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Cloud Computing as an Investment Under the ICSID Convention

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Abstract

Extracting data's value can only be possible by using a high amount of processing power. The most eligible way of procuring such amount of processing power is using cloud computing services. Cloud computing services face several interventions by governments around the globe. The most notable interventions relate to the localization of data and data processing facility. Since cloud computing services nearly always provided internationally, there is a need to explore the possibility of protecting cloud computing services from those interventions by using a legal tool from the 1960s namely the ICSID Convention which allows forming arbitrational tribunals to solve investment disputes between investors and states. One of the conditions for ICSID tribunals to have jurisdiction over disputes is that the dispute at hand must be related to an investment. However, the ICSID Convention does not contain a definition of the investment term. Mainly, there are two different approaches among the case law and legal doctrine for defining the investment term. The first approach is leaving the duty of defining the term to the parties. The second approach requires simultaneous fulfilment of the parties' consent and certain objective criteria. Cloud computing services can meet the required criteria under those approaches.

Keywords

Cloud computing • Data • Localization • Investment • ICSID

ICSID Konvansiyonu Kapsamında Bulut Bilişimin Yatırım Olarak Değerlendirilmesi

Öz

Verinin değerinin ortaya çıkarılabilmesi, ancak yüksek miktarda işlem gücü kullanılması ile mümkün olabilir. Söz konusu yüksek işlem gücünün temini için en elverişli yol, bulut bilişim hizmetleridir. Bulut bilişim hizmetleri, tüm dünyada hükümetler tarafından çeşitli müdahalelerle karşılaşmaktadır. Bu müdahalelerin en önemlileri, verilerin ya da veri işleme sistemlerinin lokalizasyonuna (ülke sınırları içerisinde tutulmasının zorunlu kılınması) ilişkin olanlardır. Bulut bilişim hizmetlerinin neredeyse her zaman uluslararası ölçekte sunulduğu göz önüne alındığında; bulut bilişim hizmetlerinin söz konusu müdahalelerden korunmasına ilişkin olarak, 1960'lı yıllarda imzalanmış olan ve yabancı yatırımların korunmasını hedefleyen, ICSID Konvansiyonu'nun kullanılıp kullanılamayacağı konusunun incelenmesi ihtiyacı doğmuştur. ICSID Konvansiyonu, yatırımcılar ve devletler arasındaki yatırımlara ilişkin uyuşmazlıkların çözümlenmesi için tarafsız tahkim heyetleri oluşturulmasına imkân vermektedir. ICSID tahkim heyetlerinin bir uyuşmazlık üzerinde yetki sahibi olabilmesinin en önemli koşullarından birisi, ilgili uyuşmazlığın bir yatırıma ilişkin olmasıdır. Buna rağmen ICSID Konvansiyonu, yatırım terimine ilişkin herhangi bir tanım içermemektedir. Doktrinde ve içtihatlarda yatırım teriminin tanımlanması için temel olarak iki ana görüş bulunmaktadır. Bunlardan ilki, terimin tanımlanması görevinin taraflara ait olduğunu savunan görüştür. İkinci görüş ise; tarafların yatırım teriminin tanımını birlikte belirlemesi ile yatırım teşkil eden ekonomik aktivitenin belirli objektif kriterleri karşılayabilmesi koşullarının birlikte sağlanmasını aramaktadır. Bulut bilişim hizmetleri, her iki görüşe göre de gereken koşulları sağlayabilmektedir.

Anahtar Kelimeler

Bulut programlama • Veri • Bölgeselleştirme • Yatırım • ICSID

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Cloud Computing as an Investment Under the ICSID Convention

Data is the new oil.[1] However, how can we extract and refine the data, or what are the extractors and refineries of this new natural resource which emerged as a result of technological developments? Naturally, processing power is needed to extract and refine the data, and we can name the companies and other organizations that use available data processing power to collect and generate, and subsequently refine, unprecedented volumes of data as the extractors and refineries of the new oil. Without such data processing power, it is impossible to get any value from data to deserve the nickname of the new oil. In this context, cloud computing has become a pivotal aspect to provide the processing power needed, in a scalable and flexible, and therefore efficient and adequate manner.[2]

The National Institute of Standards and Technology defines cloud computing as *a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction*.[3] As an alternative and more straightforward definition, cloud computing fundamentally means remote computing with software accessed via the internet with or without a fee.[4] Cloud computing has already become the driving force behind technological and economic developments around the globe. From social media to artificial intelligence, every recent and near future development that impacts our social, political and economic lives are based on cloud computing.

Almost by nature, most cloud computing services are meant to be operated internationally. Several data centres in different countries provide services to customers around the world. For example, a company in Germany can purchase cloud computing services that have servers in India, Ireland, Turkey and USA. This structure also raises concerns about control and supervision, especially for governments. As a result, interventions by governments to cloud computing services are popular around the globe especially in the European Union and countries such as Russia, China, and Iran.

On the other hand, there are countless international agreements to protect foreign investments from government interventions.[5] However, violation of a bilateral

1 Perry Rotella, 'Is Data The New Oil?' (*Forbes*, 4 February 2012) <https://www.forbes.com/sites/perryrotella/2012/04/02/is-data-the-new-oil/> accessed 11 September 2017.

2 CN Höfer and Georgias Karagiannis 'Cloud Computing Services: Taxonomy and Comparison' (2011) 2 Journal of Internet Services and Applications 81, 90 <http://link.springer.com/article/10.1007/s13174-011-0027-x> accessed 6 February 2017.

3 Peter Mell and Timothy Grance, 'The NIST Definition of Cloud Computing' (The National Institute of Standards and Technology 2011) Recommendations of the National Institute of Standards and Technology Special Publication 800-145 2 <http://nvlpubs.nist.gov/nistpubs/Legacy/SP/nistspecialpublication800-145.pdf> accessed 12 February 2017.

4 Miranda Mowbray, 'The Fog over the Grimpen Mire: Cloud Computing and the Law' (2009) 6 SCRIPTed: A Journal of Law, Technology and Society 132, 133, < http://heinonline.org/HOL/Page?handle=hein.journals/scripted6&div=11&g_sent=1&collection=journals> accessed 8 August 2017.

5 For example, there are 2363 bilateral investment treaties ('UNCTAD Investment Policy Hub' <http://investmentpolicyhub.unctad.org/IIA> accessed 28 August 2017.) between countries.

investment treaty or another undertaking to the foreign investor by the host government is always possible. To ensure adequate protection of foreign investments, International Convention on the Settlement of Investment Disputes (the ICSID Convention) established an arbitration centre which allows foreign investors to arbitrate legal disputes about their investments before impartial tribunals instead of the local courts. Even though the ICSID Convention can provide adequate protection for foreign investments, there are some prerequisites for the jurisdiction of the ICSID Centre. One the most important prerequisites is whether the dispute is related to investment or not.

Since the governments commonly intervene cloud computing services, there is a need for exploring the possibility of protecting cloud computing services under ICSID Convention and bilateral investment treaties.[6] To illustrate this need, the first section of this article will analyse the interventions on cloud computing to define the actual problem. After providing a general overview of the ICSID Convention, the last section of this article will review whether it is possible to consider cloud computing services as foreign investment or not under the current case law of ICSID arbitration.

I. Interventions to Cloud Computing

Interventions on cloud computing by governments take many different shapes as result of various policy approaches about data and cloud computing. Therefore, it would be impossible to identify each intervention case by case. To make a comprehensive analysis, interventions to cloud computing must be grouped per their characteristics.

Under the below titles, the intervention types to cloud computing around the globe will be analysed to illustrate the need for protection under the ICSID convention and bilateral investment treaties.

A. Intervention to the Location of Data Processing Facility

Location of the data processing facility poses great importance for both the governments and cloud computing service providers. Users of cloud computing services also have interests over the location of data processing facility which processes their data since the location determines the fate of users' data.

6 For a review on social media and entertainment investment within the scope of the ICSID Convention, please see: Helena Jung Engfeldt, 'Should ICSID Go Gangnam Style in Light of Non-Traditional Foreign Investments Including Those Spurred on by Social Media - Applying an Industry-Specific Lens to the Salini Test to Determine Article 25 Jurisdiction' (2014) 32 Berkeley Journal of International Law 44 <http://heinonline.org/HOL/Page?handle=hein.journals/berkjintlw32&div=5&g_sent=1&casa_token=3ZU6h80dAsMAAAAA:8IgqwV6X6gLasG-htwsm0AogPNoJZaswXK3eQVZpB5g13ZwOC-1oSGDerJCzN2D-WjZQ_W3sjw&collection=journals#> accessed 27 December 2017. For an evaluation of personal data protection and cloud computing in the context of TTP, please see George Yijun Tian, 'Current Issues of Cross-Border Personal Data Protection in the Context of Cloud Computing and Trans-Pacific Partnership Agreement: Join or Withdraw' (2016) 34 Wisconsin International Law Journal 367 <http://heinonline.org/HOL/Page?handle=hein.journals/wisint34&div=16&start_page=367&collection=journals&set_as_cursor=0&men_tab=srchresults> accessed 2 November 2018.

For governments, the location of data processing facility matters for economic and political reasons. From the economic point of view, local data processing facilities mean investments which lead increases in tax income and employment rate and decreases in cost of doing business due to cloud computing's effect on IT expenses and cheaper access to cloud services. Further, local data processing facilities allow for know-how transfer to local partners from foreign owners. In addition to that, local data processing facilities help governments to establish economic security within the country.[7] Political interests of governments about the location of data processing facilities consist of imposing its laws, controlling the content and protecting national interests.[8] These political interests become stronger every day since the cyberspace turns into a virtual battlefield between governments and other organizations especially the criminal and terrorist organizations. On the other hand, governments are also pursuing economic growth and development of their country which prevents them from acting only by security concerns.

Cloud computing service providers have mostly economic interests about the location of their data processing facilities.[9] Although it can be said that service providers have concerns about the security of their data processing facilities, these concerns are driven by gaining economic benefits. Therefore, classifying such security interests in the same category with the governments' security interests is not suitable. General criteria for cloud computing service providers for searching a suitable location to establish a data processing facility is economic advantages such as infrastructure capacity, incentives, taxes and cost of doing business in a country.[10]

7 Imar Bank case of Turkey is an excellent example of economic security and location of data processing facilities. Imar Bank is owned by Uzan family who was billionaires in Turkey back in the 90s. Uzan family was involved in a fraud scheme in Imar Bank by manipulating the records in the bank's IT systems and actual invoices given to the depositors of the bank. After Imar Bank lost its financial health with a significant effect on the economy (there was an economic crisis in Turkey in 2001), Banking Regulation and Supervision Authority ("BRSA") and Savings Deposit Insurance Fund of Turkey found out that all physical records were destroyed, and their access to IT systems were blocked. Since the bank's IT systems were located outside the territory of Turkey, it was impossible to access and audit them. This case led BRSA to take an absolute position on requiring IT systems localization in Turkish financial sector. For more information about this case: Ayse Hayali, Selin Sarili and Yusuf Dinc, 'Turkish Experience in Bank Shareholders and Top Managers Fraud: Imar Bank and Ihlas Finans Case' (2012) 1 The Macrotheme Review 114, 121 <http://macrotheme.com/yahoo_site_admin/assets/docs/MR11Ayse.28184406.pdf> accessed 8 September 2017; Mine Omurgonulsen and Ugur Omurgonulsen, 'Critical Thinking about Creative Accounting in the Face of a Recent Scandal in the Turkish Banking Sector' (2009) 20 Critical Perspectives on Accounting 651, 663 <http://www.sciencedirect.com/science/article/pii/S1045235408000245> accessed 11 September 2017.121 <http://macrotheme.com/yahoo_site_admin/assets/docs/MR11Ayse.28184406.pdf> accessed 8 September 2017; Mine Omurgonulsen and Ugur Omurgonulsen, \\uc0\\u8216{}Critical Thinking about Creative Accounting in the Face of a Recent Scandal in the Turkish Banking Sector\\uc0\\u8217{} (2009).

8 Anupam Chander and Uyên P Lê, 'Data Nationalism' (2015) 64 Emory Law Journal 679, 713 <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2577947> accessed 7 July 2017; Neha Mishra, 'Data Localization Laws in a Digital World: Data Protection or Data Protectionism?' [2016] The Public Sphere 136, 144 <http://publicspherejournal.com/wp-content/uploads/2016/02/06.data_protection.pdf> accessed 23 September 2017.

9 Albert Greenberg and others, 'The Cost of a Cloud: Research Problems in Data Center Networks' (2009) 39 ACM SIGCOMM Computer Communication Review 68 <https://www.microsoft.com/en-us/research/wp-content/uploads/2009/01/p68-v39n1o-greenberg.pdf> accessed 21 September 2017.

10 'Data Centre Risk Index' (Cushman & Wakefield 2016) 4 <https://verne-global-lackey.s3.amazonaws.com/uploads%2F2017%2F1%2Fb5e0a0da-5ad2-01b3-1eb8-8f782f22a534%2FC%26W_Data_Centre+Risk_Index_Report_2016.pdf> accessed 12 June 2017; Paul T Jaeger and others, 'Where Is the Cloud? Geography, Economics, Environment, and Jurisdiction in Cloud Computing' (2009) 14 First Monday <http://journals.uic.edu/ojs/index.php/fm/article/view/2456/2171> accessed 23 September 2017.

In addition to those, political stability and applicability of the rule of law principle to reduce arbitrary interference from the local government are essential factors in the process of choosing a location.[11] Most importantly, the cloud computing service providers wish to be able to provide services to other countries where they do not have data processing facility, as it is the fundamental logic of cloud computing.

Users of cloud computing services also have several interests about the location of the data processing facility which they are benefitting from. Requirements of the local law about data protection and data security have the most extreme effect on the treatment of the data which relates to the users. In addition to that, cost and availability of the services heavily depend on the country's conditions where the data processing facility is located.

To conclude, it is clear that different parties have contradicted interests over the location of data processing facilities that are being used for providing cloud computing services. Economic competitiveness concerns and those contradicted interests do not allow governments to impose complete localization rules or entirely liberal rules about the location of data processing facility. Consequently, the rules which require localization of data processing facility are generally imposed by the governments in regulated sectors such as finance and energy. With this approach, political and economic interests of the governments are arguably balanced with the interests of other actors. There are many examples of such localization requirements. Probably the most famous one is the Turkish e-money and payment services legislation that requires localization of information systems of the licensed e-money and payment service providers which forced PayPal to leave Turkish market back in 2016.[12] The same localization requirement is also applicable to the banks in Turkey and China.[13] Similarly, Indonesia requires public service providers to establish local data centres.[14] Under the Department of Defense Interim Rule on Network Penetration Reporting and Contracting for Cloud Services, all cloud computing service providers who work for the Department of Defense are required to store the Department of Defense's data within the borders of the U.S.A.[15]

The actual problem with the rules that govern the location of data processing facilities is that if a country imposes such rule, it would not be possible for cloud

11 'Data Centre Risk Index' (n 10) 4; Jaeger and others (n 10).

12 Ingrid Lunden, 'PayPal to Halt Operations in Turkey after Losing License, Impacts "Hundreds of Thousands"' (*www.techcrunch.com*, 31 June 2016) <https://techcrunch.com/2016/05/31/paypal-to-halt-operations-in-turkey-after-losing-license-impacts-hundreds-of-thousands/> accessed 9 July 2017.

13 For China: Chander and Lê (n 8) 686. For Turkey: Article 5 of The Communique on Principles of Information Systems Management and Business Processes and Audition of Information Systems in the Institutions of Information Exchange, Clearing and Netting.

14 Chander and Lê (n 8) 699.

15 Defense Federal Acquisition Regulation Supplement: Network Penetration Reporting and Contracting for Cloud Services (DFARS Case 2013– D018) 51744 < https://www.gpo.gov/fdsys/pkg/FR-2015-08-26/pdf/2015-20870.pdf > accessed 12 September 2017.

computing service providers to operate in that country. However, the cloud computing service providers make their investments to establish data processing facilities based on an analysis to determine how wide of an area that the facility can provide service. At the moment of the establishment of data processing facility, if a country which does not have any localization rules, located in the area introduces any localization rules, then the cloud computing service provider's investment would be harmed because using the data processing facility with full capacity becomes impossible.

From the perspective of beneficiaries of the cloud computing services, localization rules may force them to leave the market or prevent them from entering the market or force them to make additional investments as in the PayPal case. Localization requirement of Turkish Law forced PayPal to leave the market due to non-compliance with the Law. If PayPal wished to stay in the market, then it would have to make additional investments in Turkey even though it already has sufficient information systems in other countries to provide its services. So, it is safe to say that the localization rule required PayPal to make unnecessary investments for itself.

As a conclusion, the location of data processing facility is a delicate matter with many parties have different interests. Due to the conflicting interests of these parties, data localization requirements generally imposed on regulated sectors. However, it is safe to say each localization rule also harm investments and commercial activities of both providers and beneficiaries of cloud computing services.

B. Intervention to the Location of Data Processed by Using Cloud Computing

Generally, rules about location of data require storing certain types of data within the territory of a country. By nature, data localization rules require localization of data processing facilities or *vice versa* in most cases which make rules about data localization and data processing facility localization very closely connected. For example, Russian Personal Data Protection Law requires storage of Russian citizens' data within the borders of Russia.[16] As another example, Turkish regulations about electronic ledgers and invoices require electronic ledger and invoice data to be stored within the borders of Turkey.[17] In both scenarios, the applicable rules do not forbid data transfers abroad. However, mandatory localization of data demands to establish local data storing facilities which makes use of cloud computing services practically impossible due to cost and management issues. Additionally, in the PayPal case, the Turkish e-money and payment services regulations required PayPal to store its financial data within the borders of Turkey in addition to localization requirement of data processing facility.[18]

16 Chander and Lê (n 8) 701.

17 Para 9 of General Communique on Tax Procedure Law (Circular Number: 433); General Communique on Electronic Ledger.

18 Article 23 of Law on Payment and Securities Settlement Systems, Payment Services and Electronic Money Institutions.

As a new development, a draft EU regulation introduced a new rule which will prohibit the enactment of data localization rules by member states that require storage or other processing activities of data to be conducted on a specific EU member state territory.[19] This regulation only allows data localization rules if the enactment of such rule is justified on the grounds of public security as in the meaning of EU law. The EU's motivation for introducing the regulation is to strengthen its Digital Single Market to achieve economic growth which means the regulation is a proof that data localization requirements harm economic activities. Since the EU only prevented member states from introducing localization rules against other member states (the member states are still able to introduce rules preventing storage or processing data outside of the EU territory), it is safe to say that the EU took a protective approach about its internal market. Therefore, EU's regulation is still an intervention to cloud computing services even if it removed localization requirements within the Union.

Interests of governments, cloud computing service providers and users about data localization are very similar to their interests about the location of data processing facilities. To avoid unnecessary repeating, please refer to the explanations in the previous title.

Data localization requirements, as similar to the localization requirements of data processing facility, have a critical impact on providing cloud computing services to any region. Therefore, these kinds of rules have crucial importance for the cloud computing service providers regarding their business and investment decisions, because data localization requirements may force out any major player to out of the market as in the PayPal case.

C. Limitations on Processing Certain Types of Data

The rules that govern processing certain types of data can be considered as a very comprehensive intervention to cloud computing services. These rules may completely prevent or introduce additional burdens for processing some types of data. Alternatively, such rules may impose additional general requirements like complying with specific requests from governments or private persons. Those general requirements may introduce additional costs and liabilities for providing cloud services. The reasoning or justification behind imposing such rules is generally protecting citizens or ensuring public order.

General Data Protection Regulation[20] ("GDPR") may be considered as an example of the rules as mentioned earlier that govern processing certain types of data. GDPR

19 Proposal for a Regulation of the European Parliament and of the Council on a framework for the free flow of non-personal data in the European Union.

20 Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation).

is a set of rules that regulates the processing of personal data in EU countries. GDPR introduces new territorial application articles which make GDPR applicable to any entity providing services to EU countries, even without any presence in any of EU countries. Further, GDPR is also applicable to any person in EU countries, even if this person is not an EU citizen, and the relevant data controller does not have any presence in the EU.[21] Considering the fact that nearly all companies have a combined and interactive information technology infrastructure, treating some amount of data differently (in accordance with GDPR rules) from the rest of data, can bring incredibly high amount of costs especially for the companies located outside EU but processes EU citizen data among "local" data which do not fall under the scope of the GDPR. Application scope and other rules in GDPR will definitely have a substantial effect on cloud computing service providers.[22]

Personal data protection rules may also be considered as strict limitations and burdens imposed on data controllers and data processors. Exercising rights of data subjects, taking necessary administrative and technical measures to comply with personal data protection requirements, and limitations of transferring personal data abroad all mean additional costs to bear.[23] Although the right to privacy must be protected especially in the information age we are in, balancing interests of citizens about their privacy and the amount of costs imposed on data controllers and data processors (including cloud computing service providers) is a critical issue. For example, the right to be forgotten which is introduced by European Court of Justice decision[24] based on the rules about rights of data subjects, and further regulated in GDPR caused Google to review 1,849,192 removal requests between the dates of 28 May 2014 and 27 August 2017.[25] Reviewing, deciding and imposing those decisions about removal requests caused many costs for Google to bear. Would it be possible to consider imposing such burden on a company to protect citizens' right to privacy and protection of their personal data as a justified approach, even if it means just intervening online search results which are also provided freely, not the actual content?[26] From the international investment law perspective, it appears as an arguable issue.

21 Article 3 of the General Data Protection Regulation.

22 Mark Webber, 'The GDPR's Impact on the Cloud Service Provider as a Processor' (2016) 16 Privacy & Data Protection Journal 1 <http://www.fieldfisher.com/media/3993765/the-gdprs-impact-on-the-cloud-service-provider-as-a-processor-mark-webber-privacy-data-protection.pdf> accessed 13 August 2017.

23 'The High Costs of GDPR Compliance' (*Dark Reading*) <https://www.darkreading.com/endpoint/the-high-costs-of-gdpr-compliance/a/d-id/1329263> accessed 23 September 2017.

24 *Google Spain SL, Google Inc v Agencia Española de Protección de Datos (AEPD), Mario Costeja González* [2014] European Court of Justice C-131/12.

25 This data is extracted from 'Transparency Report: Search Removals Under European Privacy Law' (Google) <https://transparencyreport.google.com/eu-privacy/overview> accessed 27 August 2016.

26 For more information about the opinions about right to be forgotten: Steven C Bennett, 'The Right to Be Forgotten: Reconciling EU and US Perspectives' (2012) 30 Berkeley J. Int'l L. 161 <http://heinonline.org/HOL/Page?handle=hein.journals/berkjintlw30&div=7&g_sent=1&collection=journals>; Kyu Ho Youm and Ahran Park, 'The "Right to Be Forgotten" in European Union Law: Data Protection Balanced with Free Speech?' (2016) 93 Journalism & Mass Communication Quarterly 273 <http://journals.sagepub.com/doi/pdf/10.1177/1077699016628824> accessed 17 June 2017.

Another critical issue about limitations on processing certain types of data is content regulations. There are many laws in force around the globe that allow removal of particular content or blocking access to them. Such content regulations are very well in place for preventing child pornography, intellectual property violations, infringements to right to privacy, and other similar offenses. On the other hand, imposing access blocking decision to specific contents or entire websites based on vague terms like public order and national security mean high-impact interventions to cloud computing services in most cases. For example, China's permanent ban on Facebook, Twitter and Google allowed Chinese Government to impose censorship and control over cyberspace where Chinese citizens could enjoy the freedom of expression.[27] In addition to that, China's permanent ban allowed the creation of Chinese equivalent of such websites as WeChat, Weibo, RenRen, and Baidu which mean China prevented foreign competitors from entering its market to protect and develop the local economic actors. In other scenarios of access blocking to particular content, a country may impose temporary bans on any content to combat at hand problem like social media bans during Arabian Spring,[28] Turkish bans on YouTube and Twitter after denial of some removal requests.[29] As a compelling case for a temporary banning of some content, Turkish authorities banned YouTube after denial of removal of a content back in 2010. However, such banning affected the other Google services due to their joint usage of the same infrastructure with YouTube.[30] Therefore, other Google services became access blocked without any proper legal reason.

It should be clearly stated that the governments around the globe can and should have been able to block or remove specific content to protect public order and national security. However, such concepts are open to misuse due to approaches of interpreters of these concepts. Considering essential consequences of access blocking on cloud computing service providers, a balanced line should be drawn between conflicted interests of governments and cloud computing service providers.

In all of the above-mentioned sample scenarios about limitations on the processing of certain types of data (it is possible that there can be other scenarios now or in the future that introduce limitations on processing of certain types of data), cloud computing service providers suffer significant economic losses or completely prevented from entering the relevant markets. Since each limitation means an economic loss for cloud computing

27 For more information about Chinese censorship activities: David Bamman, Brendan O'Connor and Noah Smith, 'Censorship and Deletion Practices in Chinese Social Media' (2012) 17 First Monday <http://journals.uic.edu/ojs/index.php/fm/article/view/3943> accessed 11 September 2017.

28 Craig McGarty and others, 'New Technologies, New Identities, and the Growth of Mass Opposition in the Arab Spring' (2014) 35 Political Psychology 725, 735 <http://onlinelibrary.wiley.com/doi/10.1111/pops.12060/abstract> accessed 13 September 2017.

29 Aras Coskuntuncel, 'Privatization of Governance, Delegated Censorship, and Hegemony in the Digital Era' (2016) 0 Journalism Studies 1, 11 <http://dx.doi.org/10.1080/1461670X.2016.1197045> accessed 11 September 2017.

30 Catalin Cimpanu, 'Attempting to Ban YouTube, Turkey Restricts Several Google Services' (*softpedia*) <http://news.softpedia.com/news/Attempting-to-Ban-YouTube-Turkey-Restricts-Several-Google-Services-143894.shtml> accessed 11 September 2017.

service providers, it is safe to state that investments of cloud computing service providers can be harmed by rules about limitations on the processing of certain types of data.

D. Discrimination Between Data Types

Cloud computing services need continually functioning telecommunication services with sufficient bandwidth to transfer data. Without sufficient telecommunication infrastructure, all investments of cloud computing service providers would be for nothing. The net neutrality rule fundamentally governs data transfers via telecommunication infrastructure from telecommunications law perspective. According to net neutrality rule, all data types are equal, and there shall be no discrimination between data types while transferring.[31] Currently, net neutrality rule is generally applied all around the globe except for the U.S.[32] even though there are many debates over whether net neutrality rule should be abandoned or not.[33]

Telecommunication service providers (i.e., cable companies) wish to charge extra for certain data types by claiming that massive amount of data transfers require more cable infrastructure investment which means high costs.[34] In this scenario, the other data senders (i.e., cloud computing service providers) who refused to pay extra or do not even requested to pay will have to endure reduced internet speed while the data senders who accept paying extra will be enjoying increased internet speed. Acceptance of such approach would ultimately change the structure of internet as it is known today.[35]

Although there is currently no country except for the U.S. that adopts policies against net neutrality rule[36], abandonment of net neutrality rule would be considered as a vast intervention to cloud computing services. Such action would require cloud computing service providers to bear additional costs or endure disadvantage of lower internet speed which would eventually kill competition capacity of the relevant provider, especially if there is a discrimination between local providers and foreign providers.

Apart from net neutrality rule, there may be other scenarios in the future that can constitute an intervention to cloud computing services by any kind of discrimination between data types.

31 Nicholas Economides, '"Net Neutrality," Non-Discrimination and Digital Distribution of Content Through the Internet' (2008) 4 I/S: A Journal of Law and Policy for the Information Society 209, 212 <http://www.stern.nyu.edu/networks/Economides_Net_Neutrality.pdf> accessed 20 September 2017.

32 The Federal Communications Commission repealed the net neutrality rules inserted back in 2015 on 14 December 2017. Jacob Kastrenakes, 'The FCC Just Killed Net Neutrality' (*The Verge*, 14 December 2017) <https://www.theverge.com/2017/12/14/16776154/fcc-net-neutrality-vote-results-rules-repealed> accessed 18 February 2018.

33 Nelson Granados, 'The Net Neutrality Debate: Why There Is No Simple Solution' (*Forbes*) <https://www.forbes.com/sites/nelsongranados/2017/05/31/the-net-neutrality-debate-why-there-is-no-simple-solution/> accessed 23 September 2017.

34 'Net Neutrality: The Perspective of Telcos and Cable Companies' <https://inform.tmforum.org/features-and-analysis/2016/06/net-neutrality-the-perspective-of-telcos-and-cable-companies/> accessed 23 September 2017.

35 'Net Neutrality' (EDRi 2013) Issue 8 10 <https://edri.org/files/EDRi_NetNeutrality.pdf> accessed 21 April 2017.

36 dejiaccessnow, 'Status of Net Neutrality Around the World' (*CARTO*) <https://dejiaccessnow.carto.com/viz/4f239c60-356f-11e5-b01c-0e853d047bba/embed_map> accessed 23 September 2017.

II. An Old Instrument to Protect Cloud Computing: The ICSID Convention

A. General Overview of the ICSID Convention

After the World War II, rebuilding Europe's infrastructure and economy led the establishment of new institutions like the World Bank and Organization for Economic Co-operation and Development.[37] While economies began to grow, international investment relations started to emerge. In 1961, Mr. Aron Broches, the General Counsel of the World Bank pursued the idea of establishing an effective dispute settlement mechanism to protect international investments.[38] Four years later, International Convention on the Settlement of Investment Disputes[39] (the ICSID Convention) was open for signature and ratification. In 1966, all 20 ratifications required for the convention to enter into force was complete, and the convention becomes fully operational.[40] As of 2017, there are 161 signatories or contracting states around the globe to the convention with or without some reservations. 619 cases are registered as of 30 June 2017 to the centre since its establishment.[41]

The ICSID Convention established International Centre for Settlement of Investment Disputes which is an arbitration and conciliation institution to solve investment disputes. Procedural rules of arbitration such as jurisdiction of the centre, appointments of arbitrators, applicable law, evidence, awards and cost of proceedings are included in the ICSID convention. Generally, arbitration proceedings before the centre start with a request for arbitration from a party and then continues with the appointment of the tribunal, first session with the parties, written procedure, oral procedure and award stages.

Jurisdiction rules of the centre require fulfilment of several conditions to find a tribunal competence over the dispute. According to these rules, the legal dispute must be arising directly out of an investment *(ratione materiae)*, and the dispute must be between a contracting state and a national of another contracting state *(ratione personae)*.[42] Additionally, the parties must consent to solve the dispute with arbitration.

37 Fred L Block, *The Origins of International Economic Disorder: A Study of United States International Monetary Policy from World War II to the Present* (University of California Press 1977) 70.

38 Christoph H Schreuer, *The ICSID Convention: A Commentary* (Second Edition, Cambridge University Press 2009).

39 Convention on the Settlement of Investment Disputes between States and Nationals of Other States (opened for signature 18 March 1965, entered into force 14 October 1966).

40 Schreuer (n 38).

41 'The ICSID Caseload – Statistics' (International Centre for Settelement of Investment Disputes) Issue 2017-2 7 <https://icsid.worldbank.org/en/Documents/resources/ICSID%20Web%20Stats%202017-2%20(English)%20Final.pdf> accessed 9 September 2017.

42 The ICSID Convention also includes a provision about disputes between contracting states (art. 64). According to this article, such disputes shall be referred to the International Court of Justice unless the States concerned agree to another method of settlement.

Another critical issue is that the ICSID Convention does not strictly require the investment to exist within the territory of the host state.[43] Even though the tribunals can take a stricter position towards physical investments, such requirement is definitely not required for non-physical investments such as financial sources.[44]

The critical issue with the jurisdiction rules for the purpose of this article is assessing whether providing cloud computing services from a country to another country without any data centre or other technical infrastructure in the target country can be deemed as an investment within the meaning of the ICSID Convention or not. Under the following titles, debates about how to define the term of investment during the negotiations of the ICSID Convention will be reviewed. After that, approaches regarding the definition of it will be analysed to find an answer to this question.

B. Definition of the Term of Investment

1. History of the Definition of the Investment Term

Definition of the term of investment determines which disputes can be arbitrated before the ICSID Centre. However, the drafters of ICSID Convention purposely avoided defining investment term due to the contradiction between developing countries and developed countries about its scope. While the developed countries wanted to define the term to the greatest extent possible, the developing countries requested more limited scope for the term.[45] To conclude negotiations, a compromise was offered by the United Kingdom to remove any definition from the text of the ICSID Convention and allow each country to notify the other signatory countries about which disputes they will not consider as investment disputes.[46]

43 Rudolf Dolzer and Christoph Schreuer, *Principles of International Investment Law* (2nd edn, Oxford University Press 2012) 77 <https://books.google.com.tr/books?hl=tr&lr=lang_en%7Clang_tr&id=qS0UDAAAQBAJ&oi=fnd&pg=PP1&dq=Principles+of+international+investment+law&ots=EXyClkMpWD&sig=NuamsO2khRBJhNchL-TBfeciqn8&redir_esc=y>; Krista Nadakavukaren Schefer, *International Investment Law: Text, Cases and Materials, Second Edition* (Second Edition, Edward Elgar Publishing 2016) 113.

44 *Abaclat and Others v Argentine Republic, (formerly Giovanna a Beccara and Others v The Argentine Republic),* ICSID Case No ARB/07/5, Decision on Jurisdiction and Admissibility (4 September 2011) para 374 - 376; *Fedax N V v The Republic of Venezuela,* ICSID Case No ARB/96/3, Decision of the Tribunal on Objections to Jurisdiction (11 July 1999) para 41; *Ceskoslovenska Obchodni Banka, AS v The Slovak Republic,* ICSID Case No ARB/97/4, Decision of the Tribunal on Objections to Jurisdiction (24 May 1999) para 77 - 78. For an opinion defending that the investment should be in the territory of the host state, please see: *Abaclat and Others v Argentine Republic, (formerly Giovanna a Beccara and Others v The Argentine Republic),* ICSID Case No ARB/07/5, Dissenting Opinion, Georges Abi-Saab (28 November 2011) para 73 - 119. For detailed information about financial investments, please see Michael Waibel, 'Opening Pandora's Box: Sovereign Bonds in International Arbitration' (2007) 101 American Journal of International Law 711 <http://heinonline.org/HOL/Page?handle=hein.journals/ajil101&div=53&start_page=711&collection=journals&set_as_cursor=0&men_tab=srchresults> accessed 2 November 2018; Michail Dekastros, 'Portfolio Investment: Reconceptualising the Notion of Investment under the ICSID Convention' (2013) 14 Journal of World Investment & Trade 286 <http://heinonline.org/HOL/Page?handle=hein.journals/jworldit14&collection=journals&id=294&startid=&endid=327> accessed 1 October 2018.

45 Julian Davis Mortenson, 'The Meaning of "Investment": ICSID's Travaux and the Domain of International Investment Law' (2010) 51 Harvard International Law Journal 257, 285 <http://www.harvardilj.org/wp-content/uploads/2010/09/HILJ_51-1_Mortenson.pdf> accessed 11 September 2017."plainCitation":"Julian Davis Mortenson, 'The Meaning of "Investment": ICSID's Travaux and the Domain of International Investment Law' (2010

46 *ibid 289.*the ICSID Convention. Commentators and tribunals have often acted as though the Convention, by omitting any specific definition of "investment," delegated that question to arbitral tribunals for case-by-case lawmaking. This assumption has spun off increasingly complex (and incoherent

Apart from that mechanism, countries began to define the investment term in consent document such as agreements or bilateral investment treaties. In time, ICSID tribunals and commenters started to develop different approaches while defining the term of the investment.

2. Approaches towards Definition of Investment

The duty of defining the term of the investment falls to the tribunals and commenters since the ICSID Convention does not contain any definition. There are two major approaches for defining the term of the investment. The two-fold test or the double keyhole approach or the double-barrelled approach ("the double keyhole approach") is the widely accepted one in the current practice of the ICSID Convention. According to this, the activity subject to the dispute should meet both the criteria set by the consent document[47] (such as a bilateral investment treaty) moreover, the ICSID Convention at the same time. The deferential approach or open approach requires that the activity subject to the dispute should only meet the criteria set by the BIT.

a. The Deferential Approach

The deferential approach prioritizes the parties consent over certain specific criteria regarding the term of investment under the ICSID Convention.[48] According to this approach, consent of the parties should determine which activities will be deemed an investment for the jurisdiction of the ICSID tribunal without giving any regards to the ICSID Convention. The main reasoning behind this approach is that the term of investment was intentionally left undefined during the negotiations of the ICSID Convention for allowing states to determine their position regarding the definition of the investment term.

47 Consent of the parties can be present via an agreement between parties. In addition to that, a host state can consent to the ICSID arbitration through its legislation or bilateral investment treaties (or multilateral treaties) with the state that the investor is a citizen of. For detailed information about consent to the ICSID arbitration, please see Schreuer (n 38) 190. Commencing from here, I will use BIT (bilateral investment treaty) to refer the consent document in all possible forms.

48 Emmanuel Gaillard, 'Identify or Define? Reflections on the Evolution of the Concept of Investment in ICSID Practice' 407 <http://www.shearman.com/~/media/Files/NewsInsights/Publications/2009/01/Identify-or-define-Reflections-on-the-evolution-__/Files/View-full-text-Identify-or-define-Reflections-on__/FileAttachment/IA2009IdentifyordefineReflectiononevolutionconce__.pdf> accessed 23 September 2017; Mortenson (n 45) 269; *Lanco International Inc v The Argentine Republic,* ICSID Case No ARB/97/6the ICSID Convention. Commentators and tribunals have often acted as though the Convention, by omitting any specific definition of "investment," delegated that question to arbitral tribunals for case-by-case lawmaking. This assumption has spun off increasingly complex (and incoherent Preliminary Decision: Jurisdiction of the Arbitral Tribunal (8 December 1998) para 48; *SGS Société Générale de Surveillance SA v Republic of the Philippines,* ICSID Case No ARB/02/6, Decision of Tribunal on Objections to Jurisdiction (29 January 2004) para 99 - 107; *MCI Power Group LC and New Turbine, Inc v Republic of Ecuador,* ICSID Case No ARB/03/6, Award (31 July 2007) para 165; *Biwater Gauff Ltd v United Republic of Tanzania,* ICSID Case No ARB/05/22, Award (24 July 2008) para 312 – 317; *CMS Gas Transmission Company v The Republic of Argentina,* ICSID Case No ARB/01/8, Decision of the ad hoc Committee on the Application for Annulment of the Argentine Republic (25 September 2007) para 71; *Philippe Gruslin v Malaysia,* ICSID Case No ARB/99/3, Award (27 November 2000) para 13.5 - 13.6; *Tokios Tokelés v Ukraine,* ICSID Case No ARB/02/18, Decision on Jurisdiction (29 April 2004) para 39; *Enron Corporation and Ponderosa Assets, LP v Argentine Republic,* ICSID Case No ARB/01/3, Decision on Jurisdiction (14 January 2004) para 44; *Generation Ukraine, Inc. v Ukraine,* ICSID Case No ARB/00/9, Award (16 September 2003) para 6.1, 6.5, 11.5; *Ceskoslovenska Obchodni Banka, A.S. v The Slovak Republic* (n 44) para 68. Mr. Aron Broches also stated that parties' consent will have great weight in any determination of the Centre's jurisdiction, although it would not be controlling (A Broches, 'Convention on the Settlement of Investment Disputes: Some Observations on Jurisdiction' (1966) 5 Columbia Journal of Transnational Law 263, 268 <http://heinonline.org/HOL/Page?handle=hein.journals/cjtl5&div=18&start_page=263&collection=journals&set_as_cursor=0&men_tab=srchresults> accessed 2 December 2018.

Consent of the host state is generally expressed in the BIT with the state which the investor is a citizen of. If this BIT provides a definition about which kinds of economic activities should be considered as an investment, then the deferential approach requires the ICSID tribunal to determine its jurisdiction over such definition. According to certain opinions, this approach is the most compatible approach to the Vienna Convention.[49]

b. The Double Keyhole Approach

(i) General overview of the double keyhole approach

The double keyhole approach requires the activity subject to the dispute to fulfil the criteria set by the BIT and the ICSID Convention at the same time.[50] According to this approach, it is not possible to grant jurisdiction to an ICSID tribunal solely based on the consent of the parties. This means even if a BIT defines an activity as an investment, if that activity cannot be considered as an investment within the scope of the ICSID Convention, then an ICSID tribunal would not have jurisdiction on the legal dispute regarding that activity.

This approach identifies where to look for conditions of considering an activity as an investment, but it still does not provide any clues about the meaning of the term of investment under the article 25 of the ICSID Convention. As the conclusion of that, the ICSID tribunals developed two different main approaches to define the term. The first approach is the objective approach which defends the existence of objective conditions for considering an activity as an investment.[51] The most famous

49 Mortenson (n 45) 311; Melissa García, 'The Path Towards Defining "Investment" in ICSID Investor-State Arbitrations: The Open-Ended Approach' (2018) 18 Pepperdine Dispute Resolution Law Journal 27, 50 <https://digitalcommons.pepperdine.edu/drlj/vol18/iss1/2> accessed 2 July 2018. 50 <https://digitalcommons.pepperdine.edu/drlj/vol18/iss1/2> accessed 2 July 2018.}","plainCitation":"Mortenson (n 45)

50 Schreuer (n 38) 117; Sebastien Manciaux, 'The Notion of Investment: New Controversies' (2008) 9 Journal of World Investment & Trade 443, 449 <http://heinonline.org/HOL/Page?handle=hein.journals/jworldit9&div=46&start_page=443&collection=journals&set_as_cursor=1&men_tab=srchresults> accessed 2 November 2018; Christopher Dugan and others, *Investor-State Arbitration* (Oxford University Press 2011) 259 <https://books.google.com.tr/books?hl=tr&lr=lang_en%7Clang_tr&id=xfkEAQAAQBAJ&oi=fnd&pg=PP1&dq=Investor-state+arbitration&ots=f9zZK0Ji-q&sig=OA0kC78MRcYe7PkjCkgL-lt5LSQ&redir_esc=y#v=onepage&q=Investor-state%20arbitration&f=false>; Schefer (n 43) 83.

51 Gaillard (n 48) 410; Schefer (n 43) 85; Mortenson (n 45) 272; Schreuer (n 38) 117."URL":"http://www.shearman.com/~/media/Files/NewsInsights/Publications/2009/01/Identify-or-define-Reflections-on-the-evolution-__/Files/View-full-text-Identify-or-define-Reflections-on__/FileAttachment/IA2009IdentifyordefineReflectiononevolutionconce__.pdf","language": English","author":[{"family":"Gaillard","given":"Emmanuel"}],"issued": {"date-parts":[["2009"]]},"accessed":{"date-parts":[["2017",9,23]]}},"locator":"410"},{"id":771,"uris":["http://zotero.org/users/3734785/items/9JWRV63P"],"uri":["http://zotero.org/users/3734785/items/9JWRV63P"],"itemData":{"id":771,"type":"book","title":"International Investment Law: Text, Cases and Materials, Second Edition","publisher":"Edward Elgar Publishing","number-of-pages":"665","edition":"Second Edition","abstract":"This fully revised and updated edition of International Investment Law remains a complete and concise guide to the law of international investment protection and continues to approach the subject with an easy-to-follow, broad and balanced text. New to this edition:- updates to include numerous new cases- completely reworked sections on standards of treatment- new Q&A section to capture practitioner views. Key Features:• balance of cases and explanatory comment familiarises students with reading opinions and enables them to grasp the core concepts at stake• concise – suitable for one-semester course for non-specialists or as a first text for students who will take further specialised courses in the area• excerpts from the most influential arbitration decisions outline differing interpretations and ensure students don't learn in a theoretical vacuum• questions throughout encourage readers to come to their own opinions.","ISBN":"978-1-78536-008-4","note":"Google-Books-ID: M4IwDQAAQBAJ","shortTitle":"International Investment Law","language":"en","author":[{"family":"Schefer","given":"Krista Nadakavukaren"}],"issued":{"date-parts":[["2016",9,28]]}},"locator":"85"},{"id":515,"uris":["http://zotero.org/users/3734785/items/NVSGH6SK"],"uri":["http://zotero.org/users/3734785/items/NVSGH6SK"],"itemData":{"id":515,"type":"article-journal","title":"The Meaning of 'Investment': ICSID's Travaux and the Domain of International Investment Law","container-title":"Harvard International Law Journal","page":"257 - 318","volume":"51","issue":"1","abstract":"This article resolves a long-standing controversy about the definition of "investment" in the core provisions of international investment law's keystone treaty, the ICSID Convention. Commentators and tribunals have often acted as though the Convention, by omitting any specific definition of "investment," delegated that question to arbitral tribunals for case-by-case lawmaking. This assumption has spun off increasingly complex (and incoherent)

and influential case defending this approach is the *Salini* case.[52]

The outer limit approach is the second approach.[53] This approach states that even if a BIT defines an activity as an investment if such activity cannot be considered as an investment without violating the meaning of the "investment" word, it would not be possible to consider that activity as an investment according to the article 25 of the ICSID Convention.[54]

Since the objective approach is accepted more than the outer limit approach, details of the objective approach will be reviewed under the following subtitle.

(ii) The objective approach: *Salini* test

Jurisdiction award in the *Salini* case is probably the most important milestone since the ICSID Convention was opened to signatory states.[55] This decision on jurisdiction determined the conditions of considering an activity as an investment within the meaning of the article 25 of the ICSID Convention.[56] Even though it is not compulsory for ICSID tribunals to follow the precedence before them, the *Salini* case has been followed by many tribunals, and of course, attracted many criticisms from other tribunals and commenters.[57]

The legal dispute in the *Salini* Case is about a delay in performance of a contract which requires construction of a highway in Morocco, and underpayment of the investor under this contract.[58] One of Morocco's objections was the absence of *ratione materiae* jurisdiction of the tribunal.[59] Upon this objection, the tribunal firstly examined the BIT between Morocco and Italy to determine whether construction of highway can be considered as an investment.[60] After that, the tribunal explored the meaning of investment under the ICSID Convention.

According to the *Salini* tribunal, an investment as in the meaning of the ICSID Convention must fulfil the following conditions: contribution, a certain duration

52 *Salini Costruttori S.pA and Italstrade S.pA v Kingdom of Morocco,* ICSID Case No ARB/00/4, Decision on Jurisdiction (23 July 2001).

53 Schefer (n 43) 104; *Pantechniki SA Contractors & Engineers (Greece) v The Republic of Albania,* ICSID Case No ARB/07/21, Award (30 July 2009) para 35 - 49; *Malaysian Historical Salvors, SDN, BHD v The Government of Malaysia,* ICSID Case No ARB/05/10, Dissenting Opinion of Judge Mohamed Shahabuddeen (19 February 2009) para 8 - 11.

54 The *Pantechniki* case (n 54) gives a metaphor as *"one cannot deem a person to be 10 feet tall"* to illustrate some types of economic transactions cannot be considered as investment regardless of definitions of BITs.

55 Gaillard (n 48) 404.

56 Salini case followed the criteria set by Prof. Ch. Schreuer for the first time as a certain duration, a regularity of profit and return, an element of risk, a substantial commitment, and a Significant contribution to the host State's development Christoph H Schreuer, *The ICSID Convention: A Commentary* (First Edition, Cambridge University Press 2001) 140. However, Prof. Ch. Schreuer explicitly stated that these criteria should not necessarily be understood as jurisdictional requirements. (Schreuer (n 38) 128)

57 Please see (n 48 and 53).

58 *Salini Costruttori S.p.A. and Italstrade S.p.A. v Kingdom of Morocco* (n 53) para 2.

59 *ibid* para 36 – 42.

60 *ibid* para 43 – 49.

of performance of the contract, participation in the risks of the transaction and contribution to the economic development of the host state of the investment.[61]

Contribution condition means that an investor should be committed to the activity he pursues as an investment by assigning some amount of economic value or assets.[62] These economic value or assets can be financial sources but also be qualified personnel, know-how, intellectual property right, equipment or services.[63] Even though there is no explicit limitation on the type of contributions, their value should be substantial.[64] Finally, contributions should always be considered in connection with their remunerations or profits to the investor.[65]

Certain duration of performance of the contract condition requires an investment to last for a time.[66] The length of this time is determined as two to five years in the *Salini* decision.[67] The logic behind this condition is achieving long term commitments of foreign capital from the foreign investors for the host state to develop its local economy.[68] Therefore, one-time transactions as one-time sales or short-term commercial credits would not be considered as investments generally.[69] Even though most of the tribunals applied this two to five years condition,[70] there are some cases that tribunals accepted time periods of less than two years as sufficient due to specific needs of relevant cases.[71] It should also be noted that such interpretations are possible since the ICSID Convention does not have any time limit condition even if there was a proposition of five years minimum time limit condition during the negotiations.[72]

61 *ibid* para 52.

62 Dugan and others (n 50) 271; Schefer (n 43) 86.

63 *Bayindir Insaat Turizm Ticaret Ve Sanayi A.S. v Islamic Republic of Pakistan,* ICSID Case No ARB/03/29, Award (27 September 2009) para 131; *Malaysian Historical Salvors, SDN, BHD v The Government of Malaysia,* ICSID Case No ARB/05/10, Award on Jurisdiction (17 May 2007) para 109.

64 Antoine Martin, *Definition of Investment: Could a Persistent Objector to the Salini Tests Be Found in ICSID Arbitral Practice Topics*, 11 *Global Jurist* [i]-19, 8 (2011), http://heinonline.org/HOL/Page?handle=hein.journals/globjur11&collection=journals&id=293&startid=&endid=313 (last visited Aug 12, 2017); *Malaysian Historical Salvors, SDN, BHD v The Government of Malaysia* (n 63) para 109; John P. Given, *Malaysia Historical Salvors Sdn., Bhd. v Malaysia: An End to the Liberal Definition of Investment in ICSID Arbitrations*, 31 Loy. L.A. Int'l & Comp. L. Rev. 467–500, 481 (2009), http://heinonline.org/HOL/Page?handle=hein.journals/loyint31&div=22&start_page=467&collection=journals&set_as_cursor=0&men_tab=srchresults (last visited Sep 2, 2018).

65 *Joy Mining Machinery Limited v The Arab Republic of Egypt,* ICSID Case No ARB/03/11, Award on Jurisdiction (6 August 2004) para 57; *Fedax N. V. v The Republic of Venezuela* (n 44) 1387.

66 Manciaux (n 50) 11; Schefer (n 43) 90.

67 *Salini Costruttori S.p.A. and Italstrade S.p.A. v Kingdom of Morocco* (n 53) para 54.

68 Dugan and others (n 50) 267.

69 *ibid.*

70 *Malaysian Historical Salvors, SDN, BHD v The Government of Malaysia* (n 63) para 110; *Jan de Nul N.V. Dredging International N.V. v Arab Republic of Egypt*, ICSID Case No ARB/04/13, Decision on Jurisdiction (16 June 2006) para 93; *Consortium R.F.C.C. v Kingdom of Morocco*, ICSID Case No ARB/00/06, Decision on Jurisdiction (16 July 2001), para 62; *Bayindir Insaat Turizm Ticaret Ve Sanayi A.S. v Islamic Republic of Pakistan* (n 63) para 132.

71 *Saipem S.p.A. v The People's Republic of Bangladesh*, ICSID Case No ARB/05/07, Decision on Jurisdiction and Recommendation on Provisional Measures (21 March 2007) para 102; *Consorzio Groupement LESI-DIPENTA v People's Democratic Republic of Algeria*, ARB/03/08, Award (10 January 2005) para 14(ii); *LesiSpA and ASTALDI S.pA v People's Democratic Republic of Algeria*, ARB/05/03, Decision on jurisdiction (12 July 2006) para 73(iii).

72 Schreuer (n 38) 115; Schefer (n 43) 90.

Participation in the risks of the transaction condition is widely accepted as a necessary condition by the tribunals and commenters.[73] However, there is no generally agreed meaning of the term of risk. Still, the risk that the investor face should not be merely a commercial risk.[74] Instead, the risk must be related to investing in a foreign country where the investor exposes its contribution (i.e., financial source, equipment, etc.) to those risks.[75] The risk condition includes economic risks such as credit risk, warranty periods, an increase of production costs and work stoppages, and political climate of the host state.[76] The *Salini* case also specified that it does not matter whether the risk is freely taken or not.[77] For the contracts that the investor was substantially paid before completion of its obligations, it is not possible to accept that the risk condition is fulfilled because the economic value targeted with the investment is already obtained.[78] Finally, the condition of risk is nearly always deemed as fulfilled by ICSID tribunals due to the reason that existence of a legal dispute or nature of a long-term commercial contract or need to rely on national courts are mostly accepted as indications of the risk factor.[79]

Contribution to the economic development of the host state of the investment constitutes the most controversial condition imposed by the *Salini* decision.[80] The basis of this condition is the wording in the Preamble of the ICSID Convention that indicates one of the purposes of the convention as economic development.[81] Even though some tribunals applied this condition,[82] other tribunals refrained from applying it.[83] The commenters also criticized this condition with various reasons as ambiguity

73 Dugan and others (n 50) 269; Schefer (n 43) 90; Schreuer (n 38) 131; *Salini Costruttori S.p.A. and Italstrade S.p.A. v Kingdom of Morocco* (n 53) para 52, 55.

74 Jean-Pierre Harb, 'Definition Of Investments Protected By International Treaties: An On-Going Hot Debate' (2011) 26 Mealey's International Arbitration Report 1, 11 <http://www.jonesday.com/files/Publication/c24e6d62-3269-4b32-b93d-992f1d5e2e77/Presentation/PublicationAttachment/b4526438-d73b-4bd4-a780-8003fe19feaf/689472.pdf> accessed 21 January 2018; Mortenson (n 45) 297 the ICSID Convention. Commentators and tribunals have often acted as though the Convention, by omitting any specific definition of "investment," delegated that question to arbitral tribunals for case-by-case lawmaking. This assumption has spun off increasingly complex (and incoherent; *Malaysian Historical Salvors, SDN, BHD v The Government of Malaysia* (n 63) para 112.

75 Manciaux (n 50) 456.

76 *Ioannis Kardassopoulos v The Republic of Georgia*, ICSID Case No ARB/05/18, Decision on Jurisdiction (6 July 2007) para 117; *Consortium R.F.C.C. v Kingdom of Morocco* (n 70) para 63; *Bayindir Insaat Turizm Ticaret Ve Sanayi A.S. v Islamic Republic of Pakistan* (n 63) para 136; *Saipem S.p.A. v The People's Republic of Bangladesh* (n 71) para 109.

77 *Salini Costruttori S.p.A. and Italstrade S.p.A. v Kingdom of Morocco* (n 53) para 56.

78 *Joy Mining Machinery Limited v The Arab Republic of Egypt* (n 65) para 57.

79 *Fedax N. V. v The Republic of Venezuela* (n 44) para 40; *Consortium R.F.C.C. v Kingdom of Morocco* (n 70) para 63, 64; *Bayindir Insaat Turizm Ticaret Ve Sanayi A.S. v Islamic Republic of Pakistan* (n 63) 134 - 136; *Saipem S.p.A. v The People's Republic of Bangladesh* (n 71) 109; *Malaysian Historical Salvors, SDN, BHD v The Government of Malaysia* (n 63) para 112; *Consorzio Groupement L.E.S.I.-DIPENTA v People's Democratic Republic of Algeria* (n 71) para 14(iii); *LesiSpA and ASTALDI S.p.A. v People's Democratic Republic of Algeria* (n 71) para 73(iii).

80 Schefer (n 43) 91.

81 *Salini Costruttori S.p.A. and Italstrade S.p.A. v Kingdom of Morocco* (n 53) para 52; *Mr. Patrick Mitchell v The Democratic Republic of Congo*, ICSID Case No ARB/99/07, Decision on the Application for Annulment of the Award (1 November 2006) para 28 - 31.

82 *Joy Mining Machinery Limited v The Arab Republic of Egypt* (n 65) para 57; *Consortium R.F.C.C. v Kingdom of Morocco* (n 70) para 65; *Ceskoslovenska Obchodni Banka, A.S. v The Slovak Republic* (n 44) para 88.

83 *Quiborax S.A., Non-Metallic Minerals S.A. and Allan Fosk Kaplun v Plurinational State of Bolivia*, ICSID Case No ARB/06/02, Decision on Jurisdiction (27 December 2012) para 227; *Saba Fakes v Republic of Turkey*, ICSID Case No ARB/07/20, Award (14 July 2010) para 112; *LesiSpA and ASTALDI S.p.A. v People's Democratic Republic of Algeria* (n 71) para 72; *Victor Pey Casado and President Allende Foundation v Republic of Chile*, ICSID Case No ARB/98/02, Award (8 May 2008) para 232.

of the condition or evaluating the condition as a consequence of an investment rather than condition of an investment.[84] According to an opinion, this condition should not be applied because it cannot be used to determine which transaction is an investment or not.[85] The opinion claims that each transaction that can be considered as an investment does not contribute to economic development of the host state. The obvious example of this is purchasing shares of a company located in the host state.[86] Such transaction is definitely an investment but does not contribute to the economic development because the company was already there and operating. Secondly, it is not possible to consider each transaction that contributes to host state's development, as an investment. For example, a sale of goods for modernizing a facility would not be deemed an investment, but it undoubtedly contributes to the economy by developing the infrastructure.[87] Because of these facts, the condition at hand cannot always provide necessary protection to foreign investments. This condition is also criticized for the reason of excluding social and cultural development, and assuming that only economic contribution should be considered for the ICSID Convention.[88] Many tribunals have abandoned contribution to the economic development of the host state of the investment condition during the recent years, and this tendency is becoming stronger because of its controversial nature.[89]

After the *Salini* Case, many ICSID tribunals applied these four conditions to legal disputes brought before them to assess the existence of investment.[90] Apart from them, some tribunals sought additional conditions as the legality of the investment and investing in good faith,[91] while others required lesser or altered conditions.[92] Nevertheless, the idea of determining objective conditions for the term of investment within the meaning of article 25 of the ICSID Convention received wide acceptance from ICSID tribunals.[93]

84 For details, please see. Manciaux (n 50) 457; Dalia Hussein, 'Contribution to the Host State Development: A Marginalised Criterion?' (2015) 2 BCDR International Arbitration Review 289, 301 <https://www.kluwerlawonline.com/abstract.php?area=Journals&id=BCDR2015015> accessed 24 February 2018.

85 Manciaux (n 50) 459.

86 *ibid.*

87 *ibid.*

88 *ibid 458.*

89 Schefer (n 43) 111.

90 *Saipem S.p.A. v The People's Republic of Bangladesh* (n 71) para 99; *Jan de Nul N.V. Dredging International N.V. v Arab Republic of Egypt* (n 71) para 91; *Ioannis Kardassopoulos v The Republic of Georgia* (n 76) para 116; *Joy Mining Machinery Limited v The Arab Republic of Egypt* (n 65) para 53 - 63; *Bayindir Insaat Turizm Ticaret Ve Sanayi A.S. v Islamic Republic of Pakistan* (n 63) para 130 - 138; *Helnan International Hotels A/S v The Arab Republic of Egypt*, ICSID Case No ARB/05/19, Decision of the Tribunal on Objection to Jurisdiction (17 October 2006) para 77; *Toto Costruzioni Generali S.pA v The Republic of Lebanon*, ICSID Case No ARB/07/12, Decision on Jurisdiction (11 September 2009) para 86; *KT Asia Investment Group BV v Republic of Kazakhstan*, ICSID Case No ARB/09/08, Award (17 October 2013) para 173.

91 *Phoenix Action, Ltd. v The Czech Republic*, ICSID Case No ARB/06/05, Award (15 April 2009) para 114.

92 Please see (n 48, 53 and 83).

93 Schefer (n 43) 84; Alex Grabowski, 'The Definition of Investment under the ICSID Convention: A Defense of Salini Comment' (2014) 15 Chicago Journal of International Law 287, 302 <http://heinonline.org/HOL/Page?handle=hein.journals/cjil15&collection=journals&id=291&startid=&endid=313> accessed 17 January 2018. Please also see (n 90).

C. Evaluation of Cloud Computing Services as Investment within the Meaning of the ICSID Convention

By considering all of these different approaches explained above, would it be possible to accept being able to provide cloud computing services to a country from another country as an investment under the meaning of the ICSID Convention? This question is a very critical that may allow protecting cloud computing services from the interventions explained in the previous sections.

The deferential approach leaves the duty of defining the term of investment to the parties' consent, in other words, the BIT. Therefore, it is safe to assume that if the definition of a BIT does comprise cloud computing services, then such services shall be deemed as investments. Considering the number of BITs and scope of this article, it is not possible to conduct a full-scale analysis about how many BITs comprise cloud computing services or not. Additionally, it should be noted that BITs in the future may include new wordings to explicitly comprise cloud computing services, especially considering new technological developments based on cloud computing like artificial intelligence and their economic potential.

The outer limit approach requires the investment definition within a BIT to not to conflict with the meaning of the word "investment." Cloud computing service providers assign a certain amount of resources and expect profits as any other investors. Therefore, I think the outer limit approach would not block considering cloud computing services as in the meaning of the ICSID Convention as long as the BIT assumes cloud computing services as an investment.

The objective approach, as explained above, is the widely excepted approach by the ICSID tribunals. It requires both the BIT and certain objective criteria to consider an activity as an investment. These objective criteria are contribution, a certain duration of performance of the contract, participation in the risks of the transaction and contribution to the economic development of the host state of the investment as determined in the *Salini* Case.

I think cloud computing services fulfil the contribution condition for a couple of reasons. First, being able to provide cloud computing services to a country requires building data centres with a high cost due to the capacity needs. Further, operating such data centre (both from the concepts of technical and legal requirements), marketing and after-sale services are also very costly. As a conclusion, a cloud computing service provider assigns a lot of economic value and assets to its activity, and these assignments should be considered as fulfilment of the contribution condition. At this point, it should also be noted that the ICSID Convention does not require the investment to be within the territory of the host state.

Certain duration of performance of the contract generally requires an activity to be lasted two to five years to be considered as an investment. In other words, the activity must be continuous instead of being a one-time transaction. Even if it is possible to use cloud computing services for a one-time transaction or a short period, most cloud computing users purchase cloud computing services for long periods of time. In any case, if the cloud computing service provider makes its services available for at least two years, then certain duration condition should be deemed as fulfilled.

Participation in the risks of the transaction condition seeks the investor to bear investment related risks that his contributions are exposed to. At first sight, this risk condition may seem unrelated to cloud computing services, since cloud computing has no physical presence in a country other than the location of data centres.[94] Therefore, risks like expropriation are out of the question. However, cloud computing service providers still face many risks[95] specific to cloud computing other than the ordinary risks of business such as customer complaints. Nearly all of cloud computing specific risks originate from regulatory bodies or the government of the country where cloud computing services are provided due to their authority to regulate the internet. According to my opinion, these risks are sufficient to fulfil the risk condition of the *Salini* case, since those risks are related directly to operating in a foreign country, not just ordinary commercial risks.

Even though contribution to the economic development of the host state of the investment condition is the most controversial condition among the other conditions listed in the *Salini* Case, perhaps it is the easiest condition for cloud computing services to fulfil. Cloud computing services allow access to high amounts of computing power with lower costs. No local server can compete with cloud computing services concerning computing power and cost. Therefore, providing cloud computing services to a country contributes significantly to the economy of that country.

As explained above, some ICSID tribunals do not require the condition of contribution of the economic development of the host state. On the other hand, certain tribunals require additional conditions as the legality of the investment and investing in good faith. These conditions may also apply to the cloud computing services and fulfilled by them.

In conclusion, all existing approaches about how to define the term of investment in the article 25 of the ICSID Convention can allow cloud computing services to be considered as investments provided that investment definition in the BIT comprise cloud computing services too.

94 As explained in the Section II-A, the ICSID Convention does not specifically require the investment to be located within the territory of the host state.

95 Interventions that cloud computing faces are explained in Section I in detail.

Conclusion

Cloud computing service providers are facing many different direct and indirect interventions. Data processing facility and data localization rules disturb their activities most strongly. Other interventions like limitations on processing certain types of data, or discrimination between data types have also been several obstacles they face while providing their services.

As commonly said, data is the new oil of the information age. However, the economic value of data must be extracted from it by processing. This extraction is only possible via cloud computing services in most of the cases. So, cloud computing service is no different from an oil field or an oil refinery from economic perspective. Since oil fields and oil refineries in a foreign country are protected under international investment law namely the ICSID Convention, why should the new oil's extractor not be protected?

This leads to new questions about ICSID Convention's applicability to cloud computing services. Would it be possible to use this legal tool of 20th century to protect the base technology of 21st century from interventions of governments? To answer this question, we must answer the question of whether providing cloud computing services to a country without any presence in that country from a completely different country can be deemed as an investment for the purpose of jurisdiction of the ICSID tribunals not.

There are many different approaches about definition of the term of investment as a requirement for jurisdiction of ICSID tribunals. According to the first approach, the parties' (the investor and the host state) consent should determine scope of the investment term. The second approach requires meeting certain objective criteria along with the consent of the parties to accept an activity as an investment.

As analysed in detail above, cloud computing services can be considered as an investment for the purpose of jurisdiction of ICSID tribunals per both of the approaches. It should also be noted that the ICSID Convention does not specifically require an investment to be located in the territory of the host state.

If cloud computing services are considered as investments, cloud computing service providers may apply to the ICSID Centre (provided that other conditions of application be fulfilled) to arbitrate or conciliate their disputes with the relevant host state that intervenes to cloud computing services in ways explained above.

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General Communique on Tax Procedure Law (Circular Number: 433)

Law on Payment and Securities Settlement Systems, Payment Services and Electronic Money Institutions

Proposal for a Regulation of the European Parliament and of the Council on a framework for the free flow of non-personal data in the European Union

Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation)

The Communique on Principles of Information Systems Management and Business Processes and Audition of Information Systems in the Institutions of Information Exchange, Clearing and Netting