



New Paradigm of RegTech for Holding Digital Corporations (HODCs) in Indonesia: From Disruptive to Sustaining Innovation

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Abstract

The digital era demands transformation of all sectors, including the sector of economic law. The concept of economic law that is demanded to transform and transplant itself is the legal concept in the digital founding of companies. Companies no longer possess conventional schemes; they have transformed in terms of management patterns, market reach, and even organizational structure toward digital concepts, and therefore the law must be adaptive with these developments. The research for this article has the objective of forming new legal paradigms in the founding of companies. It takes the form of a normative legal research with usage of the philosophical and statute approaches. The results of the research showed that the adoption of concepts from the New Paradigm Theory of Kuhn requires a new legal paradigm with a new legal regime, because the old legal regime is not adaptive to the new form of companies with the conception of an enterprise form utilizing a technological approach through the aid of Regtech.

1. Introduction

Digital transformation has changed the world faster than much of the development of regulations that has occurred.¹ Regulators must accept facts of society and industry as well as technology, and struggle through the challenges caused by Industrial Revolution 4.0. Legislation and legal regulations cannot be created at will; instead, they must reflect how principles of ethics have been applied as an effort of important change to achieve order and utility for the achievement of societal objectives. In this case, in connection with legal theories², ethics and morals are the objects of study of legal theories that examine the law from the inside, in contrast to from outside interests as with studies of

¹ Budhijanto, D. (2014). *Teori Hukum Konvergensi*. Bandung: PT. Refika Aditama.

² Azizah, S. (2012). Analisis Ekonomi Dalam Pembentukan Hukum. *Fiat Justisia: Jurnal Ilmu Hukum*, 6(2). <https://doi.org/10.25041/fiatjustisia.v6no2.324>

legal dogmas that examine laws, treaties, and jurisprudences.³ This will lead to an in-depth examination and great output of legal theories when juxtaposed with any phenomena, including Industrial Revolution 4.0. Research on industrial revolution in connection with legal theories can lead to important findings that may be applied for the achievement of legal objectives, which are prosperity in society that is encapsulated in the framework of justice, certainty, and utility.

What must be understood from the concept of Industrial Revolution 4.0 is that indeed this concept is centered on humankind and their values. Humanity is demanded to create great people as well as to empower brands. In the end, the most pessimistic form that can be realized is that Industrial Revolution 4.0 can potentially “robotize” humanity and in doing so can uproot humanity from their souls as people. However, there are human characteristics that cannot be replaced by technology, being empathy and creativity, and utilization may become the support for new consciousness and morals that may be based on the feeling of mutual destiny. This matter may be able to become a particular focus of studying legal theories when examining Industrial Revolution 4.0.⁴

Industrial Revolution 4.0 is not the same as previous ones, as in this revolution, new technologies combine with physical, digital, and biological forms that affect all fields of discipline, industrial economy, and even ideas that put into opposition regarding the meaning of being human. The existing shifts and disturbances fill the lives of people with great danger. The world has its own potential of joining people into a digital network, increasing efficiency, and managing assets by way of regenerating nature, as well as creating disruptions toward previous revolutions.⁵ Schwab also situated new changes within a historical context, elucidated old technologies, and additionally encouraged this fourth era of revolution, discussing about the effects on the government, society, business, and individuals. In addition, the way of responding to this matter requires the faith that this revolution can be controlled for as long as a person can collaborate across sectors, geographical areas, and disciplines in order to be able to understand opportunities in human civilization.⁶

Sectors that affect the emergence of this era are economic sectors that demand the law to transform in order to prevent the challenges and risks that are caused by technology. One of these concerns the emergence of start-up companies. Start-up companies have become new business actors whose present appearance was never predicted by jurists in the past. For these, there would be intermediary enterprises in the form of technologies that are able to bring together business actors and consumers in an online manner, both of goods and services, whether in finance or even transportation. These actors are even able to conjoin all shards of small businesses into a humongous business that monopolizes the market and attains great profits.

³ Isdiyanto, I. Y. (2018). Problematika Teori Hukum, Konstruksi Hukum dan Kesadaran Sosial. *Jurnal Hukum Novelty*, 9(1), 54-69. <https://doi.org/10.26555/novelty.v9i1.a8035>, p. 66.

⁴ Octavia, D. R., Nurmitha, R., Veronika, R., & Nurbaiti, N. (2022). Peluang Dan Tantangan Bisnis Pada Era Revolusi Industri 4.0 Bagi Generasi Milenial Di Indonesia. *JUSIBI (Jurnal Sistem Informasi dan E-Bisnis)*, 4(1), 31-40. <https://doi.org/10.54650/jusibi.v4i1.422>.

⁵ Schwab, K. (2017). *The fourth industrial revolution*. Currency.

⁶ Budhijanto, D. *Op.cit.*

The first to develop massively is the realm of trade. transactions reach Rp. 34.3 Trillion.⁷ In 2016, the number of online transactions for Indonesian E-Commerce reached 4.89 billion US dollars, which was carried out by around 8.7 million online shop buyers.⁸ This popularity is evidenced by reports from sensor towers engaged in app store optimization where in 2016 a total of 11.1 billion applications were downloaded from the Google Play Store. This then triggers new digital actors.⁹ “In the past, the man has been first. In the future, the system must be first” which is a statement from Fredrick Winslow Taylor is the right sentence to describe the development of Start-Ups. The existence of Start-Ups in the industrial landscape in Indonesia is increasingly being taken into account, both in terms of competition or consumer acquisition. In later developments, there will be intense competition between previously mature business players and Start-Ups, which in the end will present significant competition.¹⁰

The evidence also obtained from the valuation of the transportation start-up of Gojek which has outpaced the sustainable valuation of Garuda Indonesia by 12-fold¹¹, and yet Garuda has been named as the number-one company in Indonesia in that regard. In addition, in other economic aspects, which are not only in the realm of trade in goods but also trade in services, transportation and so on. Then, there are also other actors such as Tokopedia, Shopee, OVO, Traveloka, and similar others that at present have become attractive companies in Indonesia at a very young age. So This research examines juridically and philosophically the challenges of the industrial revolution that creates a new form of enterprise called start-ups, and how they demand concepts of company law to change and necessarily adjust.

The juridical problem is vacuum of norm about start-up regulation, that there are no specific rules governing Start-Ups in Indonesia both from KUHD until technological and economic regulations that arise. So far, corporate law has accommodated several forms of business entities such as PT, CV, Civil Partnership, and Firms with the characteristics set out in the norms that govern them. In terms of corporate organization, Start-Ups have different characteristics from conventional business entities.¹² for example, PT has Directors, Commissioners, RUPS, is different with start-up which consist of a component of CEO, CTO, COO, CMO.¹³

With its own technological characteristics, the regulation regarding the operation of electronic systems has been accommodated in law through the latest regulation, namely

⁷ Radja, A. M. (2015, July 7). *Transaksi Online Indonesia capai Rp.34,3 triliun*. <https://www.antaranews.com/berita/505724/transaksi-online-indonesia-capai-rp343-triliun> (Accessed on August 6, 2022).

⁸ Hadi, F. (2017, February 20). *Transaksi E-Commerce di Indonesia Pada 2016 Mencapai 4,89 Miliar Dollar AS*. <http://www.tribunnews.com/bisnis/2017/02/20/transaksi-e-commrece-di-indonesia-pada-2016-mencapai-489-miliar-dolar-as> (Accessed on August 6, 2022).

⁹ Wijayanto, D. (2016). *Start-Uppreneur Menjadi Entrepreneur Start-Up*. Penebar Plus, p. 11.

¹⁰ Wijayanto, D. (2018). *Legal in startup business* (Cetakan pertama). Metagraf, p. 246.

¹¹ Antariksa, Y. (2018, December 31). *Kenapa Valuasi Gojek 12x lebih Tinggi dibanding dengan Garuda Indonesia?* <https://strategimanajemen.net/2018/12/31/kenapa-valuasi-gojek-12x-lebih-tinggi-dibanding-garuda-indonesia/> (Accessed on June 22, 2022).

¹² Wijayanto, D. *Op.cit.*, p. 59.

¹³ Drajat, A., & Kartika, D. (2017). *Start Up Guidebook: Panduan Memulai Startup Bisnis yang Harus Kamu Tahu* (Cetakan Pertama). Quadrant, p. 57-59

"Government Regulation Number 71 of 2019 concerning the Implementation of Electronic Systems and Transactions which regulates further provisions in Law Number 19 of 2016 amendments to Law Number 11 of 2008 concerning Electronic Information and Transactions" but this rule is only technically securing electronic systems along with personal data protection and licensing and security in the field of electronic systems, not providing private arrangements governing company organization and civil relations between parties conducting electronic transactions so that they have not accommodated the right form of business for Start-Ups. This is also a derivative rule of the rules regarding ITE in general.

Then it is different again, namely in Financial Services Authority Regulation Number 77/2016, companies in the form of "peer to peer lending" or also called information technology-based lending and borrowing, must be in the form of PT or cooperatives. However, in other fintechs, it is not regulated what type of business form that must be applied even though there are many types of financial technology businesses. Likewise in the type of business implementation in the transportation sector which also follows the laws and regulations in the transportation sector. Therefore, it is partially separated.

From the many rules that do not accommodate these yet, Start-Ups are also often equated with "Micro, Small and Medium Units" or MSMEs¹⁴, this is evident from the business registration in Malang City which states that Start-Ups are included in the form of MSME businesses. Even though, juridically, MSMEs have their own construction in positive law in Indonesia, although MSMEs may choose to take the form of business entities contained in positive law, MSMEs are also a form of granting license privileges by the government to the community and the legal construction is also provided in positive law, namely the Act. SMEs. Data notes that compared to other countries in Southeast Asia, Indonesia is experiencing faster digital economic growth. In addition to the increasing population, Indonesian people have switched consumption from offline to online products. Based on the Startup Ranking report, as of 2022 Indonesia already has 2,346 startups¹⁵.

Meanwhile, Start-Ups with technological characteristics are very different from MSMEs because if MSMEs have a regional market share, Start-Ups have a unaffordable target market area, different business forms and patterns from MSMEs, different goals, markets, and schemes make it impossible to equate Start-Ups and MSMEs.¹⁶ Moreover, the differences in the characteristics of Start-Ups with other conventional businesses that cause futuristic problems are first, the type of Start-Up business is a data-based business¹⁷, secondly, start-Up is a business with an investment regime that will not be

¹⁴ Rifan, M., & Ula, N. (2019, Desember). *Simposium Hukum Nasional "Tema Peranan Hukum dalam Menyongsong Revolusi Industri 4.0."*

¹⁵ Andreyana, E. (2022, September 1). *Startup Lokomotif Pertumbuhan Ekonomi Digital*. <https://aptika.kominfo.go.id/2022/09/startup-lokomotif-pertumbuhan-ekonomi-digital/> (Accessed on August 6, 2019).

¹⁶ Novi, F. (n.d.). *Perbedaan UKM, UMKM dan Start-Up*. Retrieved January 5, 2022, from <https://www.sons-it.com/perbedaan-ukm-ukmk-dan-start-up/>

¹⁷ In a Start-Up business, data can be used as the main capital to determine business preferences, so that the main basis for a Start-Up business is data.

able to reach the growth stage without massive investment.¹⁸ Initially, it was a business with a capital of 0 rupiah or just technology.

From those background these are the legal issues in the research for this article: 1) What are the challenges of economic law in facing the industrial revolution era with the emergence of start-up companies? 2) How is company law projected to be in the future in formulating the concept of a new form of enterprise?

2. Research Method

The type of this research is normative juridical research, also known as doctrinal legal research¹⁹, in that it involves the examination of secondary legal materials²⁰ by which the law is conceived as principles or norms that are the benchmarks of human behavior.

The utilized approaches were the statute approach, which consisted of the examination of legal regulations²¹, and the philosophical approach²², which consisted of philosophical examinations to connect the relationships among the law, economy, and technology,

¹⁸ The construction contained in economic law in Indonesia is that when foreign investors want to invest in a Start-Up directly, the Start-Up must turn into a PT as stipulated in Law Number 25 of 2007 concerning Investment. Therefore, Start-Ups must change their components as contained in the Company Law, both in terms of corporate governance and company instruments. Whereas in its development, the components of actors in Start-Ups are not able to follow the construction built by the Company Law and differ between PT companies which were originally established in a conventional form and PT in the form of changes from Start-Up companies Empirically, Start-Ups ultimately fall on acquisitions by large companies for example Buka lapak which was acquired by PT Elang Mahkota Teknologi and Ovo by PT Lippo Group, according to legal practitioners staff of PT Indosiar SCTV that this phenomenon occurs because the existing Start-Ups do not have clear company SOPs. Presented at the International Postgraduate Student Conference, Legal Challenge and Opportunity In the Fourth Industrial Revolution, Gajah Mada University, 20-21 January 2020, while Presidential Regulation number 44 of 2016 concerning the List of Closed Business Fields and the List of Open Business Fields in the Investment Sector is a legal basis for investors who will invest in Indonesia, but in this case there is no nomenclature regarding Start-Ups as technology business entities that are open or closed or open with conditions so that investment in Start-Ups can be carried out on a large scale without any certain limitations. And on the other hand, the massive growth of capital flows makes ministry of investment in indonesia run into overcapacity to monitor and record foreign investment so that inflows cannot be properly monitored.

¹⁹ Nurhayati, Y., Ifrani, I., & Said, M. Y. (2021). Metodologi Normatif dan Empiris dalam Perspektif Ilmu Hukum. *Jurnal Penegakan Hukum Indonesia*, 2(1), 1-20. <https://doi.org/10.51749/jphi.v2i1.14>

²⁰ Benuf, K., & Azhar, M. (2020). Metodologi Penelitian Hukum sebagai Instrumen Mengurai Permasalahan Hukum Kontemporer. *Gema Keadilan*, 7(1), 20-33. <https://doi.org/10.14710/gk.2020.7504>

²¹ Arliman S, L. (2018). Peranan Metodologi Penelitian Hukum di Dalam Perkembangan Ilmu Hukum di Indonesia. *Soumatara Law Review*, 1(1), 112-132. <https://doi.org/10.22216/soumlaw.v1i1.3346>

²² Prihardiati, RR. L. A. (2021). Teori Hukum Pembangunan Antara Das Sein dan Das Sollen. *HERMENEUTIKA : Jurnal Ilmu Hukum*, 5(1). <https://doi.org/10.33603/hermeneutika.v5i1.4898>

which have experienced a convergence. These approaches become the foundation for the urgency in the formation of new enterprise forms in company law in the future.

3. Results and Discussion

3.1. Challenges of economic law in facing the industrial revolution era with the emergence of start-up companies.

In discussing company law in Indonesia, regarding the legal problems that are related to the business model of start-ups that is inescapable from information and communication technology, juridically there is not yet a principal regulation that regulates start-ups as a kind of special enterprise based on technology. Yet, based on their business model and patterns, start-ups possess a different character from conventional companies for which their constructions are already present in previous positive law. The consideration may arise to construct start-ups as a non-legal entity enterprise through an application, as an enterprise in the form of a partnership, firm, or a limited partnership. However, with the characteristic of start-ups that can only grow with major investments because of their usage based on technology, it is not possible for them to follow the construction of a non-legal entity enterprise because it concerns the separation of funds and accountability of funds toward investors.²³

Considering regulations for the forms of enterprises, the most principal regulation is the Trade Law Code (KUH Dagang). Historically, the Dutch Civil Law Code and Trade Law Code can be said to be obsolete, and in academic papers related to the Civil Law Code, it is also explained that there is a need for regulations that are clearer in direction, broader in scope, and targeted in applications. This is also because in the Netherlands itself, there have been multiple revolutions of the regulations, renewing them in order to adjust to developments over time (BPHN). Second, in the regulations regarding conventional enterprises, whether or not they possess legal entities, there has not been nomenclature that states its substantial technological characteristics from beginning to end. This applies for partnerships or agreements for investment of funds by two or more people in order to obtain profits with unlimited responsibility, as well as firms as enterprises created under a joint name, also with unlimited responsibility.

In addition, limited partnerships (CV) that consist of active alliances that manage enterprises and passive alliances that provide funds are regulated in the Trade Law Code; meanwhile, the Law on Limited Liability Corporations (PT) regulate regarding enterprises with a structure that separates personal and enterprise funds as well as limited responsibility, thereby becoming their own enterprises possessing a legal entity.

The points in Regulation Number 17 of Year 2018 on the registration of CV and Firms only contain technical elements. Furthermore, the latest regulation that is frequently referenced by start-ups, being Government Regulation Number 80 of Year 2019 on Trade through Electronic Systems, does not have conceptions that are appropriate to start-ups. In Article 1 Number 11, business actors who provide facilities of electronic communication are only understood as "business actors who provide facilities of communication that are utilized as transactions for trading", which has not been able to

²³ Wijayanto, D. *Op.cit.*

accommodate the understanding of start-ups that not only provide communication facilities but also make technology as their object of business.

As well, Article 1 Number 12 includes “*Domestic Business Actors or International Business Actors that provide facilities of Electronic Communication other than telecommunication organizers that only function as mediators in Electronic Communication between sender and receiver*”. Accordingly, the statement similarly contains no firm meaning that represents the true meaning of start-ups in this article, though the following explanation contains a mention of a marketplace, which is one of its kinds.

There are many other very specific aspects of start-ups, such as their business method and schematic with their reach, which additionally do not indicate the distinct characteristics of their business model and rules of management, along with their organization, capital, and other factors. Furthermore, because the regulation is derived from the trade laws, the regulation also applies only for trade, and yet start-up companies do not only deal with trade.

The primary characteristic of start-ups that has not been regulated in law is “money burning”, the spending of funds for conducting market expansion and obtaining high valuation as perceived by society such that when they become leading businesses, the start-ups will be able to regulate the market more easily in terms of quality, distribution, and prices. This is a problem that needs to be underscored.²⁴ This construction is built up on the basis of the start-up business pattern that is not focused on enterprise profits but instead on valuation, and thus many start-ups possess a high valuation yet a deficit in profits, such as the case for Bukalapak.

This pattern, when analyzed through economic studies, will also result in a condition called a “bubble economy” that will cause a bust and collapse of the economy in the future.²⁵ Regarding enterprise organization, start-ups possess their own components, as CEO, CTO, and COO, which differ from the components in positive law in Indonesia; this is also an issue for which the juridical solution must be sought, considering that the components indicate a difference of pattern from conventional businesses.²⁶ As well, in terms of investment, the cash flow of investor funds that enter start-ups is not able to be monitored well by the Coordinating Board for Investment (BKPM) because there have been no regulations as well as structural policies that regulate start-ups.

One field of start-ups is financial technology, which also raises significant issues. Financial Services Authority (OJK) Regulation Number 77/POJK.01/2016 on Money Lending and Borrowing Services Based on Information Technology has not been able to accommodate legal interests for “E-Know Your Customer” and Bank Shadow risk.²⁷

²⁴ Arif, B. (2019, December 10). *Bukalapak Hingga Dana, Ini Start-Up yang Masih Bakar Uang*. <https://www.cnbcindonesia.com/tech/20191210151827-37-121924/bukalapak-hingga-dana-ini-Start-Up-yang-masih-bakar-uang>(Accessed on August 6, 2022).

²⁵ *Ibid*

²⁶ Drajat, A., & Kartika, D. *Op.cit.*

²⁷ Venalia, R., & Januarita, R. (n.d.). Pengawasan Otoritas Jasa Keuangan terhadap Layanan Pinjam Meminjam Berbasis Teknologi Informasi Dihubungkan dengan Prinsip Transparansi dalam Mekanisme Financial Technology di Indonesia. *Seminar Penelitian Sivitas Akademika Unisba*, 5(1), 163-168. <http://dx.doi.org/10.29313/.v0i0.13901>

There is also an overlap of Article 16 a quo that permits investment from domestic and international investors, in contrast to the spirit of Article 43 for the prevention of money laundering and funding of terrorism.²⁸

Second, the government had issued general stipulations regarding Financial Technology as stated in OJK Regulation Number 13/POJK.02/2018 on Digital Finance Innovations in the Finance Services Sector. However, accordingly, the regulation is still general in nature and requires regulations that are more technical. Although there have been legal breakthroughs such as the Regulatory Sandbox as the mechanism for observation and supervision of Financial Technology²⁹, the emphasis is located on the obligation of Financial Technology service providers to publish periodic reports to the OJK.

Additionally, a mechanism does not yet exist that allows the involvement of the OJK as the observer and supervisor to take action by actively and directly conducting periodic checking or audits to service providers. The issue regarding the protection of personal data also becomes one of the annotations of the OJK Regulation a quo that becomes a problem in the practices of Financial Technology.³⁰ Based on the explanation above, then what is required is a study regarding the legal existence of enterprises that are currently present that is indeed composed generally and flexibly to be able to accommodate. Alternatively, is a new concept of enterprises required that is different from the concept of enterprises that has been conceived in prior enterprise law?

3.2. Projection of company law in the future in formulating the concept of a new form of enterprise

Considering the historiography of technology, in the beginning, technology is only a practical tool to ease the work of people, but over the course of time, modern technology is not simply a skill with “*work of craftsmanship*” but is more of a revelation. What differentiates between modern and ancient technology is that ancient technology does not include the effort of disclosing actions for results that possess value outside of those actions, while modern technology challenges them.

This method of revelation is designed to demand nature to contribute its energies in order for people to be able to store and utilize nature. Nature and the earth are regarded as supplies that can be taken, stored, and even utilized.

An expert named Heidegger gave the example of windmills as an example of ancient technology because it does not expose wind energy. Windmills only possess the nature of spinning according to the wind direction. Windmills only reveal energy from the wind, and they do not control energy from nature or store the energy for future use.

²⁸ Nanda Narendra, P. (2017, June 19). *Fintech Rawan Dipakai untuk Pencucian Uang dan Pendanaan Terorisme*. <http://www.hukumonline.com/berita/baca/1t5946e0e4c4d4c/fintech-rawan-dipakai-untuk-pencucian-uang-dan-pendanaan-terorisme>(Accessed on June 23, 2022).

²⁹ Lubis, M. S. W. (2018, September 2). *OJK Terbitkan Aturan Fintech, Ini Poin-Poinnya*. <https://finansial.bisnis.com/read/20180902/89/834081/ojk-terbitkan-aturan-fintech-ini-poin-poinnya> (Accessed on August 6, 2022).

³⁰ Passagi, J. H., & Amalia, R. (2019). *Mengenal Financial Technology di Indonesia*. Center for Law, Technology, RegTech and LegalTech Studies.

Conversely, mining operations demand the earth to produce metal ores, and the earth is seemingly disclosed as a supply that results in energy.

This method of disclosing the hiddenness of nature and perceiving nature in this way in terms of modern technology is known as *Gestell*, meaning “*enframing*”. Technology, in the sense that it is a revelation, is created through the process and method of *enframing*. *Enframing* becomes a systematic method that can limit the perceptions in viewing the world. The process of *enframing* leads to the entirety of the earth being perceived as a supply, by which nature becomes a source of energy for the instrumental benefit of people. From this perspective, the earth becomes a source of energy. The oil that is present deep in the earth is considered to be able to store energy to be made into something that is beneficial for the activities that are conducted by people.

Therefore, technology in its philosophy is neutral in nature depending on usage by people; it moves toward the direction of goodness with the aid of laws that have the objective of creating social order. A simple example of technology is the knife, which when utilized to cut up a fruit will result in pieces that make it easier for people to eat, in contrast to when it is utilized to commit murder, which has an evil intent.

The book *Homo Deus* by Harari also contains a very comprehensive historical explanation of technology that studies and explores global forces. This book explains the historical development of technology, from human warfare in the past that only utilize simple weapons to the development of technology that has directed warfare toward the invisible kind of warfare in the form of bacterial warfare or warfare utilizing certain viruses or microbiological organisms that are intentionally created and released by people. The expression “*Homo Deus*” itself means “*god-men*” and that humans will futuristically be able to explore projects based on technology that is directed to overcome death and even create artificial life forms; thus, they are “*people of the gods*”.³¹

Then, in connection with the law, this may be elaborated by the paradigm theory of Kuhn. By definition, a paradigm is a term utilized in the sciences, as the viewpoint of a person toward the world. In this case, it becomes a theoretical framework that scientists work by at their time. It is a universal scientific achievement that provides models of problems and solutions for scientists during its time.³²

A paradigm consists of two primary components. The first is a series of fundamental theoretical assumptions that are accepted by the entire scientific community at that time. The second is the proving of scientific problems with the objective of strengthening those fundamental theoretical assumptions and affirming them as foundations of fields of disciplines.³³ With the development of various fields of knowledge, paradigms are also internalized in various sciences. Paradigms have occupied a broad reach in the development of sciences, the law, theories, models, standards, and methods, whether theoretical or instrumental, as well as intuition and metaphysical belief whether implicit

³¹ Harari, Y. N. (2018). *Homo Deus: Masa depan umat manusia*. PT Pustaka Alvabet.

³² Baldwin, T. (2003). *The Cambridge History of Philosophy 1870-1945*. Cambridge University Press.

³³ Okasha, S. (2002). *Philosophy of science: A very short introduction*. Oxford University Press, p. 82.

or explicit, as anything that can fulfill the role of becoming a part of paradigms (Baldwin, 2003).³⁴

For the paradigm theory of Kuhn, according to Kuhn himself:

“According to Kuhn, scientists working in a certain community are able to explain the impressive successes of a science; the scientific community is a very efficient instrument to maximize the number and specificity of problems that are resolved through paradigm shifts, as when paradigms change because of shifts, they are usually significantly determinant with a legitimation criteria between the problems and the proposed solutions.”

Old paradigms as knowledge that is seen as normal and legitimate in its time **fail to respond to new problems that occur**, and afterwards will only result in the occurrence of anomalies. Such conditions will give rise to **new paradigms that can offer alternatives**. As a theoretical scientist, Kuhn indeed conceived his theory based on scientific knowledge, as has been explained in the previous section.

Then, also as previously explained, the conclusion and resulting concepts are that modern science is very much intertwined with technology. Similarly, modern technology is intertwined with science. Both of them synergize with each other in creating transformations; the technological products that have been produced at this time also possess contributions from human scientific thinking. Therefore, in relation to the law, **based on the theory of Kuhn, problems that occur cannot be resolved with old legal paradigms, and thus new legal paradigms are needed**. For example, **within the old legal construction, old enterprises will not be able to resolve the new forms of enterprises that are present at this time as a product of technology**.

The characteristics of start-ups were never predicted by lawmakers in the past in constructing enterprise law at that time. The law must also be transformative to resolve problems that are also transformative. From this, the theory of Kuhn becomes a post-paradigmatic alternative or a new paradigm as the solution for developments of disruptive technology in order to create order within human life.

In discussing the idea of order, this also leads to the potential of chaos (disorder) that is also predictable as explained in the figure. In fact, this chaos can **also be related to the theory by Charles Sampford**. Before discussing the theory of Charles Sampford, it is necessary to bring up examples of problems that have occurred in Indonesia; one of them is when the Supreme Court ordered the Minister of Health, BPOM, and IPB to disclose the brand names of baby formula contaminated with *Enterobacter sakazakii* bacteria.

However, the order was not executed on the reason that a copy of the Supreme Court verdict was not given. Yet, the verdict can be downloaded at the Supreme Court web site. Mass legal violations had also occurred with the Supreme Court appeal verdict for the violation committed by six companies that reclaimed the Jakarta coastline. The six companies opposed the appeal that prohibited reclamation by continuing to dig up a stretch of 26 km of the coastline. In addition to continuing the digging, the six companies

³⁴ Baldwin, T. *Op.cit.*

also lodged a case review that was fully supported by the Jakarta Special Capital Region provincial government.

The legal violations were also worsened with the existence of a MoU between the provincial government and the Jakarta Coastal Defence Strategy (JCDS) consortium for the creation of a supergiant embankment with multi-trillion valuation to close up the Jakarta coastline.³⁵

From these phenomena, it is illustrated that the workings of bureaucracy have turned a blind eye toward the law. The law has been crumbled by the intellectualists themselves. This leads to the theory of Charles Sampford as explained in his book *The Disorder of Law: A Critique of Legal Theory*: **the situation is recognized as a situation of legal chaos, as a situation that is built up from the condition of a "Melee" or system-less society**.³⁶ To understand the condition of chaos, James Gleick explained that chaos is a situation that is present everywhere but is difficult to describe. The situation is one without order or with disturbance of objects, society, politics, economy, and the law, for which its pattern cannot be predicted, as a country with **legal void and political rule that lost its legitimacy**.

Chaos also appears in disordered social behaviors and unpredictable legal behaviors. Satjipto Rahardjo states that the chaos theory of Sampford departs from a legal and social basis that are asymmetrically related. What on the surface appears to be orderly, calm, and certain may in fact be far from certainty because society is interlinked under the control of power relations that are not always reflected in the formal relationships in society. Thus, there occurs a gap between formal relationships and real relationships that is based on strength.³⁷

To overcome chaos, legal expert Sri Soemantri stated that indeed, the law without power is purely ideals, and power without the law is tyranny. Therefore, the Supreme Court as the legal interpreter must be able to stimulate power. The law must be able to strike harder; the responsibility of judges does not end simply when the gavel has been struck. The question becomes how to stimulate society to abide by the verdict (Saputra, 2011).³⁸ Then, in relation to start-ups, **the old legal construction for enterprises will potentially experience the same process**. This is because of considering the fact that the old construction of enterprise law has not been able to solve old problems.

The existence of the Law on Limited Liability Corporations has not been able to institute regulations that firmly order the existence of *"the necessity of good enterprise management and risk mitigation, and to maintain and ensure protection of funds of investors or shareholders"*. With the construction of regulations that is not yet firm, there are still many companies that go bankrupt and a lack of protection of shareholders. This is even more so with new

³⁵ Saputra, A. (2011, February 8). *Susu Formula dan Teori Chaos dalam Hukum*. <https://news.detik.com/kolom/d-1562318/susu-formula-dan-teori-chaos-dalam-hukum>

³⁶ Ali, A. (2013). *Menguak Teori Hukum (Legal Theory) dan Teori Peradilan (Judicial Prudence)* (Vol. 1). Kencana.

³⁷ Atmaja, B. K. D. (2021). Hukum Determinan Terhadap Ekonomi atau Ekonomi Determinan Terhadap Hukum. *Simbur Cahaya*, 28(2), 202. <https://doi.org/10.28946/sc.v28i2.1377>

³⁸ Saputra, A. *Op.cit.*

types of enterprises such as start-ups, in that these start-ups possess patterns and methods that are more extreme and complex in enterprise management.

For example, even without the presence of rigid regulations to be applied on old enterprises, at present they must be utilized to resolve the problem of start-ups, in that they possess the concept of “burning money”.³⁹

This concept is what will burn through the funds of investors for the continued promotion of start-ups. This is because start-ups are also new business players in the Indonesian economy. Therefore, this chaos or disordered condition is realistically predictable with the absence of regulating regulations. Then, in discussing economic studies by its own philosophy, what becomes the basis is Article 33 of the 1945 Constitution.

This article indeed mandates that the economic system in Indonesia follows the system of a populist economy or Pancasila-based economy, in which it is understood that the orientation of the economic system is not fully left up to the market; there is intervention by the state in participating in the economic sector by instituting supervision and even contributing to its management.

This school of thought has gone through certain academic as well as historical studies regarding the failure of the free market, for which according to Samuelson and Nordhaus, the free market does not contain fair social distribution. Sadono Sukirno also levied criticism on free market mechanisms, in that unlimited freedom will oppress certain groups, economic activities will become unstable, powers of monopoly will appear, and detrimental externalities will also occur. Goodin also adds that a free market will destroy values and is vulnerable toward social exploitation, yet is not morally justified⁴⁰.

This factor is then what is considered inappropriate to the cultural roots of Indonesia and the values that are upheld in Indonesia, and thus the selected economic system pattern for Indonesia is the economic system pattern that follows the school of thought of state involvement in the market mechanism. According to Sri Redjeki Hartono, one of the important principles of economic law other than balance and public supervision is the intervention of the state toward economic activities, which by Friedmann is explained that the state intervenes not only through state-owned enterprises but also as a controller or regulator, as well as supervisor of the economy.⁴¹

Table 1: Differences of the Old Paradigm and the New Paradigm of Enterprise Forms in Indonesia

Old Paradigms for Enterprises	New Paradigms for Enterprises
Clear place of enterprise	Virtually organized enterprise

³⁹ Drajat, A., & Kartika, D. *Op.cit.*, p. 57-59.

⁴⁰ Drajat, A., & Kartika, D, *ibid.*

⁴¹ Wibisana, A. G. (2017). Campur Tangan Pemerintah dalam Pengelolaan Lingkungan: Sebuah Penelusuran Teoretis Berdasarkan Analisis Ekonomi Atas Hukum (Economic Analysis Of Law). *Jurnal Hukum & Pembangunan*, 47(2), 151-181. <https://doi.org/10.21143/jhp.vol47.no2.812>

Consumer market in a certain location	Consumer market in an unlimited scope
Many employees	Few employees, and with certain specifications such as CEO, COO, and CFO
Product in the form of goods or services	Product in the form of technology that bridges between consumers and producers, such as applications and Cloud-Based Services
Focus on stable and major profits	Focus on fast growth and enterprise valuation
Conventional working methods	Digital working methods utilizing features of computing and technological sophistications such as usage of smart contracts and Artificial Intelligence (AI)
Independent capital; investment only supports	Capital can begin from 0 through usage of technology, and will grow with major investments

Source: processed by the author, secondary legal material, 2022.

From this philosophical basis, it can be seen that indeed the philosophical aspect of the economic system followed by Indonesia has not yet reached the area of start-ups, in that start-ups in this case are still considered to **be patterned after capitalism in that there is no state intervention yet in this business model**. This is proven by the lack of the normative aspect of start-ups, which will be explained in the next section, which not only implies the disorder of the market structure but also degrades the values of the economic system that is philosophically followed by Indonesia itself. From this philosophical basis, it is desired that later on start-ups can head in the direction of ideal supervision and regulation by the state in order to be appropriate to the economic values followed by the nation.

Next, if this philosophical study is then made into the concrete discovery of new regulations for start-ups, various alternatives can be established. **First**, Indonesia can create a new concept regarding start-ups that make them as a new enterprise form in the digital era, by which there would be another construction of a new enterprise form in positive law. This would be similar to the implementations in other countries such as Italy, for which this country implements its own conception of start-ups as enterprises that cannot be older than 5 years of age with a certain amount of profits, as well as India that possesses the conception of an age limit of seven years for this enterprise.⁴² **Second**, the new concept of the start-up enterprise form may be included in one of the forms of enterprises that has already been conceptualized in positive law, but with the addition of new characteristics and criteria that are the primary characteristics of start-ups. **Third**, as an addition that strengthens the system, a technological approach may be utilized through the aid of RegTech or Regulatory Technology, which is the following:

⁴² Startup: Meaning, Process of recognition and Tax Benefits, 501 (E) Notification G.S.R. (2017). <https://taxguru.in/corporate-law/govt-announces-initiative-create-environment-startup-india.html> (Accessed August 6, 2022).

“Regulatory technology, in short regtech, is a new technology that uses information technology to enhance regulatory processes...⁴³ RegTech uses technologies such as advanced analytics, robotic process automation, cognitive computing and the cloud to achieve regulatory and compliance outcomes more efficiently and effectively.”⁴⁴

The meaning of the above is that RegTech takes the form of new information technology that aids the regulatory process and utilizes innovations such as sophisticated analysis, robotic automation, cognitive computing, and the cloud to meet and follow the law in a more effective and efficient manner.⁴⁵

Therefore, RegTech has the function of making use of technology, in this case in the form of artificial intelligence, to be able to create a system of compliance, management, transaction supervision, and reporting that is more comprehensive and efficient in terms of cost and time.⁴⁶ In addition, RegTech also allows for agility and flexibility. RegTech in the end can offer agility in supporting, learning, and evaluating new regulations, and thus the technology can be utilized for analysis of many legal regulations as well and result in output to minimize overlap among legal regulations, and in this way, it can be said that knowledge of technology contributes to the science of law (Schizas et al., 2019).⁴⁷

Presently, RegTech is known for its usage in the fields of finance or banking⁴⁸, as in the case of compliance⁴⁹, (Butler & O'Brien, 2019) for which regtech allows the development of mechanisms for verification of consumer identity or Know Your Customer (KYC)/due diligence that can prevent activities of money laundering. Its usage is not only for private matters; another area of the regtech innovation is the interpretation of regulation publications, and thus it may be utilized to computerize, analyze, and evaluate regulations.⁵⁰ It becomes appropriate for start-ups later on in that the technology is able to computerize legal regulations and even judge verdicts to be able to create an output as the prototype design of certain precise regulations for start-ups.

⁴³ Schizas, E., McKain, G., Zhang, B. Z., Garvey, K., Ganbold, A., Hussain, H., Kumar, P., Huang, E., Wang, S., & Yerolemou, N. (2019). The Global RegTech Industry Benchmark Report. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3560811>

⁴⁴ KPMG. (2019). *There's A Revolution Coming: Embracing the Challenge of the New RegTech Era* (p. 14). KPMG International Limited. <https://assets.kpmg/content/dam/kpmg/cn/pdf/en/2019/06/embracing-the-challenge-of-the-new-regtech-era.pdf>

⁴⁵ Narang, S. (2021). Accelerating Financial Innovation Through RegTech: A New Wave of FinTech. In I. A. Boitan & K. Marchewka-Bartkowiak (Eds.), *Advances in Finance, Accounting, and Economics* (pp. 61-79). IGI Global. <https://doi.org/10.4018/978-1-7998-4390-0.ch004>

⁴⁶ Packin, N. G. (2018). *Regtech, Compliance and Technology Judgement Rule*. 93(1), 193-218.

⁴⁷ Schizas, E., et.al. *Op.cit.*

⁴⁸ Anagnostopoulos, I. (2018). Fintech and regtech: Impact on regulators and banks. *Journal of Economics and Business*, 100, 7-25. <https://doi.org/10.1016/j.jeconbus.2018.07.003>

⁴⁹ Butler, T., & O'Brien, L. (2019). Understanding RegTech for Digital Regulatory Compliance. In T. Lynn, J. G. Mooney, P. Rosati, & M. Cummins (Eds.), *Disrupting Finance* (pp. 85-102). Springer International Publishing, p. 107, https://doi.org/10.1007/978-3-030-02330-0_6

⁵⁰ Pertiwi, P. (2020). *RegTech: Cara Teknologi Membantu Bank Penuhi Kepatuhan di Era Digital*. <https://www.integrity-indonesia.com/id/blog/2018/02/07/regtech-cara-teknologi-membantu-bank-penuhi-kepatuhan-di-era-digital/>

Additionally, it may also be utilized to supervise investment and other characteristics that are attached to start-ups, and therefore the alternative option is that the form of the convergence of law and technology in the field of start-ups later on may be aided by RegTech.

4. Conclusion

The process of transition in paradigms of digital corporations in Indonesia is underway. Old paradigms that emphasized the role of the government have slowly shifted to a digital information atmosphere that is no longer conventional. The Ministry of Information and Technology as well as the Financial Services Authority (OJK) have attempted to develop a model of regulatory sandbox and regulatory security that adopts the concept of HODCs. However, the HODCs have the innovation potential to disrupt corporation law in Indonesia. The Indonesian government has passed several legislations to regulate the systems of HODCs. However, to anticipate the possibility of disruptive innovation, it is essential that in the future, new directions for the paradigms of policy of digital corporations in Indonesia, the improvement of partnerships with stakeholders and shareholders, the improvement of supporting infrastructure of the system of HODCs, and the improvement of the culture of RegTech should be established

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