets, if it reflects market demand. Incompatibility can be more profitable—given varied preferences in the market—than a head-on competition to meet the same preferences, which can dissipate profits.

Some mathematical function reflects the relationship between network size and network effects, how much benefit all users (members) obtain as each new user is added to a network. Increases to the size of the network simply fail to add value at some particular threshold, which means multiple networks (parties) can coexist. We see this all the time—in markets for incompatible video game consoles, for example. Yet, Microsoft's sustainable dominance of the market for desktop operating systems has led some to gloss over this aspect of network markets. It is difficult for multiple operating systems to coexist because the threshold at which network effects wane is quite high. Moreover, preferences for desktop operating system functions do not vary substantially; they have been relatively homogeneous. Even here, however, niches can be found.

The greater the network size the dominant firm provides, the greater the product benefit the challenger must provide. Moreover, characteristics such as switching costs, R&D cost structures, and technological uncertainty impose additional risks and costs on investors and consumers. Therefore, the challenger must decide how radical its product needs to be to compensate for all of these costs. Ultimately, the degree of product benefit a challenger provides determines whether it can surmount the "net" entry barrier—the traditional barriers to entry amplified by network effects. In sum, these characteristics affect expected returns from radical and incremental innovation, rendering one of these strategies more preferable than the other. See Figure 4 – an example of an Indian company which can claim to be a radical innovator for reasons such as: Designing and marketing in rural India "chotukool" – a refrigerator for the masses (see details in earlier pages), Creating and preserving greenery by converting marshland in Vikroli in Mumbai – where the company has its HQ and manufacturing facilities, for which initiatives the company received the FORBES leadership award in 2017. (See pictures in Figure 4)

Figure 4: Godrej (India) Company is a radical innovator

Consumers will simply not switch to a new and incompatible technology unless it offers significant improvements in performance. Conversely, they will switch if the challenger provides sufficient benefits. Switching costs are those costs consumers perceive they will

Incur if they replace one product with another. They include psychological costs—such as a fear of incompatibility—the cost of learning new skills to replace those rendered obsolete, as well as the cost of replacing physical components. They occur in both network and non network markets. Switching costs and the degree of incompatibility need not be related. Many people prefer brand-name pharmaceuticals even though the compositions of generic drugs are virtually identical. Moreover, switching costs depend on the specific market for which a firm is competing. Professional programmers, for example, incur fewer switching (learning) costs than nonprofessionals when upgrading software products. Whatever the source, if the market a challenger targets has switching costs, it must provide product benefits that compensate consumers for those costs as well as forgone network benefits. When switching costs are high, radical innovation should be the preferred strategy, since it is the only type of innovation capable of providing a large enough product benefit. Incremental innovation simply provides too little improvement to convince buyers to incur switching costs and give up the greater network benefit of the larger network. Radical innovation should be more profitable than incremental innovation; expected returns should be higher.

Radical innovation already carries a high degree of risk, and this type of cost structure adds to that. Such innovations have a low probability of success. However, in this context incremental innovations have no chance of success. Moreover, firms often fund dozens of projects, knowing that only one needs to succeed. These firms treat each project as an option, which they can cut short—not fully fund—when other projects indicate more promise. Alternatively, entrepreneurs can bet the farm on one "shot," knowing radical innovation offers them a greater chance of success than incremental innovation.

Established companies entering emerging markets should take a page from the strategy of start-ups, for which all markets are new: Instead of looking for additional outlets for existing offerings, they should identify unmet needs—"the jobs to be done" in our terminology—that can be fulfilled at a profit. Emerging markets teem with such jobs. Even the basic needs of their large populations may not yet have been met. In fact, the challenge lies less in finding jobs than in settling on the ones most appropriate for your company to tackle. Consumers there are defined not so much by any particular income band as by a common circumstance: Their needs are being met very poorly by existing low-end solutions, because they cannot afford

even the cheapest of the high-end alternatives. Companies that devise new business models and offerings to better meet those consumers' needs affordably will discover enormous opportunities for growth.

Offer Unique Benefits for Less

In Kenya, for example, banking services are scarce and transferring money is complicated and expensive. Without access to traditional services, many people must use unsafe alternatives such as *hawala*—an unregulated network of brokers operating on the honor system—or transport cash by bus. The UK-based Vodafone solved this problem by developing a secure, low-cost mobile money-transfer service. Called M-PESA (*M* for "mobile" and *PESA* from the Swahili word for "money"), the system is operated by Safari.com, Kenya's leading mobile network. Customers register free with an authorized M-PESA agent—typically a Safari.com dealer, but sometimes a gas station, food market, or other local shop. Once registered, they can deposit or withdraw cash at the agent or transfer money electronically to any mobile phone user, even if the recipient is not a Safaricom subscriber. Since its launch, in March 2007, the service has acquired more than 9 million customers—40% of Kenya's adult population. As of June 2010, the *Economist* reported, M-PESA customers could conduct transactions at some 17,900 retail outlets, more than half of them in rural areas. That figure dwarfs the total number of bank branches, post offices, and Post Banks—which is only about 840 nationwide.

Village Laundry Service—which was founded in Bangalore , India uses the Chamak brand—was aimed squarely at the emerging middle market. After a lot of experimentation a novel solution with all the other elements of the business model was found that makes Chamak's services affordable and profitable. The model allows the company to charge 40 rupees (about $1) per kilogram of clothing—little more than what dhobis charge and significantly less than what professional laundries and dry cleaners do (sometimes 90 rupees per garment). Village Laundry Service currently has 5,000 customers patronizing some 20 booths in Mumbai, Bangalore, and Mysore. The company expects to reach breakeven in late 2011. Of course, as with any new business, how Village Laundry Service performs over the long term will depend on a number of hard-to-predict factors.

IV. CONCLUSIONS AND RECOMMENDATION

Leadership is no 'cake walk' – it has to be earned by corporate commitment and action visible for the public. The examples quoted from India and Kenya which for emerging markets for product innovation are exemplary. We need more of this consciousness in the business world. The environmental changes are clear and somewhat loud. Businesses cannot earn profits as a matter of routine, but they need to innovate their marketing through networking and getting a real feel and pulse of the consumers. Marketing has never before been as strategic as of current times because it brings out the best of talent in companies in their innovation efforts. Because of the proliferation of digital devices, communication is faster and product approval/disapproval also happens at the same speed. This is the consciousness that is needed in the current times so that organizations awake quickly to competitor moves and combat them.

The speed of changes happening in the business environment calls for innovative strategies, some of which have been explained and illustrated in the review of literature. Examples of Tata and Godrej companies are relevant along with the strategic initiative on mobile banking services in Kenya. Marginal improvements in Products and promotion are not going to help as much as fresh concepts in product features to appeal to new market segments not explored hitherto. That is how the Godrej refrigerator and Tata electric car are going to fare.

Companies have started networking thanks to the digital connectivity. Communication modes have changed societal values and preferences. Networking has become the preferred way to communicate between persons and also for companies to communicate with customers. Because of time constraints people do not look at news paper or TV commercials as much as mobile telephones. Digital messaging in short sentences has become the order of the day and people communicate their emotions through these devices which provide suitable images to express different emotions to choose from. The only thing is they may not be the real representation of an emotion, but the nearest equivalent. These are times for quick fixes.

Many companies are looking for unique and skewed market segments (NICHE) where their offerings can give customer benefits not offered by even the nearest competitor. Such niches soon are captured by competitors and so the companies look for unique product offerings and new market segments hitherto unexplored so that their offerings are unparalleled. This is the networking market philosophy.

V. CONCLUSION AND RECOMMENDATION

In conclusion, we see that networking is the new marketing phenomenon that is catching up fast. There is scope for more pointed as well as extensive research by marketers. The author would recommend a healthy collaboration among competitors for finding new avenues and ways of marketing beneficial for all. There is no

substitution for innovation, but it involves a lot of Research and development expenditure, which may not be affordable to many companies who enter the market or their size do not permit a large spread. Industry associations may also participate in a collaborative effort to identify new skewed market segments and product offerings which may be useful for new comers. Network size and spread may be the determining factor.

However one inescapable conclusion is that the field is nascent and innovation being the key entrepreneurial ventures would be welcome.

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