

Innovation and the Disruptive Economy: Recent Developments on the Social Change of the Socioeconomic Phenomenon

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The article elaborates on the phenomenon of disruptive economies due to innovation changes. The purpose of the paper is to formulate various theories, analyse research results from a variety of scientific literatures and identify socioeconomic phenomenons due to innovation changes. The results show that innovation and social changes have a big influence on the disruptive economy.

Key words: *disruptive, economy, Innovation, social change.*

Introduction

Knowledge and science are the fundamental supports to change the world order. A strong and civilised country has high level of correlation with knowledge, science and innovation. The monumental work which benefits the people is the embodiment of civilized science and innovation. Science is a system binding the laws of truth which can be scientifically justified (Kuhn, 1962).

“Knowledge or a system of knowledge covering general truths or the operation of general laws especially as obtained and tested through scientific method” (Kuhn, 1962).

Therefore, science moves progressively and cumulatively in every set of interaction processes and findings based on common laws and scientifically responsible methods. In the early development of science, Isaac Newton became a main pioneer by extending the laws of motion, force and energy. These laws lasted until Einstein's law notion of the speed of light and the law of relativism. The findings of both scientists greatly affected the world and how the world works. The transition period that occurs after scientific discoveries, produces disruption and uncertainty over the cultural and socioeconomic systems. Khun (1962) called this a stage of anomaly, crisis and revolutionary direction to rediscover normal science. The directions of the revolution are (1) moving rapidly and suddenly, and changing thoroughly, (2) fundamental changes in political organizations, (3) the design of activities to fundamentally change the influence of socio-economic situations, (4) changes of paradigms and ways of thinking (4) Khun, 1962).

Innovation and Disruption

The period of anomaly, crisis and revolution as stated by Kuhn (1962) appears in front of us now. Revolutionary innovation changes have altered the social and cultural structure of society. Nowadays everything can be connected with digital communication. Japan, as a country of innovation, plans an investment of \$330 million to produce electric-powered vehicles and continues to expand its high-speed magnetically levitated train system.

The UK government plans to make their country a leading hub for innovation and technology investment. Currently, they are a hub for big data and fintech technology. China develops high-tech parks, with Shanghai even encourages the innovation of digital media and entertainment companies. Furthermore, Berlin is vigorously promoting an innovation model city. The led digitally progressive governments to require an agenda that supports IT security and promotes high-speed internet. Such rapid innovation changes bring the world into disruption (KPMG, 2017). Fast, efficient, friendly, easy and trendy innovations consistently replace previous technology. The replacement process changes the economic structure and behaviour, which results in several disruptive economic activities. This process reveals natural selection, as research shows that science-based countries are able to remain robust in their response to rapid changes.

Implemented innovations in many countries arise from the results of research and study, thus innovation and research become a complementary double word (Saefuddin, 2017). Consistent and continuous long-term plans implemented by countries produce innovative works lead to social and cultural changes. Therefore, as a developing country, Indonesia needs a strategic plan to carefully develop science and technology in response to the challenges of this age.

Disruptive Consumer Behaviour

Rapid innovation changes have an impact on consumers' behaviour. One of the causes of the changes in behaviour is the revolutionary change of innovation. The change in behaviour causes disruptive changes to other economic activities. Seven-Eleven supermarkets are a company which suffered from the disruptive effects of innovation which caused the company to not survive. Similarly, Taxi Express, who publicly stated that the company suffered a huge loss and could no longer operate due to the influence of online taxi systems like Grab Car, Go Car and Uber. Online system which do not prioritize asset ownership allow the innovation industry to have significantly reduced expenses. This allowed the above companies to offer more competitive prices than traditional taxis. Online taxi operators only need digital innovation-based capital to invite vehicle owners to join their online companies.

Innovation and disruption can also lead to an increase in the number of bankrupted stores. Retail industry stores, such as Ramayana Supermarket, went bankrupt due to their inability to overcome online trading. Society has changed, individuals want the same outcomes in an easier way. People stay at home while buying online products, while waiting for an online purchase, they can also order food online. In 8-12 hours they may not leave their house but their invisible economic transactions can generate hundreds to billions of rupiah.

Sharing Economy and Capitalism

A sharing economy does not “require” large capital accumulation. Companies can use digital device innovation to build up the economy. Economic actors do not require (1) motors to create “Gojek and Grab Industries”; (2) a textile factory to market various clothing; (3) a hotel to obtain economic benefits; (4) shop houses and warehouses to store products to be sold. The economic actors have consumers' trust which results in reciprocity (Fukuyama, 2000). The digital economy brings a leaner economic structure from the organizational side and more a transparent structure from the legal and trust sides, thus they have smaller transactional costs (Williamson, 2005).

Behind the hustle and bustle of digital and sharing economies, opportunistic behaviour and capitalism still can see product gaps and seize opportunities (Marx, 1867). Economic actors are able to control information and regulate rules for individual benefit. A company is able to set conditions for partners and resource owners to follow if they want to earn bonuses. In online transportation, vehicle owners are controlled by information owners, in this case, the digital licensees. Hired resource owners, who are connected to the digital system, can only be submissive to the unilateral regulations of digital licensees. Resource owners are not involved in determining regulations, bonus distribution and profit sharing percentage, as they are not shown publicly. Resource owners only get a percentage based on the already existing

regulation without knowing the dividend distribution. These are definitely the initial stages of capitalism and accumulation of information. Accumulation of capital has been replaced with accumulation of information, however, the accumulation of information increases the accumulation of capital and the exploitation of human resources.

Most people in the world are overwhelmed by innovation and technology, however, behind them all, opportunity remains a big threat for those who work only to meet life's necessities. Behind the grandeur, innovation still poses a threat to those who have not been able to organize themselves well, and the lack of a strong government presence as a regulator, can create injustice in the disruptive economy. The invisible hands, which are expected to be a counterweight for economic activities and markets, are not always acting as market balancers. The invisible hands often distort the price and are act far away from expectations. The invisible hands also often drive up transaction costs due to weak governmental oversight and the weak credible commitment.

Asymmetric and Institutional Economics

Innovation and technology have gone far beyond the regulatory capabilities and institutional systems of economies. The digital economy can no longer be bridged by governmental regulations, thus creating market anomalies and disruption. The digitalized economy creates anomalies for formal economic institutional systems. Digital economic actors are able to significantly reduce transaction costs, causing traditional businesses to be overwhelmed, affecting their survival. These economic actors are often untraceable, because the trading arena of the economy runs digitally, while "remote" transactions can go through the flow of accounts between producers and consumers.

Disruption indirectly builds an exclusive and independent institutional system that is removed from governmental regulators. The accessible information network, supported with behavioural changes, and the attachment of trust at a certain level of society, encourages the digital economy which creates significant shifts in the traditional economy. These result in spontaneously-driven or incumbent regulation. On the other hand, spontaneity cannot be followed by government regulation because regulations are not easy to change. Furthermore, the disruptive economy moves randomly and simultaneously, so that at the beginning of the innovation and digitalization cycle, it is difficult for governments to detect the incoming change. Moreover, innovation and disruption, which are initially considered unusual and unobtrusive by some old players, are an invisible movement which is gradually shutting down old economic actors.



The government is an institution which is responsible for making changes and mediating with old players to avoid extreme social issues. Mediation can occur through regulations containing price list adjustments, provisions of online trading and cooperation.

Innovation, Food, Energy and Uncertainty

European diesel cars are threatened by electric cars as the interest in electric cars is increasing. The producers of oil-fuelled cars are worried that global consumers will divert their consumption towards electric cars. Production targets and oil-fueled car markets experienced a correction due to the emergence of electric cars. Other innovation companies, such as telecommunication companies, are careful when releasing products because of the investment required and the invisible or uncertain market competitiveness. The technological innovation race causes the technology market to run anonymously, where old players cannot accelerate quickly to take a role in the economic arena.

Uncertainties can trigger the downturn and decline of corrected global economic growth. During 1998 - 2007, the average global economic growth only increased by 2%; from 2011 - 2018, economic growth never reached 2%. Nevertheless, this economic downturn has not strongly impressed on countries, such as Indonesia, with food and innovation-based economies. Although Indonesian technological innovation is relatively low compared to developed countries, economic growth is still maintained at 5%. The trade balance was positive in the second half of 2017, with the main supporter of this being the palm oil and coal industries.

Despite economic uncertainty due to global uncertainty, food and energy are always a necessity. Therefore, Indonesia's natural wealth of various types of food products is fundamental to strengthen its' economic base in order to avoid the disruptive economy. Food, energy and water are the main components a country must have to measure whether their country is strong or weak. It is time for the Indonesian Government to pay serious attention to food and energy, which are intrinsic to innovation and technology. Comparative-based development will allow the development of competitive advantages when accompanied by innovation and technology. The government must be able to exactly map their plan for food and energy. This is important to maintain the sovereignty of the state and to banish the interests which seek opportunities to threaten Indonesia's integration. Spatial mapping with high resolution, strong binding space rules and the use of law as a commander should be immediately implemented by all parties concerned. The disruptive economy can easily be constrained to normal social realms if the country is able to strengthen their innovation-based comparative advantages.



Conclusion

Based on the above, it can be concluded that disruption is a phenomenon which occurs due to innovation and social changes. It is an anomalous phenomenon which results in crisis's and changes in the revolution of knowledge and social systems. It is a phase which needs to be passed before returning to normal science and normal social levels. Innovation and social changes provide a disruptive impact on the world system. Economic actors will slowly be eliminated from the arena if they cannot appropriately respond to change. Behind the grandeur of innovation and the disruptive economy, opportunistic behaviour and capitalism can take the opportunities and roles to accumulate information and capital. Furthermore, capitalism takes advantage of the slow acceleration in governmental economic institutions through spontaneous movement to build institutions which are not inherent with governmental institutions. Therefore the role of government is in regulating what is needed by many parties.



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