

DISRUPTIVE TECHNOLOGY & MARKETING REFLECTIONS

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ABSTRACT

Technology begins with the Sutras of Gautama- अलौकिक प्रत्यक्षम् (Super sensuous realization) when super sensuous creativity is occurred according to ideas and imaginations which reflects the reap fruit of innovation.

These days, true responsibility has been increased among CEO of different companies. No longer will they be able to survive in the market with the traditional out look of the product. Because innovation may need not only cherished with the developing of new products rather company may also involve with redesigning process of their business model.

The process of innovation in technology has become a highly sophisticated and important process for the business world. But the process is significantly critical to the success and profitability of the business organization and thus it requires a lot of efforts regarding research and development at all levels. Therefore this paper develops models and explores marketing implications of disruptive technology which will certainly prove as a good recipe of growth of business and an effective tool to survive in the competitive marketplace and the way forward.

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Introduction:

A disruptive technology or disruptive innovation is an innovation that helps create a new market and value network, and eventually goes on to disrupt an existing market and value network (over a few years or decades), displacing an earlier technology. The term is used in business and technology literature to describe innovations that improve a product or service in ways that the market does not expect, typically first by designing for a different set of consumers in the new market and later by lowering prices in the existing market.

A **knowledge-based economy** requires a highly skilled workforce and a society, which readily incorporates new technologies. A knowledge-based economy is directly based on the production, distribution and use of knowledge and information. It creates and exploits scientific knowledge and technology through entrepreneurship and innovation; diffuses knowledge through enhanced linkages; and enhances education skills through formal and informal training. Ignorance, however, impedes the diffusion of technology and the uptake of science based career choices. It is important to create and maintain links between business and science and technology to improve our economic prosperity.

It is the *business model* that the technology enables to create the disruptive impact. The concept of disruptive technology continues a long tradition of the identification of radical technical change in the study of innovation by economists, and the development of tools for its management at a firm or policy level. However, Christensen's evolution from a technological focus to a business modeling focus is central to understanding the evolution of business at the market or industry level.

Description: In keeping with the insight that what matters economically is the business model, not the technological sophistication itself, Christensen's theory explains why many disruptive innovations are *not* "advanced technologies", which the technology mudslide hypothesis would lead one to expect. Rather, they are often novel combinations of existing off-the-shelf components; applied cleverly to a small, fledgling value network Christensen defines a disruptive innovation as a product or service designed for a new set of customers.

Generally, disruptive innovations are technologically straightforward, consisting of off-the-shelf components put together in a product architecture that are often simpler than prior approaches. They offered less of what customers in established markets wanted and so could rarely be

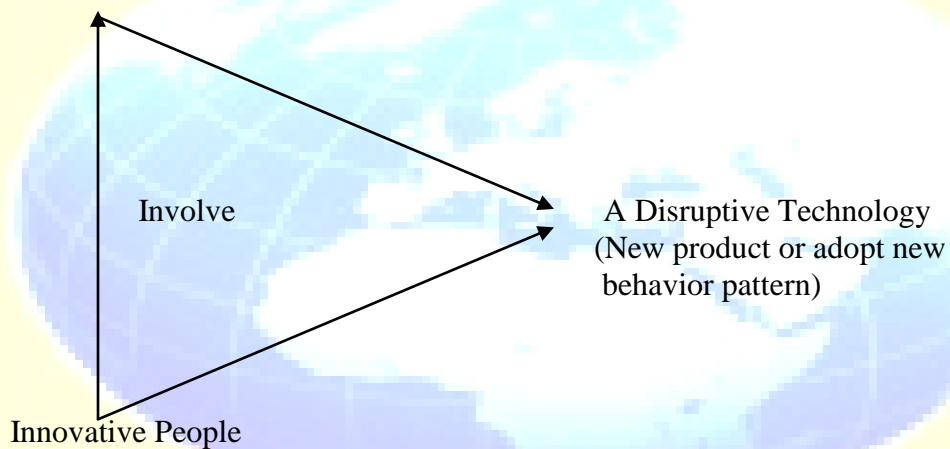
initially employed there. They offered a different package of attributes valued only in emerging markets remote from, and unimportant to the mainstream

Christensen defines a disruptive innovation as a product or service designed for a new set of customers.

So that today's philosophy of innovative people should involve for disruptive technology by following model.

Philosophy of Innovative Ideas for Disruptive technology model

Nature of product/Technology

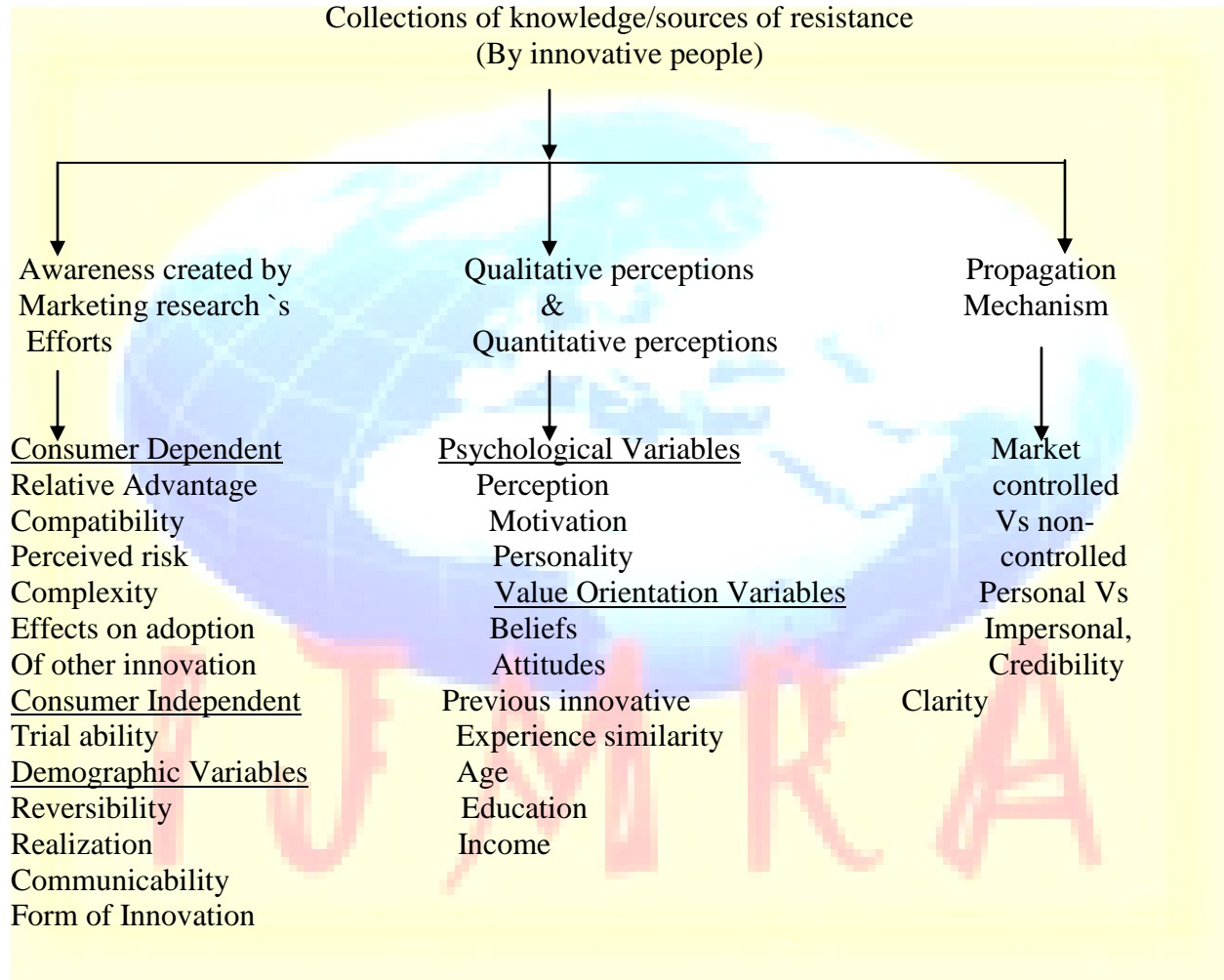


Reflection of this model explains the basic themes that innovative people should engage their inner insight, and imagination with different existing product and technology to produce disruptive technology to create disruptive market.

Therefore innovative people should go to the inner depths of their hearts & minds because even passion for excellence is a human endeavor. This endeavor is dotted by frailty, emotion, spontaneity, intuition and continuous improvement and all attributes which all are related to consumer's delights.

Innovation resistance should be properly analyzed by innovative people to win consumer's delights. A model of disruptive innovation resistance has been developed in an attempt to provide further insight with knowledge of different factors which can certainly affect resistance

,A Model of Disruptive Technology Resistance



Christensen distinguishes between "low-end disruption" which targets customers who do not need the full performance valued by customers at the high end of the market and "new-market disruption" which targets customers who have needs that were previously un-served by existing incumbents.

But in low-end disruption, the disruptor is focused initially on serving the least profitable customer, who is happy with a good enough product. This type of customer is not willing to pay premium for enhancements in product functionality. Once the disruptor has gained foot hold in this customer segment, it seeks to improve its profit margin. To get higher profit margins, the disruptor needs to enter the segment where the customer is willing to pay a little more for higher quality. To ensure this quality in its product, the disruptor needs to innovate

Marketing implications: Disruptive technologies are not always disruptive to customers, and often take a long time before they are significantly disruptive to established companies. They are often difficult to recognize. Indeed, as Christensen points out and studies have shown, it is often entirely rational for incumbent companies to ignore disruptive innovations, since they compare so badly with existing technologies or products, and the deceptively small market available for a disruptive innovation is often very small compared to the market for the established technology. Even if a disruptive innovation is recognized, existing businesses are often reluctant to take advantage of it, since it would involve competing with their existing (and more profitable) technological approach. Christensen recommends that existing firms watch for these innovations, invest in small firms that might adopt these innovations, and continue to push technological demands in their core market so that performance stays above what disruptive technologies can achieve.

Few examples of disruptive innovations:

Innovation: Personal computers

Disrupted market: Minicomputers, Workstation. Word processors, Lisp machines

Reflections: Minicomputers were originally presented as an inexpensive alternative to mainframes and mainframe manufacturers did not consider them a serious threat in their market. Eventually, the market for minicomputers became much larger than the market for mainframes. Similarly, the market for main frames and mini-computers was seriously disrupted by **personal computers**. Although they were not at all competitive at the time of their introduction in the 1970s, by the mid 1980s they had improved exponentially and could compete directly with the more expensive machines

Innovation: Digital photography

Disrupted market: Chemical photography

Reflections: Early digital cameras suffered from low picture quality and resolution and long **shutter lag**. Quality and resolution are no longer major issues and shutter lag is much less than it used to be. The convenience of small memory cards and portable hard drives that hold hundreds or thousands of pictures, as well as the lack of the need to develop these pictures, also helped. Digital cameras have a high power consumption (but several lightweight battery packs can provide enough power for thousands of pictures). Cameras for classic photography are stand-alone devices. In the same manner, high-resolution **digital video** recording has replaced film stock, except for high-budget motion pictures

Innovation: Computer printers

Disrupted market: Offset printing

Reflections: Offset printing has a high **overhead cost**, but very low **unit cost** compared to computer printers, and superior quality. But as printers, especially laser printers, have improved in speed and quality, they have become increasingly useful for creating documents in limited issues

Innovation: Plastic

Disrupted market: Metal, wood, glass etc

Reflections: early plastics had very limited use - their main advantages were electric insulation and low cost. New forms had advantages such as transparency, elasticity and combustibility. In the early 21st century, plastics can be used for nearly all household items previously made of metal, wood and glass

Innovation: Nano car

Disrupted market: car of general price range.

Reflection: Nano car is the best examples of disruptive technology which has given the opportunity to middle class to obtain a car

CONCLUSION: Low-end disruption" occurs when the rate at which products improve exceeds the rate at which customers can adopt the new performance. Therefore, at some point the performance of the product overshoots the needs of certain customer segments. At this point, a disruptive technology may enter the market and provide a product which has lower performance than the incumbent but which exceeds the requirements of certain segments, thereby gaining a foothold in the market.

Therefore it is realized that disruptive technology is the best answer to the question of CK Prahalad who always discussed---- How to fortunate the bottom of pyramid-- Because ``Sage Vasistha said to Rama in Yoga Vasistha, there is naught which is real nor is there aught which is unreal. All is made possible everywhere in this dream known as *creation*.’’

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