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THE APPROACHES OF ASEAN COUNTRIES TO DATA LOCALIZATION: IMPLICATIONS FOR ASEAN INTEGRATION

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Abstract: The article analyzes the approaches of ASEAN (the Association of Southeast Asian Nations) member states, as well as the association as an international actor, to data localization in the context of global digital transformations and ASEAN prospective plans relating to the digital support of its multilateral formats and initiatives. Salient features of contemporary global development – namely, the focus of economic actors on establishing and preserving stable environment in which economic and business activity takes place, as well as setbacks of global governance and regulatory institutions in setting the parameters of digital transformation of society – are summarized. The transformation of global value chains in the digital environment, digital support of free trade agreements and China-US contradictions on trade and technology issues are explored. Then the author turns to analyzing the association's digital initiatives and projects and reveals notable features of approaches of selected ASEAN countries to data localization, and what implications arise for ASEAN integration plans. From the author's perspective, ASEAN countries that introduce direct and indirect restrictions on transboundary data transfers are motivated by national security considerations rather than by ASEAN focus on its multilateral projects and initiatives. As the issue has not been a area of special research in the Russian academic community, while foreign scholars address it in a fragmentary and sporadic manner, the paper contributes to the conceptualization of ASEAN integration on the eve of the establishment of the ASEAN Community 2025.

Keywords: *World economy, digital transformation, regulation of digital area, global value chains, free trade agreements, ASEAN multilateral initiatives and projects, data localization*

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Научная статья. Политические науки

ПОДХОДЫ ГОСУДАРСТВ ЮВА К ЛОКАЛИЗАЦИИ ДАННЫХ: ПОСЛЕДСТВИЯ ДЛЯ ИНТЕГРАЦИОННОЙ ПОВЕСТКИ АСЕАН

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Аннотация: В статье проводится анализ подходов государств, входящих в Ассоциацию стран Юго-Восточной Азии (АСЕАН), равно как Ассоциации как международного актора, к вопросу о локализации данных в контексте глобальных процессов цифровой трансформации и перспективных планов АСЕАН, связанных с цифровым сопровождением ее многосторонних форматов и инициатив. Суммированы особенности современного глобального развития – а это нацеленность экономических акторов не столько на получение прибыли, сколько на формирование и сохранение стабильной среды, в которой осуществляется экономическая и деловая активность, а также пробуксовки институтов глобального управления и регулирования в определении параметров цифровой трансформации социума. Рассмотрены трансформация глобальных цепочек стоимости под влиянием цифровой среды, характер цифрового сопровождения соглашений о свободной торговле и китайско-американские противоречия по вопросам торговли и технологий. Далее автор переходит к анализу цифровых инициатив и проектов Ассоциации, выявляя особенности подходов ряда государств АСЕАН к вопросу о локализации данных и последствия этого для планов АСЕАН в отношении региональной интеграции. Согласно позиции автора, страны АСЕАН, вводящие прямые и опосредованные ограничения на трансграничную передачу данных, руководствуются вопросами национальной безопасности в большей степени, нежели потребностями АСЕАН в реализации многосторонних проектов и инициатив. Поскольку в российском научном сообществе эта тема не была предметом специального исследования, а в других странах обращение к ней носит спорадический и фрагментарный характер, работа содействует комплексному осмыслению особенностей интеграции стран АСЕАН накануне формирования Сообщества АСЕАН до 2025 года.

Ключевые слова: мировая экономика, цифровая трансформация, регулирование цифрового пространства, глобальные цепочки стоимости, соглашения о свободной торговле, многосторонние инициативы и проекты АСЕАН, локализация данных

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While the digital transformation gain momentum, its negative implications become evident. The fragmentation of the global regulatory landscape and the expanding sovereignization of the internet amply evidence that the digital space becomes a battlefield rather than an area of cooperation. These processes are supplemented and reinforced by non-digital confrontational trends.

Against this backdrop, smooth trans-boundary transfers deserve close attention. This factor presents both challenges and opportunities, as data transfers can be a tool of competitiveness and a vulnerability point. In these circumstances, international actors attempt to elaborate on safety measures that include, among other policy directions, data localization.

The latter is especially relevant to ASEAN. As the association aims to make Southeast Asia a unified area of manufacturing and business activity, strong trans-boundary economic and commercial ties loom large in ASEAN priorities. It means, among other things, digital support of its ASEAN-wide projects. Notwithstanding their significance, however, ASEAN member states have to take into account security considerations that are no less important than expected economic benefits.

The Evolving Global Context

Assessing global trends that influence upon the positions of ASEAN countries on data localization, the following remarks are worthy of note.

First, due to global uncertainty, security considerations have become a more important priority for economic and business actors than economic profit. Although global GDP growth in 2023 was higher than projected (for instance, in January 2023 the IMF forecasted 2.9%, while in reality, it stood at 3.2%), nevertheless it decreased, compared with 2021 and 2022 figures (6.5% and 3.5% respectively). Notable reasons include decrease in demand, the significant debt burden of the Chinese and US economies (359% and 343% respectively) and high key interest rates¹. As a result, countries and companies increasingly appreciate reliability. To substantiate, logistics companies have shifted from the “just-in-time” (delivery must be made as quickly as possible) to the “just-in case” (delivery must be made in any circumstances) paradigm. In the years to come, this approach is likely to gather momentum owing to high inflation rates and budget deficits in major world economies, deepening imbalances in the PRC economy and inefficiency of global regulatory institutions. The on-going regionalization of international trade, investment, financial and technological cooperation adds to the global economic uncertainty.

Second, the global regulation of the digital area is in a state of flux. Revealingly, there is no clear definition of what digital economy is and what major criteria of digital transformation are. To make matters worse, as digital transformation is a new and dynamic process, any forecasts about how it will develop even in a short-term perspective are misleading. In fact, regulatory norms are behind actual practice, since new platforms, services and business practices require new legal and institutional approaches. The media convergence factor plays an important role, as the Internet, television and mobile coverage are increasingly interconnected. It imposes an extra burden upon regulators, as these markets have traditionally been separate tracks. Finally, owing to the decentralized nature of the Internet, there is a “question of jurisdictions” that is especially difficult to address taking into account proxy-servers, “Darknet”, transactions through third countries with different regulatory approaches, etc. As a result, an upgrade of regulation becomes increasingly important. Approaches vary from self-regulation and blended regulation to administrative regulation. Although each of those approaches has its advantages and disadvantages, lack of unity per se greatly complicates trans-boundary economic and commercial exchanges.

To aggravate the problem, an advent of the quaternary sector strongly matters. It relates to knowledge-based activities associated with technological innovations and educational services. From a consumption perspective, an employee has to constantly upgrade his or her qualification, while the lifelong education becomes a new normal. From a production perspective, an increase in competences logically leads to rise in competitiveness of companies or industries. As a result, knowledge rather than traditional economic factors come to increasing importance. Simultaneously, knowledge itself undergoes a change, as it becomes an object of sale. This adds to the regulatory uncertainty in the digital area.

Digitalization-focusing provisions in free trade agreements are another complicating factor. It is especially relevant to the Asia-Pacific region. In 2023, intra-APEC FTA signed and in force stood at 74 and 70 respectively, while the corresponding global figures accounted for 212 and 202 respectively. There is a considerable array of digital provisions in Asia-Pacific FTA including non-discriminatory treatment of digital products, measures against spam or unsolicited messages, interoperable digital identities, digital innovation and emerging technologies, etc. Besides that, diversity of FTA themselves is of special note. For instance, while the non-discriminatory treatment of digital products is in place in selected initiatives in which ASEAN countries participate (like, for instance, CPTPP, Singapore-Australia DEA, DEPA and Korea-Singapore Digital Partnership

Agreement), it is missing in other agreements (AANZFTA, ASEAN Agreement on Electronic Commerce, UK-Singapore DEA and, most importantly, RCEP)². As digital support has become an inseparable part of economic agreements of all sorts, this regulatory patchwork runs counter to ASEAN prospective plans.

Third, contradictions between China and the US play an important role. Revealingly, they are undergoing a profound transformation. A few years ago, they focused on technology export and transfers. The parties resorted to sanctions and counter-sanctions, which is best exemplified by tensions over Huawei. The company was in the epicenter of China-US technological war, as the US blamed Huawei for cyber espionage, intellectual property theft and violating anti-Iranian and anti-DPRK trade restrictions. As a result, the US banned sales to the PRC equipment and solutions that can stimulate China's technological development, imposed restrictions on activity undertaken by Chinese specialists in technologically advanced industries in the US, banned the use of Chinese technological products in American strategic enterprises and critical infrastructure facilities. At present, their new dimension becomes evident, as China and the US aim to control all the GVC stages, from R&D to after-sale services. If this trend continues, which is a likely scenario, implications for the global development will be considerable, as the US is encountering a triple challenge: to its global positions, economic expansion and national security. Consequently, there are strong chances that elements of techno-nationalism in domestic policies of countries around the world will strengthen, to the disadvantage of global trade and technological exchanges.

Broadly speaking, the issue moves beyond techno-nationalism, as well as the geo-technological side of the problem per se, and embraces a security dimension. As AI-enabled instruments increasingly enter the military sphere, which is exemplified by drone operations, combat simulations, threat prediction and other tracks to incorporate AI into command and control, information management and logistics, a new arms race, this time in cyberspace, will gain momentum. Naturally, this process will have to be regulated both institutionally and legislatively. As it is problematic, a negative multiplier effect extending from security to economy is a likely scenario.

In sum, the international context in which the association operates becomes increasingly volatile, as global economic, security and technological challenges overlap and magnify one another. This factor incentivizes ASEAN to develop its digital initiatives and projects as a tool to raise its resilience and competitiveness.

ASEAN Digital Multilateral Projects: Increasing Maturity

Assessing ASEAN-led digital initiatives, it is evident that they have shifted from a relatively narrow “niche” cooperation to an attempt to build a comprehensive digital ecosystem in Southeast Asia. In the former case, noteworthy initiatives included e-ASEAN Framework Agreement (2000), the ASEAN ICT Masterplan 2015 (2011), the ASEAN ICT Masterplan 2020 (2016), ASEAN Framework on Personal Data Protection (2016), the ASEAN Agreement on Electronic Commerce (2019) and others. In the latter, ASEAN visionary documents deserve attention. Examples include the ASEAN Digital Masterplan 2025 (2021), the Consolidated Strategy on the Fourth Industrial Revolution (2021) and the on-going negotiations on Digital Economy Framework Agreement. A comprehensive nature of these plans is well demonstrated by the ASEAN Digital Masterplan 2025. It includes eight directions (or desired outcomes – DO) that range from broadband infrastructure to participation of the corporate sector and the general public in digital economy³.

Cooperation with dialogue partners is another track of ASEAN digital activity. Notable examples include, but are not limited to, provisions in ASEAN-China Comprehensive Strategic Partnership, the ASEAN-US Leaders’ Statement on Digital Development and the Plan of Action to Implement the ASEAN – United States Strategic Partnership 2021-2025, ASEAN – Republic of Korea Plan of Action 2021-2025, ASEAN-India Partnership for Peace, Progress and Shared Prosperity 2021-2025, the ASEAN Plus Three Cooperation Work Plan 2023-2027, etc. Although there are plenty of such initiatives, ASEAN encounters mounting challenges owing to the overlap of digital and non-digital vulnerability points in dialogue with its external partners. In this regard, ample evidence goes from China’s Digital Silk Road as part of the Belt and Road Initiative.

The start of negotiations on Digital Economy Framework Agreement (DEFA) can be regarded as a culmination point of ASEAN collective effort. From a substantial perspective, DEFA includes nine tracks: digital trade, cross-border e-commerce, payments and e-invoicing, digital ID and authentication, online safety and cybersecurity, cross-border data flows and data protection, competition policy, cooperation on emerging topics, talent mobility and cooperation⁴. It suggests that ASEAN prospective plans are highly ambitious, as each of these tracks individually, not to say about all of them collectively, aims at making Southeast Asia a seamless digital area.

The initiative ASEAN Smart Cities Network (ASCN) is a special case in point. Initially, it was a response to expanding urbanization and, as

a consequence, growing middle class. According to available estimates, ASEAN urban population is expected to grow to 373 million people by 2030 (from 280 million people in late 2010s)⁵. Undertaken since 2018, ASCN embraces thirty-one cities of ten ASEAN states and focuses on six areas: civic and social, health and well-being, safety and security, industry and innovation, built infrastructure and quality environment⁶. Apart from it, ASCN facilitates developing links between city management agencies of ASEAN countries and ASEAN extra-regional partners from both government and corporate sector. Partnerships between Cambodia's Ministry of Land Management, Urban Planning and Construction and ROK's Ministry of Land, Infrastructure and Transport on ICT for City Planning, Cisco and City of Hanoi on Smart Utilities or Alibaba and City Government of Kuala Lumpur are noteworthy examples⁷. Logically, it involves transfers of large amounts of data both within and beyond Southeast Asia.

All the factors presented above suggest that ASEAN needs to intensify trans-boundary data exchanges. Nevertheless, there is abundant evidence that the realization of ASEAN plans will be problematic in even a mid-term perspective. Several points are noteworthy in this regard.

ASEAN countries differ significantly in access to internet services. In 2022, according to the latest figures provided by the ASEAN Secretariat, the access to internet services (internet subscribers services per 100 persons) in ASEAN countries ranged from 98.1 and 97.4 (Brunei and Malaysia respectively) to 52.7 and 44.0 (the Philippines and Myanmar respectively)⁸. Furthermore, there are huge intra-ASEAN gaps in the 5G internet coverage⁹. As economic and business cooperation requires digital support for infrastructure as an obligatory component, ASEAN is and probably will remain unable to make it sufficient.

ASEAN enterprises have not established their own global value chains. In the 1970s and the 1980s, ASEAN member states integrated into Japanese GVC, whereas the association initially premised its multilateral projects on the Japanese initiative Brand-to-Brand Complementation (BBC)¹⁰. As a result, ASEAN both depends on its extra-regional partners in maintaining GVC that span through Southeast Asia and has no capacity to carry out their digital transformation. The latter is especially important, as each component of the "smile curve" (the term was offered by the Acer Inc. founder Stan Shih to demonstrate GVC stages and their value added exemplified by the ICT manufacturing industry) is undergoing a digital transformation. Importantly, a new GVC model, supported by digital instruments, covers a previously non-existent area (namely, the "extension value

contents”) that digital companies of all sorts actively explore. In this process, ASEAN enterprises are laggards rather than leading actors.

Lastly, ASEAN is hardly able to provide its trans-boundary infrastructure projects, primarily, the ASEAN Power Grid and the Trans-ASEAN Gas Pipeline, with adequate digital support. Mostly, it accounts for the Internet of Energy (or the Internet of Things in the energy sector). Practically, it includes connecting energy production, distribution and consumption facilities to monitor supply-demand balance and efficiently implement safety measures during extreme events like, for instance, natural disasters. Linking conventional energy facilities with renewable energy sources is another priority. As ASEAN undertakes initiatives like ASEAN Smart City Network, smart metering, smart grids and other tools to improve energy efficiency come to the forefront of its priorities. Since these projects are transboundary, data transfers are their integral part.

A critical factor to take into consideration relates to lack of unified approach of ASEAN countries to data localization. It influences negatively upon not only relatively narrow sectoral, or “niche” initiatives, but on the foundations of ASEAN prospective plans.

A Data Localization Perspective

Data localization is a steady development around the world. There are varieties of legal approaches to data governance ranging from sectoral regulatory acts to strict prohibitions on data transfers. In addition, types of data that are allowed to transfer vary considerably. This is hardly surprising, as international actors have different national development plans, as well as apprehensions about possible dependence on foreign providers up to loss of control over sensitive government and commercial data. Furthermore, defending technological sovereignty by protecting domestic companies and industries, fostering national digital champions and building local data centers, as well as using data localization for law enforcement purposes, are high priorities. In these circumstances, data sovereignty and related issues are of crucial importance.

Responding to global trends, ASEAN countries issue and enact laws directly and indirectly focusing on data localization. The most illustrative examples are presented below.

Indonesia adheres to a strict approach to data localization. According to Jakarta’s position, data are to be stored and processed within the RI national borders. This demand is outlined in Government Regulation № 71 on Electronic Systems and Transactions. It was adopted in 2019 and clarifies data localization requirements. Specifically, public electronic system

operators are to store and process their data in Indonesia (there are exceptions for private operators, but they are to comply with sector-specific regulations). In its turn, the Protection of Personal Data Law, enacted in 2022, states that the legal protection of data in recipient countries is to be at the same level with the RI standards. In other cases, the data transferor is to “ensure that adequate and binding standards, such as standard contractual clauses, are in place”. In case both requirements are not fulfilled, “the transferor must obtain explicit consent from the data subjects”. Lastly, cross-border data transfers are to be detailed in special reports that are to be submitted annually. Remarkably, the PDDL has an extra-territorial dimension, as it covers personal data of Indonesian citizens both within and beyond RI borders¹¹.

Vietnam adopted a similar approach. Its data localization provisions are outlined in Cybersecurity Law (2018) and Degree № 53/2022/ND-CP (2022). Domestic and foreign companies that are cyberspace service providers are to store data locally. This relates to personal information, data created by service users in Vietnam, and data on relationships of service users in Vietnam. Captured services include ten positions¹². Foreign companies are required to establish data centers in the SRV. A special period for data storage (minimum 12 months) is outlined. Revealingly, observers question the relevance of this position to the SRV’s obligations in multilateral economic initiatives, for instance, the Comprehensive and Progressive Trans-Pacific Partnership¹³. In 2023, Decree 13/2023 ND-CP on Protection of Personal Data (PDPD) further clarified terms of trans-boundary data transfers by stipulating that an Overseas Data Transfer Impact Assessment dossier is to be compiled, and Cybersecurity Department is to be informed about data transfers.

Malaysia premises its approach on Personal Data Protection Act (PDPA) that came into effect in 2013. Although this document does not outline specific data localization provisions, it focuses upon trans-boundary transfers of personal data. Generally, such transfers, although with minor exceptions, are forbidden. In 2024, several amendments were introduced. Specifically, a mandatory breach notification requirement states that data breaches are to be reported to the Personal Data Protection Commissioner within 72 hours. Data processors are imposed on direct obligations for accountability. Data protection officers are to be appointed, while responsibility for non-compliance strengthened¹⁴. Additionally, Malaysia Digital Economy Blueprint, issued in 2018, emphasizes the development of national data centers and the constant upgrade of local data protection laws, which also demonstrates the country’s preference for data localization. A

similar approach is typical to **Thailand**, whose Personal Data Protection Act came into force in 2022 (it was signed in 2019, but its implementation was postponed due to the COVID-19 pandemic). The document details rules regarding cross-border personal data transfers. Getting to specifics, PDPA outlines key terms like “personal data”, “data controller” and “data processor”, as well as clarifies what organizations are subjects to PDPA. Concerning transfers of personal data, the Act explains what specific conditions are to be met. Remarkably, a data protection officer is to be appointed by a data controller or a data processor. Subordinate regulations covering supportive activities like exemptions from the Personal data information record for the data controller are issued¹⁵.

Singapore outlined its approach to data localization in Personal Data Protection Act (PDPA) adopted in 2012 (with amendments made in 2021). The Republic of Singapore emphasizes “data adequacy” requirements: trans-boundary data transfers are permissible in case recipient countries have standards comparable with those in Singapore. Main amendments included “introduction of a mandatory data breach notification requirements, expansion of the scope of deemed consent, inclusion of additional exceptions to express consent and introduction of criminal offences”¹⁶. In addition, the country recognizes APEC Cross-Border Privacy Rules and APEC Privacy Recognition for Processors (based on two of the ten principles of APEC Privacy Framework provisions). As stated by Infocomm Media Development Authority (IMDA), “... organizations in Singapore can easily transfer personal data to overseas certified recipients without meeting additional requirements”¹⁷. This position is explicable, as Singapore lacks the scale factor. Simultaneously, Singapore has successfully carried out the digital transformation of its society, as well as portrays itself as a point of entry to the ASEAN market. Logically, Singapore is not interested in data transfers with tight restrictions.

Assessing major implications of those developments for ASEAN integration, several points are noteworthy.

First, data localization may not be advantageous to the corporate sector, as companies have to cover additional expenses on the establishment of local subsidiaries or invest in constructing local data centers. The latter is especially important owing to cloud repatriation, which means a shift from public cloud provided mostly by hyperscalers to on-premises data centers. It runs counter to ASEAN policy of inviting extra-regional companies to do business in Southeast Asia.

Second, bans on data transfers, coupled with setbacks that multilateral economic projects and initiatives are encountering, are detrimental to

ASEAN not only economic, but also political-security priorities. Here, RCEP may be conclusive evidence, as this initiative is the foundation of ASEAN-led cooperative security system presented by the ASEAN Regional Forum, the ASEAN Defence Ministers Meeting Plus and the East Asia Summit. Evidently, ASEAN must be a step ahead of its competitors in regulating data localization, as well as an example to follow for its RCEP partners. In practice, however, this scenario is hardly realistic.

Third, data localization hampers the development of AI, as well as multilateral AI-focusing projects which ASEAN carries out. In fact, to make AI efficient, unbiased, and free from hallucinations and misinterpretations, data sources must be as diversified as possible. As there is hardly any sphere of human activity not penetrated through by AI, restrictions on data transfers run counter to ASEAN priorities that focus on strengthening its regional and global resilience.

In sum, ASEAN and its member states try to implement a balanced policy towards data localization. While the motives of individual countries are shaped mostly by security considerations, consequences for the association are far from positive. In light of this, the association is encountering a perennial problem, this time in the digital sphere, as objectives of its member states are ahead of ASEAN strategic vision.

Conclusion

The analysis of approaches of ASEAN countries to data localization through the prism of global trends and in synergy with ASEAN multilateral projects leads to several broad assessments.

On the one hand, ASEAN integration objectives incentivize it to encourage trans-boundary digital practices. The association has been developing its digital initiatives for a long time, and the shift from a “niche” digital cooperation to a comprehensive approach to digital transformation is a reliable indicator of its maturity. On the other hand, security concerns loom all the larger in ASEAN priorities. Major reasons include, but are not limited to, recent trends in global economic development, geopolitical turbulence and, most notably, limited efficiency of global digital regulation. In light of this, to intensify its digital projects and initiatives may not be the best option for the association.

Notwithstanding this, unless ASEAN adds momentum to its digitalization-focusing efforts aimed at narrowing digital gaps between its member states, it will further slip into dependence on its external partners, mostly, on China. The more so since the PRC has considerable strategic assets in Southeast Asia including prosperous ethnic diasporas, infrastructure facili-

ties and dynamically developing global value chains synergized with the Belt and Road Initiative.

In these circumstances, the association is likely to implement its digital strategy, including its approach to trans-boundary data transfers, in a step-by-step manner. The substance of this policy and its modification will depend on actual practice.

ИНФОРМАЦИЯ ОБ АВТОРЕ

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