

Original Paper

Digital Assets in International Investment Arbitration: Potential Barriers to Qualifying Investments?

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Received: February 1, 2024

Accepted: March 7, 2024

Online Published: March 12, 2024

doi:10.22158/jbtp.v12n1p57

URL: <http://dx.doi.org/10.22158/jbtp.v12n1p57>

Abstract

In the context of advancing technology and economic progress, data has emerged as a critical factor of production, characterized by its proprietary attributes and inherent investment value. Within the domain of international investment arbitration, the concept of qualifying investment assumes paramount importance, serving as a linchpin for delineating the scope of applicability of international investment agreements and establishing the jurisdiction of arbitral tribunals. Consequently, the question of whether data, in conjunction with other associated assets involved in data processing activities, can qualify as a qualifying investment and thereby warrant protection under international investment agreements, stands as a primary concern demanding precise explication within the purview of international investment law. Currently, the determination of the qualifying of digital investments predominantly follows two distinct paths: firstly, by interpreting the broad definition of investment and the non-exclusive enumerations contained in international investment agreements, thereby aligning digital assets with the applicable scope of such agreements; secondly, by adopting objective methodologies developed through arbitral practice, wherein digital assets, under specific circumstances, fulfill the criteria elucidated in the “Salini text”. Nevertheless, the significant disparities between digital assets and traditional forms of investment pose certain challenges for arbitral tribunals in determining the qualifying digital investments, which may result in uncertain arbitral awards in this area. Such uncertainty could hinder the process of digital transformation of economic and social life. To respond to this challenge, a potential solution is to stipulate in concluded and revised international investment agreements that digital assets can qualify as qualifying investments.

Keywords

digital assets, data, qualifying investments, definition of investment, Salini text

1. Introduction

The term “investment” plays a foundational role within the entire international investment framework. On one hand, the definition of investment determines the scope of subject matters covered by International Investment Agreements (IIAs). This definition aims to filter out economic activities that the state parties to IIAs have determined should not be subject to international investment protection, meaning that only investments that are “covered” enjoy the protection granted by IIAs (e.g., non-discriminatory treatment, fair and equitable treatment, and expropriation compensation). On the other hand, the definition of “investment” determines the fundamental jurisdictional basis for resolving disputes between investors and host states under the Convention on the Settlement of Investment Disputes between States and Nationals of Other States (ICSID Convention) or other conventions, i.e., *ratione materiae* jurisdiction. That is, the definition of investment limits the subject matter jurisdiction or *ratione materiae* jurisdiction invoked by an investor, as well as the arbitral tribunal constituted accordingly.

Specifically, the International Centre for Settlement of Investment Disputes (ICSID) is currently the most influential institution for resolving international investment disputes. According to Article 25(1) of the ICSID Convention, the jurisdictional competence of an arbitral tribunal hinges upon the existence of a dispute emanating from an investment. Regrettably, the ICSID Convention refrains from supplying a precise definition of the term “investment” and omits detailed elucidation. Therefore, arbitral tribunals are confronted with the formidable task of ascertaining whether an investment of an investor meets the stipulations enshrined in the IIAs and ICSID Convention. During the ratification proceedings of the ICSID Convention, contracting states deliberated on the definition of investment and the degree to which this characterization should be delineated. Developing nations advocated an expansive interpretation of the term to facilitate transnational investment, whereas developed nations espoused a more circumscribed definition. Ultimately, Article 25(1) of the ICSID Convention promulgated a broad and permissive delineation, affording contracting states the latitude to ascertain the parameters of investment by formulating in the IIAs. This legislative trajectory underscores the nuanced considerations and divergent perspectives inherent in the international legal framework governing investments. The outcome of these deliberations materialized in the formulation of Article 25(1) of the ICSID Convention, which, in its wisdom, embraced a broad and inclusive definition of investment, which avoids any undesirable restrictions that a definition may impose and grants the contracting states a great margin of discretion to determine whether a dispute arises out of investment through IIAs. Based on the synthesis of ICSID-related arbitral cases, the adjudication of the investment definition by arbitral tribunals can be broadly categorized into two methodologies. One methodology respects the IIAs, while the other contends that the ICSID Convention is independent of the international investment agreement. In this context, a pragmatic framework, known as the “double-barrelled test” or “double keyhole approach”, has been instituted to prevent interpretative deviations by parties from aligning with the overarching objectives and purposes of the ICSID Convention. This approach provides that activities subject to arbitral jurisdiction not only comply with the definition of investment stipulated in IIAs but also satisfy the objective requirements delineated in the ICSID Convention. Failure to meet either of these criteria will result in the rejection of the jurisdictional claim.

With the onset of the digital economy era, it is globally acknowledged that the intrinsic value of data has propelled it into a phase of transition from commodification to assetization. This transformation signifies the rapid development of digital assets as a form of direct international investment. However, in accordance with the current state of IIAs, foreign investors may find their digital investments are not adequately protected. The reason is, in order to maintain legitimacy and legitimacy, of arbitral tribunals, the process of interpreting the scope of qualifying investments cannot extend too far beyond the assumptions of the contracting states, so as to secure continued support for the Investor-State Dispute Settlement (ISDS) system from various states. Given that most IIAs were concluded before the substantial emergence of digital assets, the investment definition clauses within these IIAs provide scant elucidation of whether digital investments qualify or not; this leads to a divisive issue of whether digital assets can constitute qualifying investments within the jurisdiction of IIAs. From this perspective, the interpretation and expansion of digital investments will have potentially enormous consequences for investors, states, and the ISDS system at large. Consequently, considering that data is a key part of digital assets, this article, on the basis of explaining the data's property value and investment form, employs the "double keyhole approach" to determine whether the data is a qualifying investment. This requires a meticulous examination of both the specific definitions stipulated in IIAs and the objective requirements followed in ICSID arbitration practice. Furthermore, recommendations are put forth regarding the direction of ratification and modification of IIAs based on such reviews.

2. Digital Assets in International Investment

From an economic perspective, with the advent of the information age, digital data unquestionably possesses significant financial value. Even if not the most important, data stands as a vital economic asset and production resource under the possession and control of global companies, and can be utilized as assets for foreign investors to make investments wholly or partially in the investment process.

2.1 The Property Value of Digital Data

Driven by the simultaneous emergence of smart manufacturing, big data mining, and the development of the Internet of Things, among other factors, the economic value of data has increased sharply, followed by an explosive growth of data. The Organization for Economic Cooperation and Development (OECD) describes data as a "core asset" in the digital economy, with assets typically understood as possessing economic value. There is no universally agreed-upon definition of "digital assets". By analyzing the basic characteristics of digital assets, it can be defined as "a collection of binary data which is self-contained, uniquely identifiable and has a value". The value of digital assets is directly linked to their data, and the value of an asset can be better examined by breaking it into two categories: intrinsic and extrinsic. The intrinsic value constitutes the primary data in a digital asset or the fundamental reason why someone might want the data. Data with intrinsic value can be found in Bitcoin, in a company logo, such as a visual representation of binary data, or in a coveted domain name. The extrinsic value of digital assets is represented by metadata, which situates data within a contextual framework and is essential "data about data". Typical metadata includes information, such as who created the data and when, a description of the data, and who has access to it.

According to the World Bank, unprocessed data has relatively little value, and added value is created by processing data (mining, refining, and collection) necessary to be sold. Therefore, in light of those mentioned above, it is evident that extrinsic value holds paramount significance. Through data collection and creation by humans and machines, subsequent analysis and processing reveal a value

that far surpasses the initial expectations of its producers and collectors. This value has now evolved into a driving force for economic development.

The development and market application of data products have become pivotal business models. A significant portion of the revenue for some of the world's leading enterprises is derived from selling customer metadata to advertisers, sales companies, and data analysis firms. To explore the potential of "digital oil", a considerable number of foreign investors are engaging in investment activities involving the establishment of new technology companies or the acquisition of such entities. The value-added rates of industries such as the internet, cloud computing, and artificial intelligence continue to soar. Data-driven technological enterprises such as Apple, Microsoft, Facebook, Google, Tencent, and Alibaba have supplanted traditional giants in sectors like energy and industry, emerging as the world's most valuable companies in the global market.

Moreover, data serves as a driving force for technological innovation and progress. Core artificial intelligence algorithms heavily rely on a substantial amount of high-quality data to enhance autonomous learning capabilities. The advancement of technology and innovation, in turn, contributes to the promotion of industrial and economic development. With the advancement of global digitalization, countries often embark on extensive investment strategies to bridge the digital divide and achieve sustainable digital development. This commonly involves encouraging investments in digital infrastructure and digital companies, including electronic payment support, cloud storage, e-commerce platforms, search engines, and social networks. Consequently, individuals or machines have collected, generated, and utilized a substantial amount of data, serving as inputs in market operations and production processes. In other words, irrespective of the legal nature of data, it has effectively become the core asset of high-tech enterprises, possessing immense economic value and crucial in attracting foreign investment.

2.2 Investment Types of Digital Assets

In order to expedite the advancement of digital industrialization and industrial digitization, countries may implement more extensive strategies for investing in digitization. The economic sectors where investment has more digital dimensions are Information and Communication Technology (ICT) industries (e.g., telecommunications), audiovisual (e.g., media, music, and film streaming), professional services (e.g., digital health services), finance, insurance, etc. To be specific, data and its processing activities may not only serve as independent business operations for investors but also integrate with other assets and business activities of investors. That is, investors have the opportunity to invest not only in "traditional" assets but also in the digital economy, notably in three main areas: (i) in digital firms, such as ridesharing or dating apps; (ii) in digital adoption by non-digital firms, such as mobile banking, or online sales; (iii) and in digital infrastructure, such as online payment, or cloud-computing. Firstly, the initial scenario pertains to foreign investors solely possessing or controlling data within the host state, or despite possessing or controlling investments in the traditional sense, and there exists no substantive connection between the data and these investments. In this case, the data within the host state exists independently, necessitating a dedicated analysis to ascertain whether it constitutes a qualified investment. The noteworthy aspect lies in the generation of data as assets of the foreign investor, which can occur either before or after establishment. On one hand, data may be generated prior to making investments in the host state. For instance, multinational pharmaceutical companies possessing clinical data collected from their home state or other jurisdictions may be required to submit such data to the regulatory authorities of the host country for market access approval. On the other hand,

data can be collected and generated post-establishment of the investment. For instance, this may pertain to the provision of purely digital and hybrid goods and services, such as electronic payment support, cloud storage, e-commerce platforms, content and media, search engines, and social networks.

Secondly, another scenario pertains to foreign investors in the host state who own or control data and investments in the traditional sense. At this time, data, whether considered as a factor of production, a product, or a service, can constitute an integral component with investments in the traditional sense owned or controlled by foreign investors. For instance, if a foreign investor invests funds and other resources in the host state to establish an entity such as a data center, and engages in activities encompassing the collection, storage, and processing of data or the production of data products within that center, it should be considered as a form of investment in the traditional sense. In the reality of digital commerce, it is noteworthy that instances where investors solely rely on data as the asset for which the host state must pay compensation may be relatively uncommon. In most cases, enterprises possessing data (e.g., multinational corporations in various industries, social media companies, cloud computing providers, and data analytics companies) also possess other assets linked to the host state. For instance, a multinational company like Apple, engaged in collecting personal data by providing diverse products and services. It maintains offices, stores, and other assets in numerous states, and some of its international subsidiaries represent well-established businesses.

3. Qualification of Digital Investment Based on IIAs

The primary objective of IIAs is to afford substantive and procedural protection to foreign investors. It is crucial to emphasize that the scope of such protection is confined solely to investments falling within the ambit of the covered investment as delineated by the IIAs. In other words, the jurisdiction of arbitral tribunals hinges upon whether the investment complies with the requirements stipulated in the relevant IIAs.

3.1 Definition of Qualified Investment in IIAs

Almost all IIAs have contained a definition of investment, albeit without a standardized model for specific wordings of investment definitions. In most cases, IIAs employ a method characterized by a combination of a generalized framework followed by specific enumerations to define the scope of investments.

Concerning the content of the definition of investment, IIAs typically adopt two modes: the “asset-based” investment definition model and the “enterprise-based” investment definition model. Specifically, the “enterprise-based” investment definition model focuses on foreign investors’ control or ownership of all or part of commercial entities, defining investment as a business or commercial shares. This definition ensures that the host state assumes obligations solely for projects established through prescribed procedures. Article 1 of the Canada-China Bilateral Investment Treaty (2012) exemplifies this approach, which explicitly enumerates various forms of investment centered around enterprises. However, in contrast, the prevailing definitional framework is the “asset-based” investment definition model in existing IIAs. This approach centrally concerns the protection of the property and rights of foreign investors. The definition of investment encompasses “every kind of asset” invested by investors in the host state, and the enumerative list is explanatory and inclusive rather than restrictive. Typical categories found in most IIAs include real estate and other direct property rights, shareholdings, and other forms of participation in local companies, claims to payment or performance, intellectual property and other intangibles, and concession agreements. This is exemplified in Art. 1 of the

Singapore-United Kingdom Bilateral Investment Treaty (1975). Accordingly, the definition of “investment” is broadly worded, covering all kinds of assets in most instances.

3.2 Definition of Digital Investment

Recent IIAs have not explicitly stipulated digital assets as a form of investment in the investment definition clauses. Nevertheless, notwithstanding this absence, through the prism of treaty interpretation, through treaty interpretation, the majority of IIAs can still encompass digital assets within the scope of investment.

Firstly, certain digital investments may be categorized as intellectual property investments. The legal attributes of digital assets and intellectual property objects are similar, possessing intangible characteristics. Illustrative examples include e-mails, social media accounts, reward points programs, electronic media in digital format (music, videos, and books), software (in source or object code), compilations of data (databases), domain names, designs, trade secrets, and digital currencies. When digital assets align with the subject matter of intellectual property protection, they may be entitled to protection under IIAs in the form of intellectual property rights. When an investment is defined to encompass intellectual property or undisclosed information such as trade secrets, the data, as an integral component of the investment, is inherently capable of invoking protection under IIAs.

However, certain digital investments lack the distinctive features of intellectual property, and the protection of such investments extends beyond the legal framework of intellectual property. Notwithstanding, the broad definition of investment in IIAs can still support qualifying digital assets as investments. The broad definition of IIAs is widely accepted, typically recognizing that various assets with investment characteristics fall within the scope of investment. Furthermore, within the definitional enumeration of “investment” in IIAs, the usual phrasing is the forms that investment “may include”, rather than the forms that investment “must/shall include”. This is evidently an arbitrary provision rather than a mandatory provision; hence, even if it is impossible to ascertain the specific type of investment to which the digital assets belong within the terms enumerated in IIAs, this does not preclude its classification as an investment. The United Nations Conference on Trade and Development (UNCTAD) Series on Issues in International Investment Agreements also stated that the broad, “every kind of asset” terminology supports the idea that the investment definition “embraces everything of economic value, virtually without limitation”. If arbitral tribunal determines that the term “every kind of asset” encompasses all entities with economic value, then digital assets should evidently fall within this broad type of investment definition. In addition, even if IIAs adopted newer definitions of investment, such as posing the “characteristics of investment” requirement to clarify and restrict the scope of the definition. For instance, Art. 1 of the 2012 U.S. Model Bilateral Investment Treaty provides that: “‘investment’ means every asset that an investor owns or controls, directly or indirectly, that has the characteristics of an investment, including such characteristics as the commitment of capital or other resources, the expectation of gain or profit, or the assumption of risk”. For digital investments, these characteristics can also be satisfied. This article will elaborate on these aspects in the following sections.

In theory, any form of property has the potential to serve as a means of contribution. With the evolution of social production methods, the connotations and specific categories of “assets” undergo continuous evolution and enrichment. For example, traditional IIAs historically encompassed investments restricted to tangible assets such as machinery, property, or land. Conversely, with the advent of the knowledge economy, intellectual property rights such as patents and trademarks have progressively

emerged as universally acknowledged types of investment. Due to the ongoing evolution of the global economy, new types of investments are inevitably emerging. These investments will become increasingly significant to the global economy over time, so it is imperative to formulate a broad definition of investment, which will contribute to protecting and promoting foreign investments.

In practice, arbitral tribunals have given broad definitions of investment along with broad interpretations. Typically, a holistic approach is adopted, wherein a transaction as a whole may be deemed an investment, even if any single component of the transaction does not independently qualify as an investment. As exemplified by the case of *Einarsson v. Canada*, it is the first investor-state dispute settlement case about digital data. The claimants, American nationals, have established a corporate entity within the jurisdiction of Canada, namely Geophysical Services Incorporated (GSI). GSI, over several decades, has been dedicated to acquiring seismic data within the Canadian territory, supplying the petroleum and natural gas industries. Although the arbitral tribunal ultimately rejected jurisdiction on the grounds of non-compliance with the condition precedent to arbitration in the North American Free Trade Agreement (NAFTA) Articles 1116 to 1121, the legal analysis presented in this case provides the notion that intangible assets, including data and intellectual property, should be regarded on par with investments protected under NAFTA. Pursuant to Canadian domestic law, it is acknowledged that seismic data generated by GSI is afforded copyright protection; therefore, such data meets the requirements of NAFTA regarding the definition of intangible property covered under investment. Furthermore, the acquisition of seismic data acquiring marine seismic data is a resource-intensive and time-consuming process, indicative of the economic value of the seismic data. Accordingly, the seismic data implicated in this case can be regarded as protected investments.

All in all, as global advancements in computer and network technologies, among other high-tech domains, continue to unfold, the era of digitalization is progressively dawning. The digital technologies, data, and strategically significant assets that constitute the foundational infrastructure of the digital economy are assuming an increasingly pivotal role in shaping the trajectory of international investment flows. Therefore, digital assets should be recognized as qualifying investments in compliance with the provisions of IIAs.

3.3 Territoriality of Digital Investments

In the context of prevailing IIAs, a prevalent stipulation emerges, either expressly articulated or tacitly implied, mandating that qualifying investments must conform to the requirement of being “within the territory of the host state”, which means that the investment has a territorial nexus to the state the investor is suing. This requirement lacks uniformity across IIAs, and may manifest itself either by the explicit inclusion of territorial connection requirements as integral components of the investment definition within IIAs, or through the jurisdictional provisions of IIAs circumscribing the scope of safeguarded investments exclusively within the territorial confines of the host state. Indeed, even in the absence of explicit territorial connection requirements in IIAs, certain arbitral tribunals may infer that qualifying investments under the IIAs must have a territorial connection to the host state.

From a conventional standpoint, it is posited that provided transnational corporations in the digital economy maintain representative offices or agencies within the host state, thereby satisfying the requirement of territorial connection, their data assets may be deemed qualifying investments. In the case of *SGS v. Philippines*, for instance, the arbitral tribunal concluded that even though the company’s primary operational activities occurred beyond the host state’s territorial, SGS invested assets in the Philippines to establish and operate its representative offices, and SGS’s business activities in the

Philippines were arranged through these representative offices; thereby, the arbitral tribunal ultimately decided on the existence of a territorial connection between the investment involved in the case and the Philippines. Nevertheless, digital assets typically embody non-territorial characteristics, such as data stored in the cloud, where the storage location, data flow direction, and the scope of data beneficiaries may traverse diverse countries. When investors contribute to digital assets, there is no necessity to establish a corporate entity or substantial branch in the country where they invest. Therefore, *prima facie*, digital assets may not seem to meet the territorial requirements associated with the host state's territory.

It is imperative to underscore that digital assets should not be automatically excluded from the eligible investment merely due to the lack of compliance with territorial connection requirements. In the course of previous international investment arbitration practices, certain arbitral tribunals have emphasized the issue of whether assets may be utilized for the benefit of individuals or the host state, regardless of whether such assets have actually been transferred to the territory of the host state. In the case of *Fedax v. Venezuela*, the arbitral tribunal observed a prevailing feature in numerous international financial transactions, wherein the assets involved do not actually move into the beneficiary's territory but remain under the beneficiary's control elsewhere. This phenomenon is notably evident in various financial arrangements, including loans and credits, which often do not traverse beyond the originating state, finding applications instead in transactions with suppliers or analogous entities. Analogously, this observation extends to significant offshore financial transactions associated with export and other business activities. Then, the arbitral tribunal proposed the application of the "effective connection" criterion to ascertain whether an investment complies with the requirement of territorial connection. This implies that the determination of whether an intangible asset investment is located within the host state is not contingent upon its physical location but rather on whether the investment's substantive employment is within the host state's territorial confines. Similarly, In the case of *Abaclat v. Argentina*, the arbitral tribunal asserted that distinct from investments involving commercial operations and elements of workforce and property, investments of a purely financial nature necessitate a deliberative inquiry wherein the identification of the investment depends, in the first place, on the nature of such investment. The tribunal further expounded that the relevant criteria should be the location and the beneficiary's interests of the assets' ultimate use, rather than the place of payment or transfer of the assets. In other words, the crucial determination of whether an investment satisfies the territorial connection requirements requirement hinges upon the location where the investment assets are ultimately provided to the host state and whether they contribute substantively to the economic development of the host state.

In light of the intangible nature inherent in both financial assets and digital assets, it is plausible that the same criterion would be applicable in practice. In the mainstream trend of arbitration practice, it is advocated that determining whether intangible assets meet the territorial connection requirements should be based on the "effective connection" criterion. It implies that so long as an investment's economic repercussions extend to the host state's territorial domain, a territorial connection can be established, irrespective of the presence of valid assets transfer. Consequently, regardless of the geographic locus of digital assets storage or transmission, even without the establishment of any physical entity within the host country, the arbitral tribunal may consider digital assets as qualified investments within the host state's territory, provided that such investments constitute an integral part of the host state's business activities and the associated activities are within the territory of the host

state. In any event, however, demonstrating territorial nexus may be more straightforward when the investor has in-state physical assets, or the investor owns in-state subsidiaries, just as it is easier for such assets to align with the traditional definition of investments.

4. Qualification of Digital Investment Based on Objectivist Approach

The ICSID Convention, as one of the most influential multilateral treaties in the field of international investment, establishes the conditions for the jurisdiction of arbitral tribunals in Article 25(1), including the requirement that disputes must arise “arising directly out of an investment”, yet it fails to provide a clear definition of the definition of investment. Therefore, in the context of ICSID arbitration, the arbitral tribunal has made an effort to search for and apply the ordinary, or “objective”/“inherent” meaning of the investment, to prevent investors from abusing the ICSID system. At the same time, the issue has also arisen in non-ICSID arbitration cases, as some tribunals have argued and accepted that such objective or inherent meaning of investment shall equally apply to investment treaties that provide for consent to investment treaty arbitrations.

To date, the “Salini text” has been the most widely adopted objective approach in both ICSID arbitration and non-ICSID arbitration cases. “Salini text” originates from the arbitral award in *Salini v. Morocco*, wherein the arbitral tribunal identified four implicit elements within the definition of investment: (i) a contribution of money or assets; (ii) for a certain duration (typically, two years suffices); (iii) an assumption of risk; and (iv) a contribution to the development of the host state. The consequence of the “Salini text” is that, if an investment does not meet one of the factors, the arbitral tribunal would lack jurisdiction over the dispute, even if the investment meets the IIAs’s definition of an investment.

4.1 Contribution

The contribution criterion requires a contribution of capital in relation to the investment. A contribution may be made in various forms, including in the form of any of the assets listed in the underlying IIAs, encompassing both monetary and non-monetary forms is sufficient to satisfy this criterion. If an actual contribution to development is required, this implies an unjustifiable protection of only those investments that succeed. There is also no requirement that the contribution be “significant”; it will suffice for a contribution to be made to the previous owner of the asset which the claimant alleges is an investment, e.g., the payment of money to a private person in return for shares of a company incorporated in the host state will be a qualifying contribution for purposes of alleging that the acquired shares constitute an investment. In this sense, for most supposed investments, this criterion is seldom challenged, given that the contribution element does not necessitate direct payment of funds to acquire the asset.

From the legislative enactments and practical applications across nations worldwide, it is evident that data has unequivocally emerged as a recognized form of digital asset. For investors that possess or control data, the collection, processing, and storage of data necessitate capital investment and various resources, including human, material, and technological resources. Therefore, from an economic and legal point of view, investors’ ownership or control of data has undoubtedly invested in the host State.

4.2 Duration

The duration element requires that an investment's risk exposure lasts for some minimum length of time. The text and negotiation history of the ICSID Convention indicate a supportive stance towards an inclusive interpretation of the definition of investment to include any activity or asset of an economic nature, but that purely commercial transactions are excluded from the ICSID Convention's definition of investment, such as one-time cargo transportation. A certain duration is considered a crucial element in distinguishing international investment from one-time international trade activities. The former is objectively characterized as a sustained business activity, while the latter only involves a simple buyer-seller relationship or temporary sales transactions. In practice, there is no firmly established minimum duration standard. Typically, an investment activity lasting for a period of two years is deemed sufficient for recognition of its eligibility; in certain cases, arbitration tribunals have even recognized investments with a duration of less than two years as eligible. Especially when considering the mere fact that the life-cycle of an investment was curtailed due to the unlawful actions of the host State, in order to prevent the host state from abusing this requirement, arbitral tribunals in practice often accord greater significance to the intended duration of the underlying asset than the actual duration (how long the investor happens to hold it).

Over time, data undergoes continuous transformation, and data that fails to reflect the latest developments swiftly loses its value objectively. Therefore, the value of digital assets is closely tied to the continuous collection and processing capabilities of data handlers. This capability is manifested not only in the processing of data already in the "past" but also in the acquisition, updating, and expansion of data in the "future". That is to say, the temporal relevance significantly impacts the value of digital assets, which requires investors to possess the right and capability for the continuous collection and processing of data. Transactions centered around data will naturally extend over a period, enabling investors to establish long-term and effective investment relationships with the host state. In the context of the business model of digital platforms, providing services such as social networks, maps, search engines, and email as examples, digital platforms offer these services to users free of charge. In return, consumers contribute relevant data to the digital platforms, which, in turn, monetize this data through the sale of tailored advertisements or the development of new products and services. At this time, digital platform companies typically find themselves obligated to engage in prolonged preliminary operational investments within the host state to meet certain duration requirements. However, for data analysis companies and cloud computing service providers, if they merely provide a one-time data analysis service to the host state, it is highly likely to be classified as a purely commercial transaction, and their digital assets may consequently face challenges in being considered as qualifying investments.

4.3 Risk

The traditional formulation of the criterion of risk requires participation in the transaction's risks on the investor's part. This requirement is very broad, since it may be satisfied as long as the party who invested is susceptible to some risk. In the *Salini* case, the arbitral tribunal enumerated the following examples of such risk: the risk consisting of the potential increase in the cost of labor in case of modification of domestic law; any accident or damage caused to property during the performance of the works; and any unforeseeable incident, among others. Evidently, the risk criterion is exceedingly broad; as long as the party engaging in investment is susceptible to the impact of risks in any form, such as market, financial, and political risks, it can meet this criterion.

In the context of digital assets, it may also meet the criterion of risk assumption for the following reasons. Firstly, the investor is unsure of a return on the investment. The valuation of digital assets is intricately linked to the continual collection and processing of data, so the value of these assets is characterized by volatility. It would appear that this requirement can be satisfied as long as there is uncertainty over the total cost to be incurred by the investor, even if all relevant counterparties discharge their contractual obligations. Secondly, there is still no consensus among countries on core issues pertaining to who owns the data, who is using the data, and how data revenue is distributed; the legal frameworks concerning data in various nations continue to exhibit significant uncertainty. In pursuit of fostering the dual objectives of promoting the development of the digital economy and ensuring data security, countries adopt data regulations, balancing the facilitation of freedom and convenient data investment with considerations for public interests or legitimate policy goals. Several countries have promulgated measures mandating the localization of data processing facilities, the storage of data within national borders, and stipulations pertaining to data sharing. These measures undoubtedly impose limitations upon the activities of investors. In addition, data processing activities related to digital assets inherently give rise to specific risks, notably including network attacks and data theft, both of which have a direct impact on data security.

4.4 Contribution to the Host State's Economic Development

In the *Salini* case, the arbitral tribunal mentioned the element of the contribution to the host state's economic development for the first time, asserting that this element is endorsed in the preamble of the ICSID Convention. Considering the need for international cooperation for economic development and the role of private international investment therein, even if the transaction or activity aligns with the conventional understanding of investments, it falls outside the scope of qualifying investments under the ICSID Convention, unless such investments contribute to the economic development of the host state. Then, the arbitral tribunal found that the element to be present as the public highway to be constructed would serve the public interest because the Italian investors would contribute know-how in the process. In the subsequent years, several arbitral tribunals also recognized that contributions to the host state's economic development are a constituent element of an investment. In light of the limited nature of the host state's protection for foreign investments, this perspective is formulated on the premise that such protection is intended to be exchanged for the development of the domestic economy. Therefore, in situations where foreign investment fails to yield any positive influence on the host state's development, the host state is not obligated to protect such investment. On the other hand, opponents argue that there exists no connection between the contribution to the host state's economic development and the host state's obligation to protect foreign investment. The hostile attitude towards this criterion is typically based on two primary reasons. Firstly, such an assessment analyses the outcome of the investment, rather than its status as an investment. Any activity that is legally recognized and implemented within the territory of the host state should be considered contributory to the development of that host state. Secondly, the criterion requires an assessment that is inherently too subjective. Arbitral tribunals, in practice, face considerable challenges in determining whether investment activities can contribute to the host state's economic development. Consequently, it is inappropriate to mandate the host state's protective obligations to hinge upon such determinations made by arbitral tribunals.

Regardless of the perspective endorsed, digital assets can, to a certain extent, meet the criteria of contribution to the host state's economic development. OECD recognizes that data access and sharing can bring the host state direct and indirect economic and social benefits. These benefits include greater transparency and empowerment of users, new business opportunities, including for data intermediaries and start-ups, competition and cooperation within and across sectors and nations, crowdsourcing new insights and user-driven innovation, and increasing efficiency across society through data linkage and integration. While there is currently controversy regarding the asset attributes and quantification standards of data, it does not imply that digital investment does not contribute to the host country's economic development or is unimportant. To lawfully and efficiently acquire data in the host state, digital economy companies may employ blockchain technology to enhance the host state's data technology level. They might offer a cost-free network platform to facilitate lower-cost knowledge and information sharing in the host state, or directly provide data analytics to improve the decision-making efficiency of the host state's government. All these initiatives could be recognized as contributions to the host state's economic development. Moreover, commodifying digital assets as a component of international direct investment inevitably involves cross-border data flow. The outflow and inflow of data both bear significant implications for the host state's economic development. Even in the absence of a nation transforming itself into a producer of digital content or platforms, potential benefit is derived from the cross-border movement of data. In other words, the mere influx of data can benefit the host state. Therefore, against the backdrop of robust global development of the digital economy, with data being a critical factor of production, few countries are inclined to implement measures restricting the inflow of data into their territories. This trend, to a certain extent, signifies the acknowledgment by countries of the contributory role of digital assets to the economic development of the host state.

4.5 Variation of "Salini Text"

In adopting an objective approach to determine the qualifying of an investment, the arbitral tribunal is obligated not only to decide on the elements it considers appropriate, but also to ascertain whether the absence of a particular element would render the investment unable to pass the test. Up to now, the reliance of arbitral tribunals on the "Salini test" has gradually diminished, particularly with respect to the debate on whether the contribution to the host state's economic development can serve as an element of the objective criterion. Regarding the key features, elements, or hallmarks of the concept of investment, it seems that elements such as contribution, duration, risk, and return expectation have now been generally accepted, and the scrutiny of these elements is not a rigid checklist but rather an examination of interrelated factors. In certain quarters, this approach may be sensible because such a contribution to development is presumed whenever the other three factors are present. Consequently, it can be reasonably asserted that digital assets fulfill a significant portion of the criteria for qualifying investments through an objective approach. For instance, to establish a digital company in the host country and obtain economic benefits from it, foreign investors typically need to invest a substantial amount of financial and resources during the market access phase within a certain period, which will expose them to significant business and regulatory risks, thereby satisfying the "Salini test".

5. Response to Qualified Digital Investment Challenges

Since the existing definition of investment was formulated in investment treaties as well as interpreted in judicial and arbitration practice prior to the advent of the digital economy era, addressing how to adapt it to the evolving modes of business and effectively protect the rights of foreign investors in the new era is an imperative challenge that international investment law must confront.

5.1 *Modify Investment Definition in IIAs*

In recent times, IIAs have generally not explicitly identified digital assets as a form of investment in the definition clauses. While a broad interpretation implies the inclusion of data assets within the scope of most IIAs, the potential negative repercussions of an overly expansive interpretation of the investment definition are significant due to the lack of clear criteria to distinguish between “investments” and “non-investments”. Especially, the lack of precedent value of arbitral awards for arbitrators subsequently considering similar issues may lead to uncertainty in the legal status of digital assets as investments, thereby exacerbating the legitimacy crisis of the ISDS system. Such uncertainty may prevent digital business model operators from determining in advance whether they will be able to rely upon an IIAs to protect their rights in the event of actions on the part of the host state that adversely affect their rights and economic interests (for example, the introduction of “digital taxes” or the imposition of fines on internet companies).

It can be seen that from the point of view of the possible promotion of the main objective of IIAs in the digital economy era—namely, the promotion and protection of foreign investment—the existing definitions of the concept of investments are not sufficient to cope with the future development trend of data investment. One possible solution to address this problem is to adequately consider the characteristics of data assets in the future IIAs, and explicitly include data assets as a distinct investment type.

5.2 *Refine Territorial Connection Requirements in IIAs*

In fact, establishing large entities such as branch offices within the host state’s territory is not an inherent requirement for investment. Rather, it is only in the production of the traditional real economy that it is relatively straightforward and expeditious to examine the qualifying issues related to investments, which makes this requirement maintain a high degree of rationality over an extended period. When the global economy develops into the era of the knowledge economy, the emergence of intangible assets such as industrial property rights in the field of international investment has led to a certain attenuation of the requirement of being within the territory of the host state, and many arbitral tribunals have shifted towards more flexible identification criteria. In the era of the digital economy, the incongruence between the requirement of being within the host state and the emerging production methods becomes increasingly pronounced. Even through the establishment of overseas representative offices or without physical entities within the host state’s territory, digital enterprises can access overseas markets and establish long-term, stable, and close connections with the host state.

However, many IIAs expressly include in their definitions of investments, or in articles defining the scope of their application, the requirement that such investments be made in the territory of one contracting party by investors from another contracting party. While arbitral tribunals may exercise a more flexible interpretation of the eligibility of disputed investments, not all arbitral tribunals can make such an interpretation. Additionally, given that international investment arbitration is not strictly bound by precedents, this complicates the determination of the qualifying of digital assets in specific cases. Therefore, it is imperative to refine further the provisions of spatial requirements in the investment

definition clauses. Regarding assets in tangible form, it may be continued to stipulate the establishment of the place where the property is physically located. As for assets in intangible form, considering that by their very nature, these properties have no physical location, the actual connection standard can be adopted, meaning that as long as digital assets are utilized for the benefit of the host state, it can be deemed to meet the territorial connection requirement.

5.3 Clarify Legality Requirements in IIAs

Within various IIAs, the definition of investment explicitly stipulates that the investment must be “in accordance with domestic law” or incorporate a legality requirement in the clause on the scope of application. However, it must be clarified that if the IIAs do not explicitly stipulate that digital investments must comply with the domestic laws of the host state, when an investor requests data protection and initiates international investment arbitration, the host state, in defending itself by asserting the absence of corresponding protection or provisions in domestic law, may not necessarily find support for such a defense from the arbitral tribunal. For example, in the case of *Saipem v. Bangladesh*, Bangladesh raised a jurisdictional objection on the grounds that the investment in dispute did not fall within the scope of property recognized under Bangladeshi law. Nonetheless, the arbitral tribunal ultimately rejected Bangladesh’s position, instead affirming its jurisdiction over the case. Currently, significant disparities among countries exist in the legal status, substantive rights, protection types, and scope of data. It is conceivable that, in subsequent developments, data may manifest territorial characteristics similar to those observed in intellectual property protection. These territorial characteristics could give rise to inconsistencies in the domestic laws of host states and the provisions or interpretations of IIAs concerning the scope of digital investments.

To avert the possibility that arbitral tribunals may include digital assets not recognized and protected by the host state’s domestic law within the scope of the IIAs protection, also to emphasize and retain the host state’s regulatory authority over digital investments. It is necessary to include the clause on investment “in accordance with domestic law” in IIAs and confine the applicability of this requirement to the investment access stage. According to this clause, whether it is the investment of purely digital companies or digitization of traditional industries generates immense data in their business operations, the ownership of data plays a decisive role in determining whether data generated post-establishment constitutes an integral part of the investment, which ultimately depends on the domestic laws of the host state. Certainly, if, according to the domestic law of the host state, the data can be protected as a form of property right or similar, and data ownership is attributed wholly or in part to the investor as the business operator, then such data should qualify as the digital investment of the foreign investor.

6. Conclusion

The question of whether digital assets can be considered as part of investments covered under IIAs is a significant and impactful issue, as it subsequently determines whether data can be protected under the IIAs and whether investors can resort to international investment arbitration when alleging the host state of breaching treaty obligations. Regarding the determination of the “covered” investments, arbitral tribunals mainly rely on the scope defined by the IIAs and the objective characteristics of the investment.

Although direct cases involving digital investments are currently absent, in practice, historical investment arbitration cases, particularly those within the information and communication technology sector, reveal that data, serving as a vital resource for multinational enterprises, may have covertly

played a role in the assessment of the market value of transnational corporate investments. In the digital era, data's escalating prominence within the spectrum of assets underscores a discernible influence on international investment arbitration. The impending discourse on the categorization of digital assets as eligible investments is inevitable. The scope of qualifying investment is in a perpetual state of flux, notably exemplified by the gradually acknowledged qualifying of intangible assets such as intellectual property and financial derivatives. As jurisdictions worldwide elucidate their legal frameworks pertaining to digital assets, the investment standing of digital assets within IIAs is poised to attain heightened clarity.

Examining the prevailing circumstances, in light of the globally acknowledged pecuniary value attributed to digital data, extant IIAs predominantly employ expansive delineations in enumerating investment categories, that include "any assets" of some economic value as covered investments. Suppose an investment is defined as covering intellectual property or undisclosed information such as commercial secrets. In that case, the data that forms part of the investment may, in principle, be considered a qualified investment. In the future, there exists a substantial probability that arbitral tribunals will accord recognition to data as a novel classification within the realm of "investment". Even if arbitral tribunals elect to apply the "Salini text" for ascertaining the qualifying of digital investments, data may satisfy criteria encompassing a commitment, be subject to risk, have a certain duration, and contribute to the economic development of the host State. Nonetheless, to fortify the determinacy of ascertaining the qualifying of digital investments within the milieu of international investment arbitration, nations may contemplate circumscribing the ambit of investment definitions within IIAs through explicatory measures. With the elucidation of the applicability of digital assets in IIAs, a myriad of developing issues may manifest, including but not limited to matters pertaining to the implementation of standards concerning treatment and protection within the framework of IIAs. These exigencies necessitate further scholarly exploration within the domain of international law.

References

- Abaclat and Others v. Argentine Republic, ICSID Case No. ARB/07/5, Dissenting Opinion to Decision on Jurisdiction and Admissibility (August 4, 2011).
- Arif, H. A., & David, L. A. (2021). *International Investment Protection of Global Banking and Finance: Legal Principles and Arbitral Practice*. Nederland: Kluwer Law International.
- Bian, C. (2023). Data as Assets in Foreign Direct Investment: Is China's National Data Governance Compatible with its International Investment Agreements? *Asian Journal of International Law*, 13(2), 342-364. <https://doi.org/10.1017/S2044251322000595>
- Chaisse, J., & Bauer, C. (2019). Cybersecurity and the Protection of Digital Assets: Assessing the Role of International Investment Law and Arbitration. *Vanderbilt Journal of Entertainment & Technology Law*, 21(3), 549-590.
- Crina, B. (2016). *ICSID Convention after 50 Years: Unsettled Issues*. Nederland: Kluwer Law International.
- Darius, C., & Justin, L. (2023). Two decades after Salini v Morocco: The case for retaining the Salini test with modifications. *Arbitration International*, 39(1), 63-84. <https://doi.org/10.1093/arbint/aiad007>
- Dmitry, A. P. (2022). The Concept of "Investment" at the Dawn of the Digital Era. *Georgia Journal of International and Comparative Law*, 51(1), 155-195.

- Dolzer, R., & Schreuer, C. (2012). *Principles of International Investment Law*. Oxford: Oxford University Press. <https://doi.org/10.1093/law/9780199651795.001.0001>
- Fedax, N. V. (1997). *The Republic of Venezuela, ICSID Case No. ARB/96/3, Decision of the Tribunal on Objections to Jurisdiction* (July 11, 1997).
- Gabriel, M. L. (2023). International investment law and data, copyrights and performance requirements: A closer look at Einarsson v Canada. *Journal of Intellectual Property Law & Practice*, 18(6), 446-454. <https://doi.org/10.1093/jiplp/jpad038>
- Ivan, S. (2020). Investor-State Dispute Settlement and Data: Implications for Data Policy and Regulation. *GRUR International*, 69(12), 1242-1246. <https://doi.org/10.1093/grurint/ikaa145>
- Julian, D. M. (2010). The Meaning of “Investment”: ICSID’s Travaux and the Domain of International Investment Law. *Harvard International Law Journal*, 51(1), 257-318.
- Katia, Y. S. (2018). *Arbitration Under International Investment Agreements: A Guide to the Key Issues*. Oxford: Oxford University Press. <https://doi.org/10.1093/law/9780198758082.001.0001>
- Lucas, D. C. (2022). International Investment Policy and the Coming Wave of Data-Flow Disputes. *Michigan Business & Entrepreneurial Law Review*, 11(2), 285-341. <https://doi.org/10.36639/mbelr.11.2.international>
- Noah, R. (2004). The Notion of “Investment” in International Investment Arbitration. *Studies in Transnational Economic Law*, 19, 283-324.
- OECD. (2016). Ministerial Meeting on the Digital Economy: Innovation Growth and Social Prosperity. *OECD official website*. Retrieved March 4, 2024, from <https://www.internetociety.org/wp-content/uploads/2017/08/bp-OECD2016-20160607-en.pdf>
- OECD. (2019). Enhancing Access to and Sharing of Data: Reconciling Risks and Benefits for Data Re-Use Across Societies. *OECD official website*. Retrieved March 4, 2024, from https://www.oecd-ilibrary.org/sites/276aaca8-en/1/2/5/index.html?itemId=/content/publication/276aaca8-en&_csp_=a1e9fa54d39998ecc1d83f19b8b0fc34&itemIGO=oecd&itemContentType=book
- Polanco, R. (2023). The Impact of Digitalization on International Investment Law: Are Investment Treaties Analogue or Digital? *German Law Journal*, 24(3), 574-589. <https://doi.org/10.1017/glj.2023.30>
- Ralph, W. (2020). Defining Digital Assets. *Digital asset management news*. Retrieved March 5, 2024, from <https://digitalassetmanagementnews.org/features/defining-digital-assets/>
- Ralph, W. (2020). Re-Defining the Meaning and Scope of Digital Assets-Part 1. *Digital asset m-anagement news*. Retrieved March 5, 2024, from <https://digitalassetmanagementnews.org/features/re-defining-the-meaning-and-scope-of-digital-assets-part-1/>
- Saipem, S. P. A. V. (2007). *The People’s Republic of Bangladesh, ICSID Case No. ARB/05/07, Decision on Jurisdiction and Recommendation on Provisional Measures* (March 21, 2007).
- Salini, C. S. P. A., & Italstrade, S. P. A. V. (2001). *Kingdom of Morocco [I], ICSID Case No. ARB/00/4, Decision on Jurisdiction* (July 31, 2001).
- Scott, J. S. et al. (2015). Using BITs to Protect Bytes: Promoting Cyber Peace by Safeguarding Trade Secrets through Bilateral Investment Treaties. *American Business Law Journal*, 52(1), 1-74. <https://doi.org/10.1111/ablj.12041>

- SGS Soci   G  n  rale de Surveillance S.A. v. Republic of the Philippines, ICSID Case No. ARB/02/6, Decision of the Tribunal on Objections to Jurisdiction* (January 29, 2004).
- Theodore David Einarsson, Harold Paul Einarsson and Russell John Einarsson v. Canada, ICSID Case No. UNCT/20/6, Counter Memorial on Jurisdiction, Merits and Damages* (January 17, 2023).
- UNCTAD. (2012). UNCTAD Series on Issues in International Investment Agreements II. *UNCTAD official website*. Retrieved March 4, 2024, from https://unctad.org/system/files/official-document/diaeia20102_en.pdf
- Wenhua, S., & Lu, W. (2018). The Definition of "Investment": Recent Developments and Lingering Issues. *ICCA Congress Series, 20*, 169-197.
- William, W. P. (2023). *Arbitration International*. Oxford: Oxford University Press.
- World Bank. (2018). Information and Communications for Development 2018: Data-Driven Development. *World Bank official website*. Retrieved March 4, 2024, from <https://documents1.worldbank.org/curated/en/987471542742554246/pdf/128301-9781464813252.pdf>