

## Disruption in Business Environments: A Framework and Case Evidence

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### Abstract

Disruption in business environments is an opaque phenomenon. While roots seem to lay in technology the tentacles and symptoms extend to economics, sociology and even politics and ideology, the article defines disruption as a system violating force. It then identifies two domains of disruption: generic and functional with the generic being a force or a bundle of forces that cut across systems and re-configure constituent elements. The functional is seen as a system attribute. This could be economic, political, technological or socio cultural. This is followed by case evidence citing artificial intelligence, Blockchain, Belt and Road Initiative, WeChat as well as Fintech as illustrations of one segment of disruption or the other. The paper contributes to the field of strategic management with the focus on the role of disruption in environmental analysis and scanning.

### 1. The problem

Disruption is one of those opaque phenomena that could mean different things to different people. While roots of business disruption seem to lie in technology, the tentacles and symptoms extend to economics, sociology and even politics and ideology. Tales of disruptive technology innovations and breakthroughs in variety of products and markets are abound. Social media is also viewed as a disruptive force. Quirks of the global political scene are, more frequently than not, labelled as disruptive. All in all, the entire business-related disruption concept is assuming a wide scope and an ever widening spectrum. And that brings forward the question: what constitutes disruption in business environments and is there supporting evidence?

This will be the focus of the following article.

### 2. Disruption: A Definition

Disruption is an occurrence that interrupts events, processes, systems or paradigms. It is a violating force. Disruption of an event, a system, or a process is tantamount to discontinuity and a suspension or even a reversal of what is considered a normal flow.



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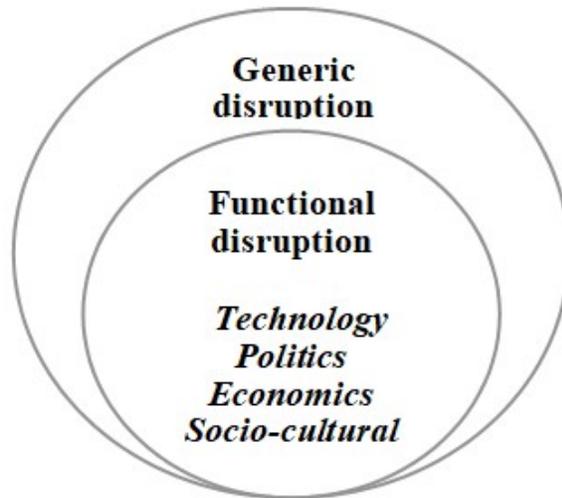
Roots of disruption, in management, are discussed in Christensen's work on innovation (Christensen, 1997). He introduced the idea of "disruptive innovation" or a process of rapid anticipation of future needs and equally rapid development of congruent products, services and processes. In the process he separates new technology into sustaining and disruptive, with sustaining technology resorting to incremental improvements to an already established technology, while disruptive technology reflects anticipation of a different set of parameters. The anticipation and adjustment would lead to market shake ups and the eventual replacement of dominant operators by nimble small innovators.

The term, however, quickly took on a life of its own.

### 3. Disruption: the Domains

It is the author's contention that disruption could be generic or functional.

Figure 1: Domains of disruption: conceptual framework



#### 3.1. Generic disruption

Generic disruption is a force or a bundle of forces that cut across systems and reconfigure constituent elements. Generic disruption cuts across industries, markets organizations and functions. It does not arise from competitors in the same industry or even from companies with a remotely similar business model but from distant and previously unidentified driving force. It blends forces drawn from separate seemingly unrelated strands of technology, primarily, in order to create dramatic value enhancing and rule changing propositions (El Namaki, 2014).

#### 3.2. Functional disruption

Functional disruption is a force that undermines one or the other aspect of system-related functional performance. One can think of it in terms of four segments of functional disruption: a technology segment, an economic segment, a political segment and a sociology segment; with of far reaching economic disruption (El Namaki, 2015).

#### 3.3. Politics, Economics, Socio-cultural, and Technology

A study conducted by Mckinsey suggests three prime sources of disruption: shift in economic locus, rapid technology change, and more notably, the information revolution (Dobbs et al., 2014). A closer examination of the Mckinsey's study suggests that these three sources of disruption naturally lead to two relevant disruptive forces: political and socio-cultural factor.

##### 3.3.1. Technology: the 4th industrial revolution

Technologies that significantly alter the way that businesses or entire industries operate, are labelled disruptive and seem to be a leading source of functional disruption. In the seminal work of Klaus Schwab, *The Fourth Industrial Revolution*, he describes how this fourth revolution is characterised mainly by technological advances.

### **3.3.2. Politics: Neo-globalization**

Premises of a new paradigm for globalization are challenging traditional frameworks and at the same time introducing disruption to international economic policies, strategies and institutions (El Namaki, 2017; Liu and Dunford, 2016; Wilson, 2016).

### **3.3.3. Economics: Extreme capitalism**

Capital markets provide the core and the driving force of capitalism and, also, the prime source (Dobbs et al., 2014; El Namaki, 2015; Schwab, 2016).

### **3.3.4. Socio-cultural: Social media**

Social media or software based technologies that facilitate the creation and sharing of all forms of expression via virtual communities and networks, is proving to be a potent disruption vehicle (DeMers, 2016; Lawrence, 2016; Smith, 2018).

## **4. Disruption: case evidence**

There is plenty of evidence to support the conceptual framework outlined above.

### **4.1. Case one: the generic disruption of Artificial Intelligence (AI)**

Performance of computing equipment is rapidly becoming complex and demonstrating cognition and a high measure of "intelligence" on its own. This is gradually introducing a strong and comprehensive dimension of generic disruption unseen before. The equipment is moving towards a state of perception and accommodation of their environment and an ability to take measures essential for the fulfilment of a specific mission or missions (Schwab, 2016). This behaviour is labelled Artificial Intelligence (AI) because it simulates the cognitive functions of the human brain insofar as problem-solving is concerned (Davenport and Ronanki, 2018). Rather than replacing human capabilities, Davenport and Ronanki (2018) suggest that AI can augment daily business operations in at least three ways: automating administrative activities, gaining insight through data analysis, and engaging with customers and employees. The near future may witness an increase in the intelligence content of the performance to the extent that equipment become increasingly capable of a measure of independent "thinking".

### **4.2. Case two: the social disruption of Wechat**

WeChat (微信) is a socio-cultural disruption force that has achieved national, that is Chinese, and multi-national proportions. Deep penetration and multi functionality generated WeChat's social disruption driving force. WeChat, launched by China's Tencent way back in 2011, has become one of China's most popular and most used smartphone apps. The user base of WeChat grew from 50 million in 2011 to over 960 million in 2017 (Statista, 2018). Smartphone users resort to WeChat's for a wide variety of services ranging from telecommunication to virtual finance. It is common for people to pay rent, locate parking, donate to charity, book an appointment with doctor, find a date, or even pay rewards to people who rat out traffic violators through WeChat (Lawrence, 2016). With 70 million WeChat users outside China (Smith, 2018), it could, very likely, be the most advanced global mobile messaging app in terms of functionality and scope of services.

### 4.3. Case three: the economic disruption of Fintech

Fintech is an amalgam of products and practices that constitute an innovative use of technology in the design and delivery of financial services (Igarachi, 2015). The global financial industry is undergoing a disruptive transformational phase as a result. The FinTech industry comprises a wide variety of financial businesses going all the way from online Peer-to-Peer lending, SME finance and crowd-funding to crypto currency and mobile payments platforms (Chishti, 2016). It is becoming a potent disruptive force for the banking and finance industry by introducing fundamental change in access and operation of those and other services. It, moreover, is changing customer behavior and expectations by generating an unusual measure of service mobility, speed and access (Marr, 2017). And it is generating start up opportunities that are as much innovative as potentially lucrative.

### 4.4. Case four: the political disruption of the Belt and Road Initiative

China's Bridge and Road Initiative (BRI) is emerging as the new bulwark of a reconfigured World economy and a disruption of classic globalization thoughts, strategies and institutions (El Namaki, 2017; Liu and Dunford, 2016; Wilson, 2016). It constitutes a conceptual and operational framework for the restructuring of the global economy. It is all inclusive (Liu and Dunford, 2016). There is capital, trade, technology and human resource elements. There are outward flows, inward flows, bilateral flows and regional flows. It draws a whip of economic exchange that run all the way from Spain through Germany, Turkey and Greece to Pakistan and ultimately China. It is projected by China's President Xi Jinping as "a Chinese idea but for everyone's benefit...to encourage the building of systems of fair, reasonable and transparent global trade and investment rules" (BBC, 2017). It, in reality, replaces Reagan's country competitive advantage supremacy by cross country dynamic synergy (El Namaki, 2016).

### 4.5. Case five: the technology disruption of the Blockchain

Blockchain is a generic disruptive force with broad scope and extensive reach (statement by the author). It involves constant-growth record lists linked together and secured through cryptography, a symmetric-key algorithm where key is shared by both sender and receiver (Narayanan et al., 2016). Each block of the chain envelops a hash pointer relating to the previous block, as well as transaction data and a timestamp. Corporations are beginning to incorporate blockchain technology into their systems after early application in market capitalization of crypto currencies (Iansiti, and Lakhani, 2017). And blockchain technology is penetrating a wide variety of other applications from cyber security, elections and voting, transaction-based real estate to analytics and forecasting and ridesharing application search segment having its own set of driving forces (MacDonald, 2017).

## 5. Summary and conclusions

Disruption is omnipresent. Yet it is one of those opaque phenomena that could mean different things to different people. This paper asserts the view that, while roots of disruption are associated with technology, its tentacles and/or impact extend to the domains of economics, sociology, politics and ideology.

The article provides a definition of disruption as observed in physics as well as social sciences. It is a system shaking violent force. It then identifies two domains of disruption: generic and functional with the generic being a force or a bundle of forces that cut across systems and re-configure constituent elements. The functional is seen as a system attribute. This could be economic, political, technological or socio cultural. This is followed by case evidence citing artificial intelligence, Blockchain, Belt and Road Initiative, WeChat as well as Fintech as

illustrations of one segment of disruption or the other.

The article relies on recent exploration of the issue of disruption and related case histories. It is eclectic drawing upon the treatment of disruption all the way from physics to economics and technology.

Follow up research should address the applied implications of the concept within key strategic management frameworks.

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