Frugal Innovation – Its Concept & Attributes of Success; Learning Lessons for Western MNCs

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Abstract:
Frugal Innovation is an emerging trend as affordability has become a major constraint on purchasing behaviour of the growing population of emerging/developed economies. The Westerns MNCs are good at innovation; however working in a resource-constrained environment requires extra challenges. The success of frugal innovation depends on the ability to sense the local needs and translating them into low cost products without compromising on quality. Using four case examples of Mettler Toledo Basic Weighing Scale, GE’s Portable Ultrasound Machine, Haier’s Mini Magic Child and Philips Bedside Patient Monitoring System, the research findings reveal that the firms which are aware of the difference between developed and developing markets and are more flexible and adaptive can have more opportunities to capture the market.

Keywords: Frugal innovation, Emerging markets, Resource Constraints, Innovation Challenges.

1.0 INTRODUCTION:

The middle class consumers of emerging economies have lesser purchasing power, this has resulted in new trends that focus on low costs and high value (Zeschky et al., 2014). According to Prahlad (2010), affordability is the most important underlying concept in purchasing decisions in the low income markets. In these markets Western MNCs see great growth opportunities (Radjou, 2014). Frugal innovation that is focused on cutting out unnecessary costs by redesigning products and processes is the answer to this emerging trend. Woodridge (2010) defines it more than cheap labour, it is according to him, redesigning the procedures to eliminate all unnecessary costs.

The purpose of this study is to contribute to understanding the concept of frugal innovation. With the help of existing elaborations and conceptual models, this study will lead in extracting a definition of frugal innovation. Moreover, the paper also sheds light on the importance of the difference between developed and emerging economies. It discusses the factors that make its implementation successful. The Western MNCs that know that emerging / developing economies need different business models and organizational structures make success in capturing relevant markets.

2.0 LITERATURE REVIEW

Frugal innovation is an emerging concept; Oxford Dictionaries (2017) defines it as ‘simple and plain and costing little’. The existing literature so far lacks in-depth coverage on this topic (Hossain et al., 2016). Outlining different definitions will enable us to have a better understanding of the topic and its conceptual dimensions.
<table>
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<tr>
<th>Source</th>
<th>Definition</th>
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<td>George et al (2012)</td>
<td>Frugal innovation as &quot;innovative, low-cost and high-quality products and business models originating in developing countries and exportable to other developing countries or even the developed world&quot;.</td>
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<td>Basu et al., (2013)</td>
<td>“Frugal Innovation is a design innovation process in which the needs and context of citizens in the developing world are put first in order to develop appropriate, adaptable, affordable, and accessible services and products for emerging markets.”</td>
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<td>Bhatti (2013)</td>
<td>“Frugal innovation is a means and ends to do more with less for more people”.</td>
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<td>Rao (2013)</td>
<td>“By economizing the usage of resource-use and aiming for simple products and services, albeit sometimes using cutting edge technology, frugal-innovations have a lot to offer for sustainable-development.”</td>
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<td>Simula et al., (2015)</td>
<td>“Frugal innovation can be defined as a product, service or a solution that emerges despite financial, human, technological and other resource constraints, and where the final outcome is less pricey than competitive offerings (if available) and which meets the needs of those customers who otherwise remain un-served.”</td>
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<td>Agnihotri, (2015)</td>
<td>“Frugal innovation refers to those innovative products and services which are developed under conditions of resource constraints.” “Due to resource constraints, these products are often technologically less advanced compared to the sophisticated counterparts, but are good enough to provide the core functionality of the product.”</td>
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<td>Angot &amp; Plé, (2015)</td>
<td>“Frugal innovation means renewing the way that resources will be used. It aims to generate more business and social value than ‘traditional’ innovation. More business value, first, as by reaching huge segments of customers previously excluded by their poverty, frugal innovation makes possible to tackle untapped markets where the competition may be lower. But also more social value, as frugal innovation favors the economic development for an improved quality of life for targeted populations.”</td>
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<td>Hossain et al., (2016)</td>
<td>“Frugal innovation refers to products, services or combination of them that are affordable, sustainable, easy-to-use, and have been innovated under the resource scarcity. In general, frugal innovations are developed in and for low-income market contexts and are seen to differ from innovations in developed markets.”</td>
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<td>Center for Frugal Innovation in Germany</td>
<td>“Innovations that seek to minimize the use of material and financial resources in the complete value chain with the objective of substantially reducing the cost of usage and/or ownership of a product while fulfilling or even exceeding pre-defined criteria of acceptable quality standards.”</td>
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Based on the above, our definition of frugal innovation will be:

“Innovation that emphasis on doing more with fewer resources not losing the focus on quality.”

Frugal Innovation’s one of the most important attributes is simplicity. According to Christensen (1997) it is about offering simplicity, affordability with limited features. In figure 1, Bhatti (2011) sums up the dimensions of frugal innovation. According to him scale up, quality, distribution, servicing, adaptability and performance all play their role in making affordable products.
3.0 DESCRIPTION OF FOUR CASES:

The paper uses four exemplary cases of frugal innovation that created success for the local markets at first and later stepped into the developed markets. Kim and Park (2010) state that a firm’s capacity for innovativeness is positively influenced by its international research & development networks.

3.1 Mettler Toledo Basic Weighing Scale:

Mettler Toledo (MT) was initially found in Switzerland. The company had its repute in manufacturing weighing scales with an accuracy of up to one ten-millionth gram. When it started its operation in China, its sales decreased as it has to face fierce low cost competition from the other players present in the market. At that time, in contrast to its existing product line, MT introduced a new version of its weighing scale which was lower cost but still highly accurate. However extra and advanced features like protective covering, fully automated adjusting and electronic data analysis via PC were removed (Zeschky et al., 2011). The strategy implemented by Mettler Toledo proved to be right after 10 years as the company not only captured market share in China and other emerging economies but also in Western Countries.

3.2 GEs Portable Ultrasound Machine:

GE’s ultrasound machine was able to capture markets in emerging economies as well as in developed economies. GE is an American conglomerate. In 1979, it successfully launched high end Ultra-sound Machines in the United States markets. Later after many years, it started analyzing different countries for expansion of its Ultrasound Machine market. China was assessed by the R&D team as the market with the highest potential. However after a long presence in China’s market, finally in the late 1990s it got success after changing its perspective on capturing market share. China proved to be a very different market from those it traditionally operated. Hossein et al, (2017) state that in Western Countries the main feature of high end medical devices was a product, quality and performance, whereas in Chinese market the focused feature remained ‘product price’. This lead GE to manufacture a very low cost ultrasound machine. Moreover, China’s poor transportation system asked for such health care equipment which was portable so that the hassle of taking patients to the medical centers can be avoided. Thus GE focused on two crucial factors; price and portability. It supplied local engineers with access to its global research pool (Govindarajan & Rammurti 2011). The price of the machine thus became much lower than conventional ultrasound machine.
Initially the machine made success in China, later it has found its markets in the developed countries as well; now becoming a global product with 50% annual growth rate.

3.3 Haier’s ‘Mini Magic Child’:

In China, Hair introduced its washing machine that was customized according to local needs. Contrary to traditional big capacity, large and expensive washing machines, it introduced its ‘Mini Magic Child’ for the local market (Zeschky et al., 2011). Haier read the market and analyzed that summer was a slack season for washing machine sale in China as most of the families do not prefer using washing machines in the summer. Haier decided to attract consumers by offering new product i.e washing machine with low, medium and high water levels that can wash just one pair of socks or underwear (Hang et. al; 2010). The ‘Mini Magic Child’ saved electricity, water and & space. It got an excellent response from the consumers, they embraced the change. The success encouraged Haier to continue its series and it exported its product to 68 countries of Europe, Asia, Africa and America. Although Haier was a large company, however its flexibility, observation and readiness on creating new value for its customers encouraged it to experiment the disruptive idea. Thus generating profit as well as changing the lives of its consumers.

3.4 Philips Bedside Patient Monitoring System:

Philips has a history of successful innovations. It has also played its role in developing frugal product lines that complement the lower end of their existing offerings. Although the company like Siemens was tightly controlled by central headquarters (Zeschky et al. (2011). However its strategies show that it was much aware of the fact that frugal innovations are homegrown products that cannot be easily derived from existing Western products. Instead, they are the result of a unique value architecture that is grounded in the drive to meet basic requirements at the lowest possible cost. Second, developing frugal innovations requires local organizational structures and resources to help develop an understanding of the needs of the resource-constrained targeted markets. The Philips R&D teams in China consist of local engineers who teamed up with local doctors and hospitals. This collaboration enabled these teams to develop such products that fit into small rooms, can handle dirt, power fluctuations, and intense usage (Zeschky et al. (2011). Philips willingness to learn and understand the actual local conditions in which their products were to be used made their product offerings successful. By joining local doctors in hospitals they figured that their bedside patient monitoring system is meant to be not only a display device but it should also serve as a writing pad. Unlike Western hospitals it carried around and even into operation theaters where it was exposed to sweat and blood. Their observations offered the right combination of solutions, services and expertise to support the delivery of first-rate clinical care in the targeted areas.

4.0 IMPLICATIONS:

The insights from Mettler Toledo Basic Weighing Scale, GEs Portable Ultrasound Machine, Haier’s ‘Mini Magic Child’ and Philips Bedside Patient Monitoring System offer important and significant learning avenues for Western Multinationals who intend to pursue frugal innovation.

- Value Architecture
- Power of Local Knowledge

4.1 Value Architecture:

The common feature of frugal innovation is their focus on relatively basic needs of the poorer countries in a resource constrained environment. The development of such products needs support from several design-to-cost instruments such as target costing and value analysis. The core competency of success lies with the attitude of the team, which needs to be ready for radical cost goals. According to Zeschky et al. (2011), to meet aggressive price performance needs of resource constrained environments, three factors play a vital role: low-cost manufacturing; focus on basic functionality and minimum features sets.
4.2 Power of Local Knowledge:

Gassmann and Han 2004 states that local R&D units enable Western MNCs to build their presence in those sectors where new technological development are originating. However to fully exploit these opportunities, it is essential to empower local research & development subsidiaries to access the power of local knowledge. The vital role is played by sensing the local needs and translating them into low-cost products which are at the same time efficient in use. Zeschky et al. (2011) state that value systems, culture and living conditions in emerging markets are different from the developed world, hence it is very difficult, if not impossible for the designers and engineers raised in the West to fully cater and understand the needs of the emerging / developing markets. Personal experiences as well as the environment, in which the product will be used, are essential for its success.

5.0 CONCLUSION:

For successful frugal innovation to take place, institutional level changes are required. Leaders need to be flexible and adaptive to change. Haque (2011) states that although it is hardest to change institutions however the opportunities lie with those companies whose leaders are innovators. Such companies are not only outperforming their competitors but also disrupting the competition. The emerging markets because of the absence of these attributes are fertile for new business activities. However Western MNCs who wish to enter these markets need to learn that ignoring the cultural values and ground realities of the targeted markets will not bring any success. The strong innovative capabilities need to be complemented with local knowledge and architecture.

For future research there exists a number of opportunities to explore. To have deeper insights into the topic, a higher number of cases can be selected to come to more meaningful analysis. Moreover, possibilities of collaborations between local and western MNCs can also be discussed to further refine knowledge on the topic.

References:


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