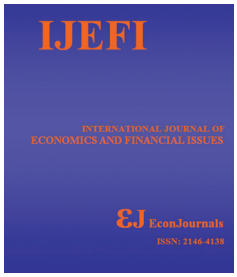

International Journal of Economics and Financial Issues

ISSN: 2146-4138

available at http: www.econjournals.com

International Journal of Economics and Financial Issues, 2016, 6(S8) 274-279.

Special Issue for "Fundamental and Applied Research in Economics and Management: New Perspectives"

Strategy of Disruptive Innovation in Emerging Regional Markets: Factors of Success and Failure

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ABSTRACT

Disruptive innovation opens up new technological cycle and a new cycle of business innovation, because it is not intended to support the existing and established core technology, with strong well-established company in this market, and it aims to completely change the technology radically to undermine the market. Each of the above concepts of innovation in their own way successfully draws attention to is actually the same phenomenon-change of technological cycles or economic cycles, the depth of the changes in the economic system. Therefore, they can be considered as homogeneous, interchangeable concepts. This article is devoted to analysis of formation and development of "disruptive" innovation. We analyzed the factors of success and failure "disruptive" strategies. On the basis of experience in the development of disruptive strategies based on demand creation, a comparison of innovative models being implemented in various industry markets.

Keywords: Disruptive Innovations, Developing Countries, Demand, Production Cycle, Technology, Disruptive Strategy, Innovative Product
JEL Classifications: O30, Q55, O18, R11

1. INNOVATIONS AS A FACTOR OF MASSIVE CHANGE

From the variety of approaches to the analysis of crisis and post-crisis processes in the world economy deserves special attention in the theory of long cycles of conjuncture N. Kondratieff and its subsequent development in the framework of the "technological" theory of economic development advocated by was J. Schumpeter, G. Mensch, C. Kuznets, K. Freeman, P. Romer, D. Yutti and others (Kondratyev, 1989; Mensch, 1979). Based on the theory of long conjunctural waves Schumpeter explained the possibility of withdrawal of the production system from the crisis associated not with the growth of business scale, reduce costs or increase the price of the same goods, but with the change in the economic process through the creation and implementation of innovations. J. Schumpeter considered innovation as a means of overcoming economic crises. But the starting point in turning points for sustainable development are not just innovation, but radical innovation, which is the main criterion of formation of priority directions of technological development, and which ultimately determine the direction of structural shifts and economic growth. The established technological level of production gradually exhausts itself, and at some stage, requires radical innovations (on the downward wave of the big K-cycles) that becomes a trigger for the formation of "clusters of basic innovations," which, in turn, form a new "technological system" of social production.

J. Schumpeter showed that in the dynamic process of innovation, promote economic development, in which new technologies replace the old, calling the process "creative destruction." He used the terms "radical" and "incremental" innovations. From the point of view of Schumpeter, radical innovations give rise to large-scale revolutionary change, while improving, incremental innovations

gradually advancing the process of change (Schumpeter, 1939). J. Schumpeter held the view that radical innovation is determined as a new technological Foundation of the system and generate the pulse structural changes in the overall model of social development (Alt and Puschmann, 2012).

In the 1990s, American scientists from the Massachusetts Institute of Technology and Harvard University have developed and enriched the concept of incremental and radical innovation the concept of so-called "architectural" and "modulated" innovation. They came to the conclusion that there are more diverse and ambiguous combinations of elements of technology (architecture), changed (or unchanged) elements of the architecture, which in reality significantly influence on the competitiveness of companies and entire industries. If you stick to this approach, the output from the crisis of 2008-2009 associated with radical innovation. They are most dramatically updating themselves elements of technology and the connections between these elements within the system technological concepts (that is as revolutionary and "destructive" for all parameters in this matrix). All other types of innovations simply allow you to survive the completion of past technological paradigm. For private corporations and it's a lot, because the new, more promising forms of business yet. Of course, only the architectural and/or modulated innovations in the conditions of change that will not be able to provide the entire economy stable growth due to scale.

Each of the above concepts of innovation in their own way successfully draws attention to is actually the same phenomenon-change of technological cycles or economic cycles, the depth of the changes in the economic system. Therefore, they can be considered as homogeneous, interchangeable concepts.

Frequently used the terms "disruptive," "breakthrough" innovations are distinguished according to different criteria. These concepts characterize the extent of the economic benefits of radical innovative products on the market.

2. FACTORS OF SUCCESS AND FAILURE OF DISRUPTIVE INNOVATION

The theory of disruptive innovation has been described by Clayton Christenson (the most influential business thinker in the world by Thinkers 50) from Harvard business school in his book "innovator's Dilemma." Christensen used the term to describe innovations that create new markets and open up new customer segments. They achieve this partly through the use of new technologies, and partly by modernizing traditional business models and old methods, but in the new key.

Disruptive innovation opens up new technological cycle and a new cycle of business innovation, because it is not intended to support the existing and established core technology, with strong well-established company in this market, and it aims to completely change the technology radically to undermine the market. In Figure 1 is a diagram explaining the essence of "disruptive" technology.

Products "disruptive" technology first, low functional quality, but they differ in some significant attractive sides: They are smaller, much lighter, easier, more convenient, more economical (the first handheld receivers was a bad sound, but they were ten times smaller and lighter and they could carry). Then they gradually with increasing rate are becoming more and more qualitative.

Disruptive innovations are divided into two types. The first occurs in the following scenario: The market has a new product that is fundamentally different from existing ones. Initially it is worse in quality, but has the hidden potential to modernize and gain market share before competitors wake up (Boni, 2012). The second type of access to new market where unique product does not exist.

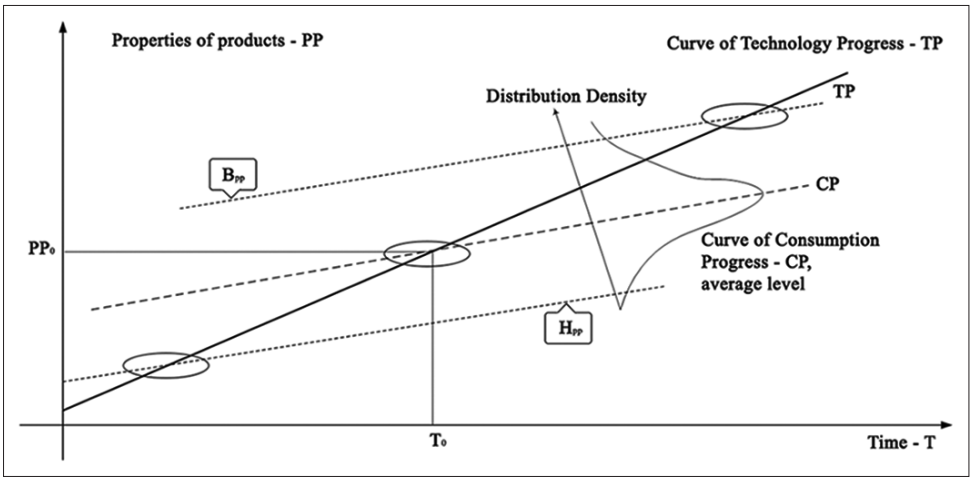
The other type almost always wins. Paradoxically, a startup with hundreds of employees and meager financial capabilities can sink the monster, which has tens of thousands of employees. If startups are able to innovate, which really undermines the market and changes the rules on him, and then he has a good chance to rise above the leaders. This is true not only for hi-tech. A good example is the steel industry. Until the seventies of the XX century all steel is produced in huge plants, integrated steel holdings. The construction of such a plant costs billions of dollars. The company produces all types of steel-from low-quality cheap fittings to sheet metal. Suddenly appeared the so-called mini mills-small plants, the cost of which was much lower compared with the huge factories. At first, the technologies used at these plants, allowed to do only rebar from scrap metal. However, its price was substantially below the price of rebar, produced in giant factories. The leaders of the market relief gave way to small plants this niche, explaining to shareholders that the production of rebar was more of an obligation and bring more headaches than profits (the margin from the valves of large plants was 4%, while mini mills - 7%). A buyer, of course, was also pleased with the lower prices. Some time passed and technology improved mini mills. In the early 1980s they started to make not only rebar, but also angle iron. Large factories and then retreated, preferring to concentrate on the production of high quality steel. But after a few years' technology has allowed mini mills, structural steel at competitive prices. A holding was comforted by the fact that the remaining iron is 55% of the steel market and brings them the greatest margin.

How it all ended, it is easy to guess. It took another few years and the mini mills made it to the market iron sheet, starting to release it at prices 20-30% below the prices of integrated enterprises.

A classic example of disruptive innovation of the second type is the production of computer disks. Modernization of the media happened very quickly is over 20 years happened three disruptive turn of events (Antonioli et al., 2013).

In the 1970s was performed on 14-inch discs for computers; other drives on the market did not exist. Closer to 1980, there were a couple of companies that released the 8-inch drives with memory 10-20 MB. Producers were interested in a computer memory of about 300-400 MB, so they remained indifferent to the novelty. The result is an 8-inch drives appeared on the market, where before the drives were not used at all-the market of mini-computers. They

Figure 1: The progress of technology through disruptive innovation and progress of consumption with the lower price and upper sectors of the market



were smaller and cheaper 14 inches; it is more convenient to use. In the middle of 1980s they successfully met the requirements of the computer, replacing the market with all the former players.

It's been <5 years, and history repeated itself exactly: There were disks of 5.25 inches, memory about 5-10 MB. They captured the personal computer market because the manufacturers 8 inches felt comfortable ruling the market of mini-computers and mainframes. But after a few years improved the 5.25-inch and has captured the market of mini-computers (the so-called common in 1960-1980 years, "small" computers that were the size of the Cabinet to a small room). Finally, it was the 1990s, and the same story repeated with floppy disks (3.5 inches). Their makers started with the laptop market and subsequently captured the market for personal computers.

Interesting fact: 17 of the companies producing the discs in 1976, after 20 years went out of business, except IBM. During this time, the industry has created 129 of the companies, of which 107 went bankrupt. Most failed because missed disruptive innovation.

The problem is that companies affected by disruptive investments, the profit forecast was based on the assumption that, if there is no innovation, cash flows will remain the same as now. Required investments and future return on innovation compared with zero. But these companies did not take into account that in the modern economy in the absence of innovation, the cash flows fall over time.

"Victims" of disruptive investment invest, usually in large market segments and satisfying the most important clients. This is the case when a successful marketer and the requirement to listen to the customer lead to a disastrous result. For example, the company 90% of the market, it does what you need in this segment. From the point of view of strategy, it correctly. The problem is that a disruptive innovation out to another small market segment and begin the operation to capture him with a tiny foothold. Large companies it is difficult to create an innovative product. Now, many are aware of this and are beginning to use special mechanisms. Usually, these maneuvers are that startups are created outside the company. For example, if within the company the group comes up with something interesting, promising, like a major innovation, the group is removed from the company, create a startup and let it float freely for several years (Barbaroux, 2014). If the project is successful, the company gets a new technology.

Outdated products out of use immediately. When you have a big market share, you find it hard to track changes in real time. When companies notice that you're losing consumers of their product or service is usually too late.

However, not every promising technology fits into the daily lives of the target audience, resulting in new habits. Take, for example, Segway is widely publicized and technically unique invention. This self-electric scooter was too awkward to manage and too expensive to mass change the behavior of the target audience. Since 2001, only sold about 50,000 copies of this vehicle. Similar story with machines for making homemade soda is Soda-Stream. They are already widely used, but it is not yet clear whether they will become popular enough to undermine the production industry of carbonated beverages. It depends on how many people the possibility at any time to prepare their own soda outweighs the ability to buy a drink in disposable packaging, which is then washing is not necessary.

Another good example of disruptive changes in production technologies-digital prototyping. This technology, which recently received wide distribution, is changing the fundamental practices of most industries. Installation for prototyping represent three-dimensional (3D) printers with software that can create physical objects of a predetermined shape by overlaying each other hundreds or even thousands of layers of special materials, usually polymeric, plastic, or metal. As always happens with technological breakthrough, every year there are faster, cheaper and more functional devices of this kind. At the moment, this technology flourished. More than two thirds of US manufacturing companies surveyed in 2013 as part of the ongoing PwC International study of innovations, said that one way or another used 3D printers (Garrett, 2014).

3. SUSTAINABLE COMPETITIVE ADVANTAGE AS THE BASIS FOR THE SUCCESS OF DISRUPTIVE INNOVATION

Obviously, not all cheap products targeted to consumers who could not buy expensive counterparts of these products can be considered "disruptive." To become "disruptive," cheap product must meet two criteria. First, it should have a lower level of "functional" from the point of view of those customers who are already using similar expensive products. These clients will first ignore the not enough a functional product, but other consumers (who have not used similar products) will be attracted by the low price.

Second, this product has become disruptive, it needs to improve and become "good enough" from the point of view of functionality (becoming attractive for the majority of consumers of similar products available on the market previously), but keep a lower price. In other words, it should be "good enough" in quality and best in price.

There is an element of speaker: "Disruptive" the product does how it develops with time and how it reacts manufacturers of other similar products (Hari et al., 2014).

Thus the important conclusion that one can never say for sure whether the product is "disruptive." To assess whether certain innovations created in emerging markets, to become "disruptive" in the more developed economies, it is necessary to answer two questions:

- Whether to keep innovators from developing countries a significant cost advantage over competitors from developed countries?
- Can innovators from developing countries to reduce the gap in terms of quality so that consumers from developed countries began to consider their products "good enough"?

The answers to these questions will allow us to understand what factors will contribute to the success (or failure) "disruptive" products. For example, cheap disposable razors, bred in the 1970s by the company Vs, became a powerful "disruptive" proposal in the background of Gillette razors and allowed Bic. to the beginning of the 1980s to win 25% of the global market for disposable razors (Osiyevskyy and Dewald, 2015). However, Gillette responded with its own line of inexpensive single-machine, and by the early 1990s, the products of Bic ceased to represent a significant threat to Gillette in this market.

On the other hand, airlines-low-cost airlines not offering passengers' additional services, have undermined and continue to undermine the market position of traditional airlines. The same can be say about their own brands of the supermarket chains (which now occupies more than 60% of the shelves in the supermarkets of Europe and the United States). Why do some disruptive innovations change the face of the relevant sectoral markets, and others not?

To "disruptive" goods had the chance to win in competition with the existing products, you need to invest in improving their quality and at the same time to maintain a price advantage compared to existing products. The success of the company's efforts to preserve price advantage depends on the source of this price advantage and its sustainability. If the cost advantage of "disruptive" of goods is achieved through low labor costs or by modification of the product (reducing the number of parts, using cheaper components, etc.), other manufacturers of similar products will be able to find a way to neutralize that advantage. For example, if the cost advantage of the "disruptive" product due to the novelty of its design, other manufacturers can thus to change the design of their own products. It was a Swiss watch company when Japanese manufacturers in the 1970s successfully "undermined" the market through the production of cheap quartz watches. In response, the Swiss have developed a cheaper product - Swatch watch. The Swiss costs have been reduced, removing those product features which, they decided, was optional, and improving other characteristics such as style and design (Mac an Bhaird and Lynn, 2015). Thus, the clock virtually eliminated the cost advantage of the "disruptive" Japanese brands, at the same time offering consumers another distinctive advantage is the style. In the end the Swiss won back almost all lost market share hours.

But perhaps the most amazing format for disruptive innovation from bottom of pyramid entrepreneurs, who invent new ways of providing financial services in the segment of traditional players in the financial industry. According to Christenson: "When big companies fail, it often is not because they did something wrong, but precisely because they did everything just right. Successful companies train their employees so they can as efficiently as possible, so to speak, to support innovation to maintain profitability, retain market share for this products are gradually improving. The main problem is that this approach makes the company vulnerable to disruptive innovation, which are originally not in the most obvious sectors of the market and not noticeable due to the low profitability at the start-this is the place where the real revolution, and then wreaked havoc among the traditional players in the market."

A study conducted by Christenson shows that large and successful corporations are not capable of breakthrough innovations. Their internal processes are built in such a way that they always choose the more predictable scenario, losing the real picture of the future. The only development option for the large companies in this case is the separation of independent teams in the whole of the independent group, which will develop breakthrough technologies. They must be in separate buildings and to choose their own name, are not required to comply with the corporate dress code and working hours, they don't have to defend their budgets based on standard corporate cliches. A Steve job has created for J. Ive, the legendary Apple designer, such conditions, resulting in the company again went to a completely new height. These men should have entrepreneurial spirit even at the time, as are regular managers. In this way the company artificially creates its own start-up and employees need to feel like he belongs to them and they work only for themselves.

In our opinion, the company that sells "disruptive" strategy through the conquest of new markets is not faced with competitors, and lack of consumption. "Disruptive" innovative product is so cheap

and easy to handle that large groups of the population, who until then did not use the products in this category are beginning to buy this product and enjoy using them. Personal computer and the first radios battery powered Sony - examples of innovative "disruptive" products, successfully won new markets: Their first users had never before used the products of earlier generations. The same products were desktop copiers Canon: Their appearance, consumers have the opportunity to make photocopies at the workplace, instead of having to carry the original in the copy center, where the copies produced by a specialist. When thanks to Canon's Photocopying became available to wide categories of the population, began to copy much more. Thus, a company that wants to use the "disruptive" strategy to conquer new markets must first of all create new networks of value creation: She has to deal with the lack of consumption, not with the leader of a particular industry.

Initially, the company that produces the market of "disruptive" innovative product and thereby conquering new markets, opposed to no consumption in a particular network. However, as product improvement, the manufacturer is gradually starting to win and other networks of value creation, luring consumers to its new network, the basis for which was the least demanding sector of the market. That is "disruptive" innovative products don't invade immediately to the principal markets; just a new, improved product starts to wonder more and more consumers. So, using the "disruptive" strategy, the manufacturer pulls consumers from the core network value creation in the new.

As the company implements its "disruptive" strategy, reaching out to new markets and thus competes with no consumption, the recognized market leaders do not feel threatened as long as the "disruptive" strategy will not be included finally in its final phase. In fact, when just appeared on the market, the company began to draw consumers from the lower end of the source network value creation; it is even beneficial to the leaders (Sarkis, 2012). They themselves at this time struggling to advance in the upper sector of its market, and the income from the lower sectors that are moving to the company-beginner leaders make up the profit from the sale support innovative projects.

If a new product designed for consumers from the lower sectors of the source network value creation, we can speak of "disruptive" strategy focused on the lower sector of the market. Steel mini, discount stores, Korean car manufacturers-they are all included in the North American markets in its pure form by implementing the "disruptive" strategy aimed at the lower market sector: New markets, these companies did not create. They grew up using based on the low pricing business model, and thus lured customers least attractive to established companies in the market. And although the "disruptive" strategy for the conquest of new markets and "disruptive" strategy, focused on the lower sector of the market differ, both put market leaders in a dilemma: The first strategy forces them to ignore the attack, and the second to run away from the attack.

"Disruptive" strategy, focused on the lower sector of the market is a perfect example of what economist Joseph Schumpeter called "creative destruction." This strategy involves a step-by-step reduction of prices in the industry, and it is achieved by the fact that entering the market the company is replacing the leader. On the contrary, for the implementation of the "disruptive" strategy for the conquest of new markets requires a certain creative period: Before the old consumer market will be completely destroyed, you need to create a new sector of consumption. Exclusion of competitors is a continuous process which occurs under the influence of certain forces. This means that companies that have successfully used the "disruptive" strategy, marketing, subsequently themselves become victims of the "disruptive" strategy. For example, by introducing "disruptive" innovative product is the new model of Ford Model T, Ford Company has pushed the strong growth of the automotive market. In the next step the impulse given to a new wave of Japanese companies Toyota, Nissan and Honda, and then Korean car manufacturers Hyundai and Kia. The company is a supplier of telephone services AT&T at the time pushed out of the market a rival company Western Union, and now AT&T from the sector of long-distance communications replacing mobile company. Synthetic materials manufactured by Dow, DuPont and General Electrics displace steel, and at the same time they are themselves ousted manufacturers of polyamide, such as Himont.

4. DISRUPTIVE INNOVATION IN EMERGING MARKETS: TRENDS OF FORMATION AND DEVELOPMENT

Some researchers believe that similar "disruptive" processes are maturing and today's emerging markets, especially China and India. Perhaps the most telling example of "disruptive" innovations - low-cost Nano car developed by Tata Motors in India in 2009. To "disruptive" products can be attributed to eco-friendly portable water purification system, Tata Swach, and battery operated cheap portable refrigerator ChotuKool, which brought to the Indian market a local company Godrej and Boyce, and cheapest LePhone smartphone, which became the response of the Chinese company Lenovo for Apple's iPhone.

These examples are only the tip of the iceberg. Already, a number of less well-known companies and entrepreneurs offer billions of local consumers with cheap products, without encountering any serious competition from international corporations. Entrenched in their local markets, entrepreneurs from developing countries will begin to break to the markets of developed countries. There, they will probably start with the conquest of cheap segments, gradually moving in the more expensive segments. Many companies from developed countries fear that history is repeating itself and coming next big thing companies from developing countries to global markets, at the forefront of which are China and India.

Hundreds of millions of people in China don't buy air conditioners because the average Chinese family has no money for expensive; consume a lot of electricity instruments on the market. In addition, the current conditioners cannot be inserted in the usual Chinese window of the apartment. If the company Hitachi has developed a compact air conditioner that would cost no more than $50 and would consume a current of only 10 amps, it easily would fit in the window, close to Shanghai 10-m apartment, and it would have been an interesting proposition. Because of all of the competitors,

only the Hitachi has a business model that allows the company to make a profit at such low prices, promotion in the upper sector of the market would have already been less difficult.

Now the management of Western companies concerned about the threat posed to their cheap manufacturing in China, and their concern is understandable. But we believe that the most powerful weapon in the competition is the presence in China of numerous potential markets where there is no consumption. The company that dare to explore this fertile ground of new markets with the help of "subversive" strategy that will create real conditions for profitable growth. Today, companies operating in emerging markets, serving billions of local consumers, offer them innovative and inexpensive products. What happens if these companies suddenly appear on the markets of developed countries?

5. ACKNOWLEDGMENT

The study was performed under grant of the President RF for state support of leading scientific schools No. NSH-9726.2016.6 "Implementation of state policy through the development of tools of strategic and indicative planning."

REFERENCES

Alt, R., Puschmann, T. (2012), The rise of customer-oriented banking - Electronic markets are paving the way for change in the financial industry. Electronic Markets, 3, 1-13.

Antonioli, D., Bianchi, A., Mazzanti, M., Montresor, S., Pini, P. (2013), Innovation strategies and economic crisis: Evidence from firm-level Italian data. Economia Politica, 30(1), 33-68.

Barbaroux, P. (2014), Innovation disruptive et naissance d'un écosystème: Voyage aux origines de linternet. Revue d'Economie Industrielle, 146(2), 27-59.

Boni, A.A. (2012), Project, product or company. Journal of Commercial Biotechnology, 18(2), 13-18.

Garrett, B. (2014), 3D printing: New economic paradigms and strategic shifts. Global Policy, 5(1), 70-75.

Hari, A.P.N., Subramaniam, S.R., Dileep, K.M. (2014), Impact of innovation capacity and anticipatory competence on organizational health: A resource based study of Nokia, Motorola and Blackberry. International Journal of Economic Research, 11(2), 395-415.

Kondratyev, N. (1989), Problems of Economic Dynamics. Moscow: Economics.

Mac an Bhaird, C., Lynn, T. (2015), Seeding the cloud: Financial bootstrapping in the computer software sector. Venture Capital, 17(1-2), 151-170.

Mensch, G. (1979), Stalemate in Technology. Cambridge, Massachusetts: Ballinger Publishing Co.

Osiyevskyy, O., Dewald, J. (2015), Explorative versus exploitative business model change: The cognitive antecedents of firm-level responses to disruptive innovation. Strategic Entrepreneurship Journal, 9(1), 58-78.

Sarkis, H. (2012), Entrepreneurship, acquisitions and systems of innovation. International Journal of Entrepreneurship and Small Business, 16(3), 314-335.

Schumpeter, J. (1939), Business Cycles. New York, NY: McGraw-Hill.