Chapter 11
Leveraging Blockchain Technology in the Value Chain and the Supply Chain:
Cases on Blockchain Applications Within Chinese Firms

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ABSTRACT

The chapter will discuss and present four Chinese companies leveraging blockchain technology within their value chain and supply chain to strengthen their business and generate sustainable growth. Two of the companies described are service providers: Hyperchain and Huawei. They offer the possibility to their clients to integrate blockchain technology in order to solve business problems and improve processes within their operations. The other two cases will focus on JD e-commerce and Shunfeng express delivery, which are involved in intense supply chain activities. The descriptions will show how blockchain allowed them to develop a better, more secure, and efficient fluidity of information, capital, and goods.

INTRODUCTION

Within the value chain and supply chain, it is possible to observe different flows in both directions, upstream to downstream, and vice versa (Gao, 2018). First of all, a flow of information, all companies need to make decisions and perform their operations to create and receive data (Ren et al., 2016; Mbiatem et al., 2018). Those data represent the reality of the company`s activity and operation. They could be of different natures: technological, financial, sociological, and tangibles. In all cases, for companies to be efficient, data must be tracked, accessible and most importantly trusted. Secondly, a flow of tangibles, companies possess or create assets within their operations and those assets move from one function of the value chain to another, or from one partner of the supply chain to another. To be efficient, meaning to optimize the uses of resources available to achieve a specific goal, companies need to keep track of their assets, and similarly to information, this tracking needs to be accurate and trusted (Husna et al., 2021). All resources need to be accounted for. Finally, and by far the most important, a flow of capital (or money to be simple), all resources and assets represent a monetary value (Glaa et al., 2014). Since money is limited, it Is highly controlled. In this context, financial management becomes an important function for companies to generate sustainable growth. Within a corporation, executives have an obligation to financial transparency toward shareholders and other stakeholders.

Therefore, it is of tremendous importance to make sure of the integrity of data and accuracy when reporting the flows of information, assets and money (Taghipour, 2009; Lebosse et al., 2017). It is for these reasons that blockchain technology is adopted and integrated within those flows. Blockchain offers reliability as it helps to render a truthful representation of the situation. It also offers transparency and allows permitted stakeholders the ability to inspect records. When linked to blockchain technology, data become tamperproof (Nakamoto, 2008). Blockchain could support many codified agreements between parties usually handled by traditional means, including stock trades, contracts, inventory records, quality controls, preserving provenance, maintaining the chain of custody, etc. (Taghipour and Frayret, 2013). In this way, the technology becomes part of the routine operations of the company within its value chain and supply chain (Beck, 2018).

As one of the major economic superpowers, China is not immune from this development. It is even at the forefront. However, due to the language barrier and a large amount of information, it is hard for non-Chinese readers to get a clear picture of what is happening in China. This article will help in this direction by introducing four Chinese companies and showing how they integrated blockchain technology into their business model and operations: HYPERCHAIN, a unicorn company and blockchain service providers; HUAWEI, the well-known technology company that

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