**Building resilient supply chains in uncertain times:**

**A comparative study of EU and ASEAN approaches to supply chain resilience**

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**Abstract**

Amid rising uncertainty in the global economy and unprecedented economic disruption caused by the COVID-19 pandemic, the concept of supply chain resilience has gained increasing popularity in ASEAN and the EU. However, by comparing their paths to resilient supply chains, this article argues that while both organizations regard resilience as a departure from past doctrines of pure economic efficiency, each has a different understanding of and approach to supply chain resilience. While for ASEAN supply chain resilience is meant to reconcile inward and outward-looking dimensions to support ASEAN competitiveness, within the EU resilience is associated with the search for strategic autonomy with an internal focus. Despite these differences, both groups regard sustainability and digital transformation as crucial components of supply chain resilience, which they see as a way to enhance their economic cooperation and strategic partnership.

**Introduction**

Although ASEAN and the EU have different approaches to economic integration, both organizations aim to facilitate the movement of goods, services, investment, capital, and labour to enhance trade and production. They therefore both experience high levels of interconnectedness and interdependence. Driven by the globalization of markets and by the ambition to stimulate regional growth, innovation and employment, both organizations are also strongly integrated into the global value chain (GVC) (Fujita 2021). Since the 1990s, in the drive for market efficiency, cost reduction and technological innovation, both organizations have increased their participation in the GVC and currently have a higher level of GVC involvement than any other region (Fujita 2021). This means that the different stages of the production process, such as design, production, marketing and distribution, have been segmented and located across different countries, notably by outsourcing labour-intensive and less-value-added operations to developing countries. This has allowed firms to improve their market position and benefit from more efficient production processes, leading in some cases to lower prices for consumers (Lanz and Mirodout 2011).

In recent years, rising uncertainty in the global economy, geopolitical tensions caused by the strategic and economic rivalry between the US and China, protectionist policies, Brexit, and the COVID-19 pandemic have demonstrated the vulnerabilities of highly integrated production channels. This has triggered a growing awareness of SC (supply chain) challenges, particularly the snowballing effects of SC disruption (Katsaliaki, Galetsi and Kumar 2021). Recent examples demonstrate that dependence on peer competitors or single sources for the supply of critical technologies and strategic materials carries many risks. The delivery of goods and services may be interrupted by the intensification of great power competition or emergencies (Katsaliaki, Galetsi and Kumar 2021). Systemic shocks may restrict production and international transport routes (Katsaliaki, Galetsi and Kumar 2021), affecting the supply of essential products. COVID-19 has caused many supply-related shocks in medical and pharmaceutical supplies. Within ASEAN, the virus also posed a threat to food security and livelihoods in lower-income countries (Asia Pacific Foundation of Canada 2021). These shocks may have significant repercussions on the demand side, including sudden drops in regional and global demand.

Against this backdrop, designing resilient SCs has become vitally important (Katsaliaki, Galetsi and Kumar 2021). While production processes and responses to SC disruptions are primarily governed by businesses, regional organizations are increasingly involved in designing mitigation strategies to ensure that SCs maintain their critical functions and return to stability after disruption (Christopher and Peck 2004). The operational and financial impact of COVID-19 led to the concept of SC resilience gaining popularity in ASEAN and EU official discourse, and it has become the keystone of their regional economic recovery strategies.

Resilience is not a novel concept within ASEAN. The principle was endorsed by the association in its early years to favour an inward-looking approach to security, underscoring the need to strengthen national and regional capacities to ensure regional stability and keep the region free from external interference (Emmers 2009). Against the rise of multifaceted and trans-border threats, the concept has evolved to incorporate a balance between an ‘inward-’ and an ‘outward-looking’ ASEAN position. That is to say, it refers to the strengthening of national capacities and the development of intra-ASEAN cooperation as well as the search for wider engagement with external partners and stakeholders (Ha 2018; Caballero Anthony 2017). Conversely, resilience only entered the EU lexicon with the 2016 EU Global Strategy (EUGS) as a middle-ground solution between the EU’s over-ambitious liberal peacebuilding efforts and its under-ambitious objective of stability (Wagner and Anholt 2016).

Clearly, there are variations in how resilience is defined, and there are diverse paths to resilience, but these paths have not been examined in relation to security of supply. This article therefore asks: What do ASEAN and the EU mean by resilient SCs? What are ASEAN and EU approaches to SC resilience? And to what extent do these approaches allow interregional cooperation? This article seeks to contribute to the EU and ASEAN literature by comparing their concepts of SC resilience, examining their different approaches to SC resilience in the light of recent challenges to economic interconnectivity, and briefly discussing the implications of these issues for interregional relations. It argues that while both organizations regard resilience as a departure from the previous doctrine of pure economic efficiency, for ASEAN, resilience is not a significant departure from its support of regional and GVC participation. ASEAN seeks to diversify supply networks, complementing inward and outward-looking orientations to sustain ASEAN competitiveness, with the ambition of maintaining an ASEAN-centric regional architecture (Ha 2018). Conversely, for the EU the notion of SC resilience marks a remarkable shift from its conventional outward-looking position to an internal perspective based on the desire for strategic autonomy. Despite these differences, both organizations regard sustainability and digital transformation as crucial components of SC resilience.

This article first examines what resilience means within ASEAN and the EU. It then discusses the rise of resilience in the context of security of supply and how resilience is reflected in EU and ASEAN approaches to SCs. This is followed by a comparative analysis of their approaches and observations about the future direction of EU–ASEAN interregional relations.

**What resilience means for ASEAN and the EU**

The notion of resilience was initially adopted in the fields of ecology and biology, but it now informs the study of politics and international relations (Brasset et al. 2013). In a general sense, resilience refers to the ability to withstand and recover from adversity (Mun 2018), but it is constantly being redefined through experience and practice (Giusti 2020).

ASEAN endorsed the concept of resilience in the Declaration of ASEAN Concord in 1976. The concept originates from the Indonesian term ‘Ketahanan Nasional’ and was initially used by certain ASEAN member states (MS) to address socio-economic vulnerability and the threat of communist insurgency (Emmers 2009). In its original version, resilience emphasized the need for strong and stable governance and economic performance based on the nationalistic belief that security could be achieved through domestic socio-economic development (Emmers 2009; Caballero-Anthony 2017). Resilience thus favoured an inward-looking approach to security (Emmers 2009). ASEAN leaders expected to achieve regional resilience by complementing national efforts of domestic development with a shared approach to security emphasizing processes of regional consultation that excluded outside powers. To this aim, ASEAN formalized informal processes of cooperation centred on dialogue, non-interference and respect for national sovereignty, which became known as the ASEAN way. In its early formulation, resilience thus reflected ASEAN’s desire for autonomy aimed at limiting external interference by major powers, evidenced for example by ASEAN’s signing of the Zone of Peace, Freedom and Neutrality in 1971.

Rising trans-border problems and the new international scenario marked by growing US- China competition, showed that the early definition of resilience was no longer adequate (Caballero-Anthony 2017). The specific meaning of resilience has thus been adapted (Caballero-Anthony 2017; Ha 2018). The new meaning can be seen in major ASEAN documents, especially those pertaining to non-traditional security, such as the ASEAN Socio-Cultural Blueprint, which highlights the need to strengthen the response to non-traditional security emergencies through concerted national, regional and international cooperation. This shows that ASEAN’s conception of resilience has evolved most significantly in its external aspects (Ha 2018). Hence, while strategic autonomy has remained one of ASEAN’s central goals, the association has sought to reconcile it with an outward-looking position (Ha 2018). The ASEAN Leaders’ Vision for a Resilient and Innovative ASEAN, adopted at the 32nd ASEAN Summit in 2018, reflects a concept of resilience rooted in both internal and external perspectives. The document affirms that resilience must be sourced from within the region by intensifying regional integration and community-building (Ha 2018). ASEAN resilience should also be sourced from without by deepening engagement and interdependence with external partners ‘in order to respond collectively and constructively to global developments and issues of common concern’ (ASEAN Secretariat 2018: 2). It is also interesting to note that ASEAN resilience is intertwined with the concept of centrality. While a detailed discussion on the notion of centrality is beyond the scope of this article, it is worth noting that according to the ASEAN Leaders’ Vision, resilience is about ensuring that engagement with key partners is defined by ASEAN-led mechanisms that promote ‘an open, transparent, inclusive and rules-based regional architecture’ (ASEAN Secretariat 2018: 4). The close connection between resilience and centrality (Mun 2018) is demonstrated by ASEAN’s efforts to position itself at the centre of East Asian regional architecture as a convenor of dialogue and cooperation (Caballero-Anthony 2014).

In the EU, resilience can be seen as a new form of governance (Cooper and Walker 2011) to deal with complexity and uncertainty. Here, resilience requires international actors to be prepared for unknown threats and be adaptable and flexible (Duffield 2012). The concept only gained traction within the EU after the release of the 2016 EUGS. EUGS defined resilience as ‘the ability of an individual, a household, a community, a country or a region to withstand, cope, adapt, and quickly recover from stresses and shocks such as violence, conflict, drought and other natural disasters without compromising long-term development’ (European Commission 2016: 1). Resilience was also addressed in the EU’s 2012 flagship resilience initiatives supporting the Horn of Africa and Sahel (European Commission 2014) and in the 2013 EU Action Plan for resilience in crisis-prone countries (European Commission 2013). These policy papers show that resilience was initially associated with the EU’s external security governance and with EU policy on development, humanitarian affairs, disaster management and civil protection in third countries or regions.

However, the malleability of the concept has allowed it to be adopted in a wider range of policy contexts (Wagner and Anholt 2016). Thus, resilience has become the ‘new leitmotif’ of the EU’s external relations, signalling a perfect middle ground between the EU’s over-ambitious liberal peacebuilding and its under-ambitious objective of stability (Wagner and Anholt 2016). Here, the concept of resilience echoes the EU’s new narrative of ‘principled pragmatism’ (European Commission 2016), according to which a resilient foreign policy should balance the EU’s strategic priorities and interests with the defence of its fundamental values, such as human rights, democracy, sustainable peace and the rule of law.

The above discussion demonstrates that resilience is a relatively new concept within the EU, which has primarily been adopted in the context of EU external action, revealing a predominantly outward-looking vision of resilience. This study shows, however, that the COVID-19 pandemic has resulted in a shift towards an inward-looking framework that prioritizes the EU internal community’s ability to address external shocks and enhance SC security through a higher level of strategic autonomy within the international economy.

 **The rise of resilience in SCs**

*ASEAN*

Since the 1990s, one of the central goals of ASEAN has been a deepening economic integration by facilitating trade and participation in regional and global value chains (Azis 2018; Chen and De Lombarde 2019). Participation in the GVC is regarded as a crucial way to ensure ASEAN competitiveness and narrow development gaps in the ASEAN region. The ASEAN Economic Community (AEC) Blueprint seeks to make ASEAN a stronger and more dynamic part of the GVC and enhance ASEAN’s capacity to serve as a global production centre. The Master Plan on ASEAN Connectivity (MPAC) seeks to deepen production and distribution networks in ASEAN in terms of the value chain and bring more commodities and countries into the networks. It also seeks to make ASEAN more significant in global and East Asia production and distribution networks (ASEAN Secretariat 2010: 37). The AEC Blueprint 2025 seeks to increase the region’s participation in GVC to make ASEAN a highly integrated and cohesive economy.

These policy documents reveal that participation in the GVCs has been primarily driven by efficiency considerations, with the ultimate goal of improving ASEAN competitiveness and productivity. The AEC Blueprint 2025 notes that involvement in the GVC will: ‘realize economies of scale, collective efficiency and the organic formation of regional innovation systems’ (ASEAN Secretariat 2015: 11). Similarly, MPAC 2025 focused on improving the logistical efficiency of SCs by lowering SC costs and boosting the speed and reliability of SCs in ASEAN MS. MPAC 2025 also seeks greater collaboration between logistics firms, academic institutions, and ASEAN MS to identify and ease SC bottlenecks and strengthen ASEAN competitiveness (ASEAN Secretariat 2016: 9). Another aim is identifying ‘specific trade corridors and then understanding “chokepoints” in the SC processes related to these corridors, such as establishing a mechanism to support and implement border management measures’ (57).

Although the AEC Blueprint 2025 identified the need to create ‘a more dynamic and resilient ASEAN, capable of responding and adjusting to emerging challenges through robust national and regional mechanisms that address […] economic shocks and trade-related issues’ (ASEAN Secretariat 2015: 2), the concept of resilience in security of supply did not feature until the COVID-19 outbreak. To support its economic growth, ASEAN has strongly advocated intra-group economic integration, cross-border businesses and segmentation of production between ASEAN, the East Asian region and the rest of the world (Chen and De Lombarde 2019; Azis 2018). Although the extent and nature of ASEAN GVC participation varies across its members, the region as whole has become an integral part of production networks in which China occupies a pivotal position (IMF 2019). Remarkably, ‘both the share of foreign inputs in exports and the GVC participation share […] is higher for ASEAN than for the world average’ (Fujita 2021: 112).

Given the high level of ASEAN participation in regional and international production networks,

admittedly COVID-19 was not the first instance of SC disruptions affecting ASEAN. SC interruption had been regarded by ASEAN as a critical issue in the past, amid shocks such as the Asian Financial Crisis in 1997 – 1998, the Global Financial Crisis in 2007 – 2008, and Thailand’s flooding in 2011. Some studies have shown that some sectors have demonstrated their resilience against these shocks. For instance, Ando and Kimura (2012) have highlighted the stability and robustness of production networks in machinery industries. Others, have shed light on how diversified SC networks with suppliers and clients positively affect resiliency in times of natural disasters (Todo, Nakamura, and Matous 2015). Nevertheless, a more systemic discussion of ASEAN’s conceptualisation and approaches to enhance resilience in SCs has remained limited.

It has been only recently that US-China trade wars and the fear of rising protectionism have paved the way for a more critical debate in both academia and media circles about the benefits and costs of the fragmentation of production processes. Some scholars argue that ASEAN MS have been among the most affected by trade wars in Southeast Asia due to their strong interconnectedness through GVCs (Iqbal, Rahman and Elimimian 2019; The Business Times 2021). Others contend that trade wars may offer a number of opportunities for Southeast Asia, including the prospect of moving the region ‘towards a self-sustaining economic entity with its own business cycle’, which would increasingly enable ASEAN to produce for its own domestic consumption (Moeller 2018:5). Amid this contentious debate, it is clear that trade wars have provided a powerful reminder of the risk of relying too heavily on any one market or trading partner as well as potential threats resulting from extreme policy shifts (Elms 2021).

The SC chain logjam generated by COVID-19 further underlined the need for a critical rethink of GVC participation. Many ASEAN businesses focus on cross-border production, so supply disruptions have had severe effects on ASEAN production and distribution (Menon 2020), not least due to the shortage of parts caused by factory closures in China’s Hubei province. Chinese suppliers are present in all ASEAN countries, with the exception of Laos and Myanmar (Fujita 2020: 10). More than fifty percent of the raw materials and intermediate products used in Vietnam’s textile industry are imported from Chinese suppliers (Bangkok Post 2020). Factories in Indonesia, Thailand and Vietnam source between forty and sixty percent of their electronic parts and components from China (Bangkok Post 2020). To some extent, mitigation policies conducted by some ASEAN countries helped to address some negative supply shocks resulting from shortages originating in China. Sectors, which have benefitted from an increasing preference for e-commerce and COVID-19-specific demand for certain products have also been less affected by SC disruptions (Ando and Hayakawa 2021). For instance, the machinery sector, in which ASEAN has developed sophisticated production networks since the Nineties (Baldwin 2006), didn’t face any serious negative economic impact and has quickly recovered (Ando and Hayakawa 2021). Conversely, other sectors, such as transport equipment, have seen a more prolonged impact with a decline by more than 60% and 50% for final products and parts and components, respectively, in April 2020 (Ando and Hayakawa 2021).

 Despite the economic impact of COVID-19 being varied across sectors or even amongst products within the same sector (Ando and Hayakawa 2021), generally speaking, disruption caused by interruptions in normal business operations, mobility restrictions, and government measures to control the pandemic and address supply shortages triggered a generalized decrease in global demand, which had a dramatic effect on the most export-oriented ASEAN MS (ADB 2020). The economic effect on service sector activities was also dramatic: the crisis placed unprecedented stress on ‘food supply chains, with bottlenecks in farm labour, processing, transport and logistics and marketing’ (Asia Pacific Foundation of Canada 2021: 56). It is worth recalling how disruptions in SCs have contracted foreign direct investment (FDI), which was a major engine of regional growth. Overall, the Southeast Asia economy recorded a 9.2% fall in FDI in the first quarter of 2020 (Bangkok Post 2020). Even Vietnam, which has reported only a limited number of COVID-19 cases, saw a 4.9% year-on-year decline in FDI (Bangkok Post 2020).

As a result of this, ASEAN experienced a remarkable growth contraction. For 2021, the Asian Development Bank (ADB) has downgraded the forecast for Southeast Asian growth from 4.4% to 4.0%. The World Bank (2021) has also raised concerns about rising poverty, income inequality, food insecurity, and the erosion of human capital. This has led to a shift from simply improving SC efficiency to bolstering the ‘resiliency’ and ‘sustainability’ of the regional economy and SCs, especially for essential goods such as food and medical supplies. Building resilient SCs that will recover and adapt after disruption has thus become part of ASEAN’s official lexicon and a new ASEAN priority, signalled by the fact that ‘resilience’ is now systematically mentioned in the context of SCs and GVC participation in most ASEAN official documents (ASEAN Secretariat 2020a; 2020b; 2020c; 2020d).

*The EU*

Prior to the outbreak of COVID-19, discussion of SCs was largely confined to internal economic policy debates. As in ASEAN, GVCs and SCs were managed on the basis of efficiency-related calculations (Petersen 2020) and cost considerations (European Central Bank (ECB) 2019). In the twentieth century, EU industry was predominantly regionally integrated (Rugman and Verbeke 2004; De Backer and Yamano 2011), but in the early years of this century GVCs began to develop, particularly through increased trade and investment integration with Central and Eastern European countries (Stehrer et al. 2012). In the early 2010s, the EU seemed optimistic about its GVC performance. According to the ECB, European economies were by and large ‘able to deepen their internal integration as well as reorient themselves towards higher-skilled and higher value-added services activities’ (Di Mauro et al. 2013: 1).

Despite the slowdown of GVC expansion after the global financial crisis in 2007, the EU remains heavily involved in cross-border production chains. Euro-zone countries’ participation in GVCs is high in comparison with most other economies, including the United States and China (ECB 2019: 13). The EU is thus one of the main drivers of internationalization and fragmentation of production and trade (Amador and Di Mauro 2015), and European economies are believed to play a crucial role in shaping contemporary GVCs. This high level of GVC participation has allowed the EU to perform strongly in regional and global trade (Garcia-Herrero and Turegano 2020).

Instead of identifying any existential threats from GVC and SCs, the EU has regarded itself as an effective player with an ambitious ‘objective to support development by enabling countries to integrate into and move up regional and global value chains’ (European Commission 2015: 22). As the 2015 EU’s External Trade Strategy highlighted, while the EU acknowledged the need to ‘tackle a wider range of issues’ to secure its place in GVCs, such as promoting trade in services, digital trade, securing access to raw materials, and addressing regulatory fragmentation (European Commission 2015: 10), GVC and SC security or resiliency were not explicitly mentioned.

The COVID-19 outbreak, along with new dynamics in international politics, including the US–China trade war, revealed severe problems with the EU’s approach to security of supply. This sparked reconsideration of SC security (Vanhanen 2020) as well the EU’s decreasing competitiveness in GVCs (Garcia-Herrero and Turegano 2020). For example, during the early stage of the outbreak, many EU MS seemed unprepared, as evidenced in a lack of essential material resources, unwillingness to export medical equipment to other countries, and the absence of a coordinated EU-level response. In parallel, the pandemic exposed significant shortcomings in EU crisis management, especially in relation to emergency supplies (Garcia-Herrero and Turegano 2020). As a result, ‘strengthening the resilience and sustainability of the EU economy and its SCs’ have become new EU priorities, as seen in the EU’s DG Trade’s Strategic Plan 2020–2024 and the Communication on the Trade Policy Review published in February 2021 (European Commission 2020a; European Commission 2021a: 7). Interestingly, whereas the 2015 EU Trade Strategy did not mention any issues associated with SC resiliency, the terms ‘resilience’ or ‘resilient’ are mentioned twenty-four times in the 2021 Communication on the Trade Policy Review (European Commission 2021a). This document highlights the need to enhance resilience of value chains and SCs, listing solutions ranging from crisis preparedness, trade openness, development of sustainable transport, diversification of production and SCs, strategic stockpiling, and fostering production and investment in neighbouring regions (European Commission 2021a: 7–8).

A close examination of recent EU policy documents also shows that, following the COVID-19 outbreak, SC resilience is increasingly associated with the concept of open strategic autonomy. This clearly indicates a new EU focus on internal resilience, which centres on strengthening its ability to act autonomously by drawing on its own resources (European Parliament 2020). This approach significantly departs from its outward-looking posture on resilience, as reflected in the 2016 EUGS.

**ASEAN and EU approaches to SC resilience**

*ASEAN*

In response to sudden SC disruptions in Southeast Asia, ASEAN has primarily focused on promoting non-binding measures to secure SC connectivity. Most ASEAN MS have reacted unilaterally, imposing lockdowns and other limitations on people’s movements. In order to secure domestic supplies, most MS also imposed export restrictions on essential products, such as food, vital medicines and medical supplies, while they have adopted more liberalizing measures to facilitate the importation of these goods, in the form of temporary elimination of import duties and sales (Chandra, Mujahid and Mahyassari 2020).

ASEAN has attempted to formulate a common approach to mitigating the socio-economic impact of the pandemic and maintaining SC connectivity. Strengthening the resiliency of regional SCs became the hallmark of ASEAN official declarations and statements. In March 2020, ASEAN economic ministers issued their first joint statement on strengthening economic resilience in the region. They agreed to keep ASEAN markets open for trade and investment; strengthen regional information-sharing; make full use of technologies and digital trade; strengthen long-term SC resilience, in particular by implementing MPAC 2025; enhance cooperation with external and development partners; build on existing trade facilitating platforms, such as the ASEAN Single Window, a regional initiative to expedite cargo clearance by enabling the electronic exchange of border trade-related documents among ASEAN Member States; refrain from actions that could adversely affect food security; and address non-tariff barriers, particularly those that impede the smooth flow of essential goods (ASEAN Secretariat 2020a). In June, the adoption of the Hanoi Plan of Action further stressed the need to strengthen SC connectivity to make SCs more resilient.

ASEAN leaders have recognized that SC resilience cannot be pursued within national boundaries alone but requires collaboration within ASEAN and a deeper engagement with external partners. At the Special ASEAN Summit in April 2020, MS agreed to draft a post-pandemic recovery plan and establish a COVID-19 ASEAN Response Fund. This would provide support to ASEAN MS in the detection, control and prevention of COVID-19 transmission (ASEAN Secretariat 2020f). MS also pledged to work with one another, with non-ASEAN countries, and with international organizations to ‘maintain socio-economic stability while sustaining ASEAN community-building momentum for sustainable development, inclusive growth and leaving no one behind’ (ASEAN Secretariat 2020b: 4). Meanwhile, ASEAN ministries of agriculture and trade have leveraged the ASEAN Food Security Information System and ASEAN-Plus-Three group Emergency Rice Reserve, comprising ASEAN, China, Japan, and South Korea, to secure food supplies.

The ASEAN Comprehensive Recovery Framework (ACRF) demonstrates that the notion of resilience has been applied to ASEAN’s approach to SCs post-COVID-19. As noted in the Mid-Term Review of the AEC Blueprint (ASEAN Secretariat 2021a: 9): ‘The world has been irreversibly transformed by the pandemic, and the post-COVID-19 world is not going to return to business as usual... some restructuring and diversification of global and regional value chains’ will therefore be needed. To provide strategic direction for strengthening the resilience of SCs, the ACRF outlines a two-pronged approach. First, to reduce vulnerability to external shocks, ASEAN internal resilience will be strengthened by maximizing the potential of the ASEAN internal market. To this end, it seeks to increase intra-regional trade and investment and address non-tariff barriers and market-distorting policies. Although ASEAN completed tariff elimination through the ASEAN Free Trade Agreement (AFTA) and the ASEAN Trade in Goods Agreement, non-tariff barriers still increase trading costs in the region (Suvannaphakdy 2021). Meanwhile, the ACRF emphasizes the need for trade facilitation measures, including digital technology and electronic infrastructure; simplifying documentation requirements and procedures; setting up travel corridors; and facilitating public–private partnerships. It also highlights the importance of improving ASEAN internal resilience in agriculture by investing in the sector’s sustainability and productivity. Second, the ACRF seeks to maximize the potential of the external market and cooperate with ASEAN’s external partners. ASEAN FTAs and economic partnerships are seen as ways to strengthen economic resilience and SC connectivity.

Amid global and regional uncertainty, ASEAN leaders have opted not for reconsidering ASEAN participation in regional and GVCs but for readjusting it. The ACRF (ASEAN Secretariat 2020e: 29) urges the creation of ‘stronger and smarter supply networks’, emphasizing the need to balance between resilience and efficiency of production. To achieve these goals, sustainability and digitalization have become ASEAN priorities. Upgrading infrastructure to support sustainable economic development is deemed necessary to improve the efficiency of key trade routes and SC networks (ASEAN Secretariat 2020e: 33). Another priority is to accelerate digital transformation to enhance connectivity and boost the economy. As AEC Deputy Secretary-General Satvinder Singh noted: ‘despite external shocks such as COVID-19 and global trade tensions, GVCs are here to stay, and will continue to be an important growth strategy for ASEAN’ (ASEAN Secretariat News 2021).

It is finally worth noting that the ASEAN path to SC resilience is characterized by its quest for centrality, as highlighted by ASEAN’s attempt to act as the main convenor of cooperation with external partners and to champion ASEAN-led mechanisms of cooperation This quest is epitomized by the Regional Comprehensive Economic Partnership (RCEP), the largest multilateral free trade pact, comprising the ten ASEAN MS and five key trading partners (Australia, China, South Korea, Japan and New Zealand). ASEAN has been the chief driver of the RCEP (Cossa and Glosserman 2021). It has pushed for negotiations to overcome participants’ political, economic and cultural differences (Deng 2020). The pact, signed in November 2020, covers twenty-nine percent of global GDP and thirty percent of the world’s population (Suvannaphakdy 2021). For ASEAN, its signing is very significant, because the RCEP reaffirms ASEAN unity and centrality in East Asian economic integration (Shimizu 2021). It will facilitate the establishment of expanded regional value chains in ASEAN MS and East Asia (Shimizu 2021). Meanwhile, the RCEP institutional framework will facilitate the movement of goods among members (Shimizu 2021) and commit ASEAN major trade partners to the stability of the region.

*The EU*

Since the early days of the pandemic, the SC resilience debate has been closely intertwined with the concept of open strategic autonomy, which emphasizes the EU’s aspiration ‘to make its own choices and shape the world around it through leadership and engagement, reflecting its strategic interests and values’ (European Commission 2021: 5) as well as the necessity for the EU to gain independence and self-reliance in a wide range of fields (European Parliament 2021). For instance, the newly published Communication on the Trade Policy Review states that ‘strengthening the resilience and sustainability of the EU economy and its supply chains is a pillar of the European Union’s drive towards open strategic autonomy’ (European Commission 2021a: 6). The growing nexus between the concept of SC resilience and the EU’s open strategic autonomy indicates a move from a purely economic and efficiency-centred approach to SC governance towards prioritizing political and geostrategic considerations. It also indicates a redirection of resilience from without to within.

In line with this new approach, the EU has put in place both short-term and long-term instruments to tackle SC disruption and strengthen SC resilience. Early actions addressed the shortage of protective personal equipment (PPE) and the disruption of medical supplies. For example, in February 2020, the EU launched joint procurements of PPE, drawing on the Joint Procurement Agreement for medical countermeasures (JPA) adopted in 2014. This voluntary mechanism provides rules for practical organization of joint procurement procedures, with the objective of improving MS’ preparedness to mitigate cross-border threats to health and improve security of supply (European Commission 2021b). In March 2020, at the urgent request of the European Commission, the European Committee for Standardization and the European Committee for Electrotechnical Standardization, along with all their members, decided to make a set of European standards for certain medical devices and PPE. This action not only encouraged EU and third-country companies to immediately start production but also allowed these products to enter the internal market more smoothly (European Commission 2020b). In addition, in order to facilitate border management during the crisis and minimize SC disruption, the European Commission issued new advice on border management, according to which MS were required to designate all internal border-crossing points on the trans-European transport network as ‘green lane’ crossings (European Commission 2020c).

Moving to the analysis of longer-term instruments, in May 2020 the European Commission proposed a new recovery instrument, ‘Next Generation EU’, within the long-term EU budget. The EU’s budget 2021–27, along with Next Generation EU, formed the largest stimulus package ever financed via the EU budget, accounting for over 1.8 trillion Euro (EuroHealthNet 2021). Next Generation EU places resilience at the centre of its initiatives. Specifically, the primary objective of the Recovery and Resilience Facility – the centrepiece of Next Generation EU – is to tackle the pandemic’s socio-economic challenges and ‘make European economies and societies more sustainable, resilient and better prepared’ for future challenges (European Commission 2021c). Furthermore, the EU launched a new Strategic Investment Facility, embedded in the wider InvestEU programme, to provide crucial long-term funding for sustainable recovery. This new initiative will build ‘resilient value chains in line with the strategic agenda of the Union and the new Industrial Strategy presented by the Commission’ (European Commission 2020d: 5). By supporting the development of ‘strong and resilient value chains across the EU’, this initiative will play a crucial role in enhancing ‘the strategic autonomy of the Union economy whilst providing from within the EU resources for strategically important corporates to prosper and grow’ (ibid.: 6).

In addition, the EU has begun rethinking its strategy to diversify SCs and reduce reliance on foreign suppliers for critical products and materials, as evidenced in the Joint Communication ‘A New Industrial Strategy for Europe’ adopted in March 2020 (Hart 2021). This document calls for ‘a new industrial way for Europe’ and pays particular attention to the development of industrial ecosystems (European Commission 2020e: 1–2). Contrary to the EU’s optimistic view of its position in GVCs in the early 2010s, this new strategy explicitly states: ‘Although EU industry is highly integrated in global value chains and operates globally, the EU should not be naïve to threats to fair competition and trade’ (European Commission 2020e: 13). This statement not only shows the EU’s growing awareness of SC resiliency but also stresses the connection between enhancing SC resiliency and achieving strategic autonomy. Specifically, this document notes that ‘Europe’s strategic autonomy is about reducing dependence on others for things we need the most: critical materials and technologies, food, infrastructure, security and other strategic areas’ (European Commission 2020e: 13).

Although the process of recalibrating the EU’s industrial strategy was not directly prompted by COVID-19, the pandemic exposed the EU’s SC dependency (ERT 2021) and therefore contributed to the adoption of an increasingly inward-looking strategy to improve SC resiliency. In May 2021, the European Commission issued ‘Updating the 2020 New Industrial Strategy’, outlining key lessons learned from the pandemic. The document identifies a set of strategic dependencies and proposes new measures focusing on three key areas: (1) strengthening the resilience of the Single Market, (2) supporting Europe’s Open Strategic Autonomy by dealing with dependency, and (3) supporting the business case for the twin transitions (European Commission 2021d). The Commission conducted an in-depth review, identifying 137 products (accounting for six percent of the EU’s total import value of goods) in sensitive ecosystems for which the EU is highly dependent on foreign suppliers. These areas include raw materials and pharmaceutical ingredients as well as other products related to the digital and green transformation (European Commission 2021d: 11). Apart from identifying the origin of the EU’s strategic dependencies and implications for SC security, the updated industrial strategy also calls for the development of a toolbox to reduce strategic dependencies. This toolbox includes diversifying supply and demand, relying on different trading partners, stockpiling, and acting autonomously.

While these joint communications on the EU’s new industrial strategy reveal a predominantly inward-looking approach to SC resilience, centred around reducing strategic dependencies and maximizing strategic autonomy and sovereignty, the EU also highlights the need to pursue international partnerships. For instance, it could pool resources and establish more diverse SCs with its closest allies and partners, especially through the transatlantic relationship and the enlargement and neighbourhood policy (European Commission 2021d: 13).

**Comparing ASEAN and EU approaches to SC resilience**

While the role of regional organizations in designing approaches and instruments to GVCs has been largely neglected (Horner, 2017), in a deeply changed international landscape created by unprecedented GVC and SC disruptions during the pandemic, the world’s most GVC-integrated regional groupings, ASEAN and the EU, have begun to critically rethink their approaches to SC security. Despite the impact of breaks in SCs being quite different, a common trend can be identified: a departure from the search for SC efficiency to reinforcing SC resiliency. Prior to the COVID-19 outbreak, the concept of resilience did not feature in discussions of GVC and SC security, but it is now an essential component of both ASEAN and EU official discourse.

The previous sections demonstrate, however, that ASEAN and EU understand SC resilience rather differently. In ASEAN, resilience can be traced back to the Declaration of ASEAN Concord in 1976, whereas within the EU resilience only gained traction in the 2016 EUGS, which makes specific reference to the EU’s external security governance. As mentioned earlier, ASEAN’s notion of resilience has undergone a process of transformation, gradually shifting from an inward-looking and nationalistic interpretation to a more balanced approach, highlighting both internal and external resilience. In other words, amid rising geostrategic tensions and growing non-traditional security concerns, ASEAN is attaching equal importance to internal and external aspects of cooperation, demonstrating a desire to promote ASEAN centrality in the Asia–Pacific region.

A different trend can be identified in the EU’s understanding of resilience. It has shifted from an outward-looking view of resilience towards an increasingly inward-looking approach, highlighting the importance of strengthening the EU’s strategic autonomy. In the 2010s, the concept was closely associated with EU policies on development aid, humanitarian affairs and disaster management in third countries. However, the COVID-19 pandemic shifted the notion of resilience towards an inward-looking framework, based on the need for an autonomous EU capability to address external shocks.

Against this backdrop, ASEAN and the EU have adopted distinctive approaches to SC resilience. Economic literature generally argues that resilience is in a state of tension with efficiency, the latter prioritizing lucrative economic exchanges, through delocalization strategies and cost reductions (Hynes et. Al 2020). However, ASEAN’s post-COVID-19 approach to SC is trying to square the circle, seeking a ‘balance between resilience, sustainability and efficiency in production’ (ASEAN Secretariat 2020: 29). While emphasizing the need to strengthen ASEAN internal markets, ASEAN continues to support global and regional production networks and partnerships, which have been engines of regional economic growth and competitiveness. By doing so, it aims to secure its centrality in the Asia–Pacific region, notably through economic integration processes such as the ASEAN-led RCEP, which ASEAN leaders regard as the most important ‘catalyst for the regional post-COVID-19 economic and social recovery’ (ASEAN Secretariat 2020e: 32). Accordingly, the search for efficiency has not been entirely discarded and is still regarded as a crucial way to reduce regional development gaps.

By contrast, the EU’s current approach to SC resilience reveals a clear departure from its past focus on market forces. In comparison with ASEAN, the EU’s approach seems to be much more transformative in nature. Prior to the pandemic, the EU exhibited strong confidence in its performance and participation in GVCs, but its newly published Trade Policy Review and Industry Policy signals a drastic change of approach to SC security. Enhancing the EU’s open strategic autonomy in critical sectors as well as reducing its reliance on foreign suppliers have become priorities.

The disparity between ASEAN and the EU also reflects a difference in their application of the concept of SC resilience. Within ASEAN, trade dependence on China has been a major contributor to economic pain and SC disruption, and there are grave concerns about China’s political and strategic influence, as highlighted by the State of Southeast Asia 2021 survey report, but decoupling from China is not seen as an option by the region’s leaders. The fact that China is closely integrated with ASEAN and that most ASEAN countries are still at the relatively low value-added end of GVCs, making them heavily dependent on the global market (Chen and De Lombarde 2019), may account for ASEAN’s continuing support of regional and global value chains. Differently from the EU, since its early stages of development ASEAN has relied more on market mechanisms and intra-regional integration processes which have been associated with efforts to promote trade and investment ties with the wider East Asia region (Chen and de Lombarde 2019) ASEAN has thus become part of an “integrated Asian Factory” (Baldwin 2006), shaped by regional production sharing and cross-border business connectivity, with China as a hub.

 The signing of bilateral/trilateral FTAs and comprehensive economic partnerships with China, Japan, the Republic of Korea, India, Australia, and New Zealand have allowed ASEAN to become a central node of East Asian economic regionalism. This economic network accounted for one third of ASEAN’s total exports and over 40% of its total imports in 2015 (Chen and De Lombarde 2019: 731). At the same time, intra-ASEAN and regional connections have been complemented by links to the global market. Foreign inputs of intermediate products, parts, and components have remained critical to the ASEAN economies and play a vital role in supporting ASEAN’s export capacity (Chen and De Lombarde 2019). In particular, for imports, China is the region’s most important partner with a share of 23.5%, followed by Japan (7.8%) (ASEAN Secretariat 2021b). Meanwhile, ASEAN’s export industries remain highly dependent on external markets. A large share of intra-ASEAN trade is in parts and components that are exported also as intermediate products to the rest of East Asia and the world (Intal and Chen 2017). With a share of 15.7% China was the largest market for ASEAN exports in 2020 followed by the USA with 15.2% and the EU-27 with 9.4% (ASEAN Secretariat 2021b). ASEAN is also a major US trade partner for several products, accounting for 9.9 percent of overall US imports in 2020, in particular for electrical machinery ($72.9 billion) (USTR website).

It would then be impossible to cordon off the region and prevent interaction with the major powers and other external parties that have long supported ASEAN growth and competitiveness. In addition, during the US–China trade wars, some Southeast Asian countries, such as Vietnam, have benefited from the relocation of lower value-added activities away from China (Thomas 2019). Although some moves of decoupling can therefore be observed, the close economic relationships between ASEAN and its external partners make a departure from globalization only partial and piecemeal.

Distinctly from ASEAN, which features a deep interdependency with the regional and global economy and relatively low levels of intra-ASEAN trade (21.2% in 2020), most EU Member States have a share of intra-EU exports of between fifty and seventy-five percent (Eurostat). As of 2021, EU exports to other European countries have accounted for 35% of the total (Eurostat). The different nature of the EU’s economic integration and geopolitical considerations fuelled by rising competition with China may therefore account for the EU’s search for autonomy and the adoption of innovative instruments to support a shift in the EU’s participation in GVCs. The EU has demonstrated growing concern over its dependency on Chinese and other foreign suppliers in strategic areas, such as raw materials, pharmaceutical ingredients and semiconductors, especially following the pandemic-induced economic shock and SC disruption (Chee 2021). These dynamics have generated policy discussions on the need to diversify supply and demand by relying on different trading partners as well as increased stockpiling, and, more importantly, acting autonomously in critical sectors (Chee 2021). Differently, ASEAN measures to enhance SC resilience show important signs of continuities. These are anchored on the traditional ASEAN toolbox of developing the means primarily aimed at expediting trade procedures and the transit of multi-country shipments between its MS.

It is also noteworthy that the EU and ASEAN differ greatly in terms of their ability to provide adequate policy instruments as well as financial support to tackle pandemic-related disruption and strengthen SC resilience at the regional level. The EU’s status as a hybrid post-sovereign actor puts it in a better position to generate binding frameworks and policy instruments to tackle external shocks in a collective manner. The EU has been able to put in place a wide range of regional-level initiatives combining both short-term policy instruments and long-term stimulus packages to facilitate SC recovery. By contrast, ASEAN is not moving away from its traditional consensual modus operandi, and its collective responses to the COVID-19 crisis have been mostly declaratory. ASEAN has functioned as an institutional hub for information-sharing, and ASEAN MS have responded independently to SC disruption; a coherent response at regional level was lacking. Furthermore, while the European Commission managed to put forward a strong centralized financial instrument (Next Generation EU), the ASEAN Response Fund is primarily financed by voluntary contributions from ASEAN MS and the external partners.

**Conclusion**

Despite the disparity between the EU and ASEAN in their conceptualization of and approach to SC resilience, potential complementarities and synergies can be identified in the context of ASEAN–EU interregional cooperation. The COVID-19 crisis and the growing awareness of SC resilience in both regions may provide new opportunities for ASEAN and the EU to deepen their interregional cooperation. Remarkably, in December 2020, the EU and ASEAN upgraded their relationship to ‘strategic partnership’ (EEAS 2020). This new partnership not only paves the way for deepening EU–ASEAN economic and security engagement; it also identifies new priorities for cooperation on issues such as the response to COVID-19, connectivity, digital transformation, climate change, and green growth (Pozzi 2021).

Since the outbreak of the pandemic, both actors have demonstrated a stronger desire to strengthen their ties and cooperate on connectivity to ‘mitigate the impact of and support a robust socio-economic recovery from the COVID-19 pandemic’ in both regions (Council of the EU 2020). In a joint ministerial statement on connectivity adopted in 2020, ASEAN and the EU reaffirmed their commitment to ‘enhance the resilience, safety and security of regional and global logistics, supply chains’ as well as ‘to share experiences and best practices in cross-border supply chain management’ (Council of the EU 2020). Interestingly, as evidenced by the EU’s ‘Recovery Plan for Europe’ and the ACRF, both organizations have highlighted the importance of sustainability and digital transformation to ensure SC resilience during the pandemic, which may provide incentives to consolidate EU–ASEAN interregional cooperation in areas such as sustainable development, the environment, and the digital economy. In fact, the overlapping interests and priorities of both actors have been drawn into the EU–ASEAN interregional cooperation framework over the past two years. For instance, ‘green growth and environment’ has been a key pillar of interregional cooperation since the adoption of the EU–ASEAN strategic partnership in 2020 (EU–ASEAN 2021). In December 2020, the EU and ASEAN adopted a joint statement on connectivity, which explicitly emphasized the importance of strengthening synergies in areas of sustainable infrastructure, digital innovation and transformation, which set the tone for future interregional cooperation (Council of the EU 2020). In spite of their different approaches to SC resilience, ASEAN and the EU have identified common interests and may still find common ground.

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