

## The Challenge of Pursuing International Governance in a Changing Indo-Pacific Region<sup>1</sup>

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### Abstract

This paper examines the challenge of pursuing international governance in a changing Indo-Pacific region generated by the U.S.-China competition. International governance refers to the sum of state-related activities, rules, and norms existing and operating in specific regional system. It involves a wide-array of states' cooperative problem-solving arrangements to manage their relationship in a dynamic, conflict-prone and anarchic system. It involves cooperation and coordination by states in the absence of world government. The challenge of international governance is to prevent a systemic conflict in the light of the changes and tension generated by the U.S.-China competition in the Indo-Pacific region. This competition is a result of the Trump Administration's adoption of a balancing strategy on China that involves challenging its assertive behavior as an emergent power and preserving the regional balance of power that tilts towards the United States. In conclusion, the paper will argue that international governance will involve managing the process of peaceful change as the Indo-Pacific region that evolves from a balance of power system that tilts towards American preponderance to either a concert of powers system or a Sino-centric order.

**Keywords:** International governance, balance of power in the Indo-Pacific, U.S.-China strategic competition, strategic constraintment, peaceful change in the Indo-Pacific, and systemic change

The Trump Administration's current strategy on Asia reflects continuity rather than discontinuity with the Obama Administration's rebalancing policy. This stance stems from an appreciation and understanding of the U.S. role and function to strengthen American alliances, partnerships, and regional institutions that are committed to a rules-based international order as the foundation of peace and

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<sup>1</sup> This paper is based on the keynote speech I presented at the 17<sup>th</sup> Annual Asia-Pacific Conference: "Governance in the Asia-Pacific: Politics, Economics, Business, and Environment," November 30-December 1, 2019, Ritsumeikan Asia Pacific University (APU), Beppu, Oita, Japan.

stability in East Asia.<sup>2</sup> It is also based on the realization that China continues to challenge American leadership in the Indo-Pacific. Two American analysts shared this observation: “Asia remains a high priority region; administrations may change but national interests do not.”<sup>3</sup>

The Trump Administration, however, has reworked the Obama Administration’s *constraintment* policy by treating China as a strategic competitor rather than a potential responsible stakeholder. Constraintment is a balanced policy of engagement with a modified form of containment. Conceptually developed by Canadian academic, Gerald Segal, the term refers to the collective action of states that coalesce to pressure China to moderate its stance on certain issues. Segal recognized the advantages of deepening the economic, social, and political relations with China. However, he cautioned Western countries and ASEAN member-states that such interactions would be optimized only if China could be prevented from using force to realize its irredentist claims and/to tilt the balance of power in East Asia in its favor. According to Segal, there is a need to engage an emerging power like China, yet the international community should not hesitate to constrain it when necessary. Segal warned about some states’ tendency to indulge or pander to its whims so as not to offend the sensibilities of the Chinese people especially in what is perceived as an attempt to contain China. He noted, nevertheless, that China fears a concert of countervailing forces. Thus, it has softened or modified its positions on contentious issues in the ASEAN Regional Forum (ARF) and even signed the Non-nuclear Proliferation Treaty (NPT) and the Comprehensive Ban Treaty (CBT). Constraintment should never be a confrontational or a balancing policy against China. Instead, it must aim to integrate China into the international system.

According to Segal “a policy to constrain China...is intended to tell China that the outside world has interest that will be defended by means of incentives for good behavior, deterrence for bad behavior, and punishment when deterrence fails.” Therefore, Segal’s constraintment approach is a “carrot-and-stick” policy in which engagement is matched by a tough-minded readiness to deter China from committing any aggressive act.<sup>4</sup>

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<sup>2</sup> James J. Przystup and Phillip C. Saunders, *Asia and the Trump Administration: Challenges, Opportunities, and a Road Ahead* (Washington D.C.: National Defense University Press, June 2017), 30.

<sup>3</sup> Ralph A. Cossa and Brad Glosserman, “The Pivot is Dead, Long Live the Pivot,” *Comparative Connections: A Triannual E-Journal on East Asian Bilateral Relations* 19, 1 (May 2017): 6.

<sup>4</sup> See Gerald Segal, “East Asia and the Constraintment of China,” in East Asia Security (Eds) Michael E. Brown, Sean M. Lynn-Jones and Steven E. Miller (London; Cambridge: The MIT Press, 1996): 159-187 and Michael Yahuda, “Gerald Segal’s Contribution,” in a *Regional Military Power, Does China Matter? A Reassessment* (Eds) Barry Buzan and Rosemary Foot (London; New York: Routledge, 2004): 6.

The Trump administration abandoned any delusion of power sharing with China. This is because it saw China's expanding comprehensive capabilities in terms of: a) undermining America's role as the off-shore strategic balancer in the Asia-Pacific region; b) exacerbating old territorial disputes, and contested historical issues; and c) flaunting to Washington that unchallenged U.S. military dominance in the region is about to end because of China's emergence as a great power in East Asia.

### **The Challenge of International Governance and Peaceful Change**

Many scholars have predicted this geopolitical competition between these two great powers. In 2001, Harvard Professor John J. Mearsheimer argued that if China's economy would continue to grow at its robust rate of more than 10%, it would become a potential hegemon that would eventually become the United States' peer competition in East Asia.<sup>5</sup> Accordingly, if the Chinese economy continues its expansion, then it would not only become a leading producer of cutting-edge technologies but the world's wealthiest economy that would eventually build a powerful military machine.<sup>6</sup> Moreover, for strategic purposes, China would also pursue regional hegemony, the same way as the United States did in the Western hemisphere at the end of the 19<sup>th</sup> century and early 20<sup>th</sup> century.<sup>7</sup> Professor Mearsheimer warned his fellow Americans that the future China threat might be far more dangerous than any of the aspiring hegemons that challenged the United States in the 20<sup>th</sup> century such as Wilhelmine Germany, Imperial Japan, Nazi Germany, and the communist Soviet Union.<sup>8</sup>

In 2014, Professor Mearsheimer repeated his warning about China as it observed that the rapid growth of the Chinese economy is transforming the country into a superpower that would build its power-projection capability enabling it to compete with the United States on a global scale.<sup>9</sup> He foresaw China's building of military (especially naval) forces that would allow it to project its capabilities to distant regions, such as the Western Hemisphere and the Persian Gulf.<sup>10</sup> He predicted that the United States would adopt a policy of strategic containment against China that will involve:<sup>11</sup> a) launching a preventive war against it; b) thwarting its economic growth; and c) rollback which will involve

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<sup>5</sup> John J. Mearsheimer, *The Tragedy of Great Power Politics* (New York, London. W.W. Norton and Company, 2001), 397.

<sup>6</sup> *Ibid.*, 399.

<sup>7</sup> *Ibid.*, 400.

<sup>8</sup> *Ibid.*, 400.

<sup>9</sup> John J. Mearsheimer, *The Tragedy of Great Power Politics* (New York, New York: W.W. Norton and Company, 2014). 370.

<sup>10</sup> *Ibid.*, 371.

<sup>11</sup> *Ibid.*, 384-388.

weakening regimes that are friendly to Beijing and fomenting political and social unrest and trouble in China.

Three years later, another American academic would talk about the prospect of a great power competition in the 21<sup>st</sup> century. Renowned Harvard academic, Professor Graham Allison, claimed that the United States and China are locked in what he called the “Thucydides Trap.”<sup>12</sup> He explained this situation as the natural and inevitable discombobulation that occurs when a rising power threatens and challenges a status quo power.<sup>13</sup> He argued that because of the ongoing restoration of Chinese power and influence in East Asia, China believes that the U.S. strategic dominance in the Western Pacific is waning.<sup>14</sup> As a result, China’s efforts are directed at hastening America’s strategic retreat from East Asia. Based on the current trajectory of the two great powers’ competition, he warned that war between the United States and China in the decades ahead is not only possible, but also more likely to erupt than currently recognized.<sup>15</sup>

As a major feature of the contemporary global society, international anarchy refers to the state system where there is no higher ruling authority above the territorial nation-states. International anarchy has nothing to do with chaos, conflicts, and war. Rather, it is about a system of providing independent and sovereign states an order without a higher level of government. However, forms of international governance could exist among a group of states, depending on cohesion of their social/political structures generated by their interactions, which could override the dynamics of balance of power, strategic competition, and even intense inter-state rivalries.

International governance does not require the presence of mature and developed institutions of governance, bureaucracy and organized violence associated with the sovereign state. In the light of the current U.S.-China strategic competition, international governance entails effecting the necessary and desirable changes within the global society without triggering a destructive systemic war between these two great powers.

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<sup>12</sup> Graham Allison, *Destined for War: Can America and China Escape Thucydides Trap?* (Boston; New York: Houghton Mifflin Harcourt, 2017).

<sup>13</sup> *Ibid.*, xvi.

<sup>14</sup> *Ibid.*, xvii.

<sup>15</sup> *Ibid.*, xvii.

## The U.S.-China Strategic Competition

As China joined the ranks of the great powers with comprehensive capabilities in the first decade of the 21<sup>st</sup> century, the Chinese leadership assumed that their country now has the preponderance of power to alter the rules, norms, and institutions that governed the global society to suit their country's expansive interests. At the onset of the second decade of the 21<sup>st</sup> century, China began to initiate crucial changes from a great power that accepts the existing rules and norms of the international order to one that seeks to reshape the status quo according to its image and national interests. This effort has become apparent in the South China Sea as China is developing its anti-access, area-denial (A2/D2) capabilities against the U.S. 7<sup>th</sup> Fleet. China is now relying on asymmetrical tactics (or gray zone tactics) below the threshold of actual conflict.

China's continuing naval build-up bolsters its A2/D2 capabilities that can prevent foreign navies from occupying or crossing vast stretches of maritime territories and make the Western Pacific off limits to the U.S. Navy.<sup>16</sup> To achieve this objective, the People's Liberation Army's Navy (PLAN—Chinese Navy) undertakes the following:<sup>17</sup> a) setting up of anti-satellite missiles, lasers, and a sophisticated cyber-attack mechanism to target the U.S. military's command and control systems that rely operationally and logistically on satellites and the Internet; b) deployment of conventional ballistic and cruise missiles and stealth combat aircraft to cripple major U.S. military installations in the region and to limit the U.S. Navy's ability to maneuver in international waters; and c) purchase of submarines armed with advanced torpedoes and high-speed cruise missiles to counter U.S. aircraft carriers and the surface vessels that protect them.

Strong economically and militarily, China has taken provocative actions in the South and East China Seas. These include the unilateral declaration of an Air Defense Identification Zone (ADIZ) in the East China Sea; the active conduct of several live-fire naval exercises by the PLAN and the People's Liberation Army's Air Force (PLAAF) in the Western Pacific/South China Sea; and the hardline responses by the PLAN in coordination with Chinese maritime law-enforcement agencies on territorial rows with the Philippines and Vietnam in the contested sea.<sup>18</sup> These moves worry the other littoral states about China's maritime design in the region.<sup>19</sup> From their viewpoint, these bullying tactics smack of

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<sup>16</sup> Andrew F. Krepinevich, Jr., "How to Deter China: The Case for Archipelagic Defense," *Foreign Affairs* 94, 2 (March/April 2015): 79.

<sup>17</sup> *Ibid.*, 79-80.

<sup>18</sup> National Institute for Defense Studies, *NIDS China Security Report 2014* (Tokyo: National Institute for Defense Studies, 2015). 3.

<sup>19</sup> *Ibid.*, 3.

Chinese territorial expansionism and adventurism.<sup>20</sup> However, from China's perspective, it is a case of the country outgrowing its subordinate status in the past and feeling confident enough to stand its ground in the western Pacific—to resolutely manage its territorial and sovereignty issues in the East and South China Seas.<sup>21</sup>

Indisputably, China's vigorous pursuit of its territorial claim over the South China Sea has increased in tandem with its aggressive naval maneuvers.<sup>22</sup> Its regular sea exercises utilize modern surface combatants and even submarines.<sup>23</sup> These actions concretize China's intention to unilaterally and militarily resolve the maritime issue, flaunt its naval capabilities, and impress upon the other claimant states its *de facto* ownership of the disputed territories.<sup>24</sup> In the end, China's naval capabilities will enable it to expand its maritime domain and deny foreign navies passage to the South and East China Seas. In time, it can deprive the U.S. Seventh Fleet access to the Western Pacific inside of the so-called first island chain.<sup>25</sup> Hence, China's long-term goal to project its naval prowess not only to the near seas but also to the far seas—the sea adjacent to the outer rim of the first island chain and those of the north Pacific—is not a remote possibility.<sup>26</sup>

In 2015, China fortified its expansive maritime claim in the South China Sea by constructing artificial islands over the six reefs it occupied in the Spratlys. Based on the satellite images provided by the *IHS Janes Defense Weekly*, China has created new artificial islands at Cuarteron Reef, Hughes, Johnson, Gaven, Fiery Cross, and Mischief Reefs.<sup>27</sup> On 9 April 2015, the Chinese foreign ministry acknowledged China's massive artificial island constructions in the Spratlys. It justified this effort as a means of “satisfying necessary military defense requirements. However, these facilities would also provide “civilian facilities such as typhoon shelters, fishing services, and civil administration offices” for

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<sup>20</sup> David Scott, *China Stands Up: The PRC and the International System* (Oxon; New York: Routledge, 2007), 104.

<sup>21</sup> Michael D. Swaine, “The Real Challenge in the Pacific: A Response to “How to Deter China,” *Foreign Affairs* 94, 3 (May/June 2015): 146-147.

<sup>22</sup> Peter Dutton, “Three Disputes and Three Objectives: China and the South China Sea,” *Naval War College Review* 54, 4 (autumn 2011): 6.

<sup>23</sup> For details on China's Training Exercises in its surrounding waters, see National Institute for Defense Studies, *NIDS China Security Report* (Tokyo: National Institute for Defense Studies, 2011). 14-21.

<sup>24</sup> See International Institute for Strategic Studies, *The Military Balance 2011: The Annual Assessment of Global Military Capabilities and Defence Economics* (London: The International Institute for Strategic Studies, 2011). 196.

<sup>25</sup> Yoichi Kato, “China's Naval Expansion in the Western Pacific,” *Global Asia* 5, 4 (Winter 2010): 19.

<sup>26</sup> Christopher H. Sharman, *China Moves Out: Stepping Stones toward a New Maritime Strategy* (Washington D.C.: National Defense University Press, April 2015). 6.

<sup>27</sup> Bonnie Glaser and Jacqueline Vitello, “China Makes Strides with AIIB and A Great Wall of Sand,” *Comparative Connections: A Triannual E-Journal on East Asian Bilateral Relations* 17, 2, May 2015: 5.

China, its neighbors, and international vessels sailing in the South China Sea.”<sup>28</sup> Despite President Xi Jinping’s statement to then President Barack Obama that China “does not intend to pursue militarization” of the Spratly Islands, China continued its construction of airstrips and other facilities for military requirements in the disputed land features.

More significantly, as the world’s traditional and leading practitioner of economic statecraft or geo-economics, China used its massive wealth to advance its geopolitical goal of blunting the Obama Administration rebalancing strategy to Asia.<sup>29</sup> China’s rapid economic growth and massive foreign exchange reserve have enabled it to reshape regional trade and investment patterns and to influence geo-strategic developments in East Asia. China has not only relied on its economic power as assurance measures and inducements to neighboring states to cooperate with it, but also used coercive economic measures like trade sanctions to punish countries opposing its policies.<sup>30</sup> Confronted by growing American naval presence in the Western Pacific, China pursues its maritime expansion by outflanking and blunting the U.S. rebalancing policy in the Asia-Pacific region through its huge foreign aid and several infrastructure projects under the umbrella of Belt and Road Initiative (BRI).

The BRI involved the building of comprehensive connectivity with countries and regions through infrastructures such as roads, railways, and ports as well as communications and energy projects.<sup>31</sup> It plans to connect the following regions and countries: (1) a route stretching from Central Asia west through Russia to the Baltic; (2) a historical route starting from Central Asia turning towards Western Asia, passing through the Persian Gulf on its way to the Mediterranean Ocean; and (3) a route that passes through Southern China into Southeast Asia then leads through South Asia into the Indian Ocean.<sup>32</sup>

The BRI is a two-edged geo-political sword. On the one hand, it expands China’s influence into Eurasian sub-continent away from the Pacific. On the other hand, it also projects Chinese influence into the east and thus, becoming China’s 21<sup>st</sup> century Marshall Plan to blunt the U.S. strategic rebalancing to the Western Pacific.<sup>33</sup> This is because it provides China an effective tool to drive wedge

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<sup>28</sup> Ibid., 7.

<sup>29</sup> See Robert D. Blackwell and Jennifer M. Harris, *War by Other Means: Geoeconomics and Statecraft* (Massachusetts: Belknap Press, 2016), 128.

<sup>30</sup> Ibid., 129-151.

<sup>31</sup> National Institute for Defense Studies, *East Asian Strategic Review 2017* (Tokyo, Japan: The Japan Times Press, 2017), 79.

<sup>32</sup> National Institute for Defense Studies, *East Asian Strategic Review 2016* (Tokyo, Japan: The Japan Times Press, 2016), 119-120.

<sup>33</sup> Ibid., 18.

between countries and within countries that it sees as having impact on its core interests such as Taiwan, Tibet, and the South China Sea. Chinese balancing is against individual states or any coalition of states that is challenging its expansionist agenda in East Asia. Furthermore, the BRI also strengthens China's hand in undermining the existing military alliances and the current regional order while empowering China to create new power relationships and arrangements that exclude the United States.

In the first months of the Trump Administration, White House officials examined in depth America's strategic interests and involvement in East Asia—including some policies it inherited from the Obama Administration. Conscious that certain strategic developments in the region could threaten U.S. security interests, the Trump Administration found it prudent not only to continue but also to strengthen U.S. strategic engagement in the region. Key administration officials assessed the Obama Administration's calculation that that the Asia-Pacific has become "a key driver of global politics" and "the rebalancing is a means for a sustained and coherent U.S. long-term strategy toward the region."<sup>34</sup> This assessment demands asserting America's leadership role in Asia and projecting its naval power to counter-balance China's pervasive regional influence.<sup>35</sup>

The Trump Administration observed that Asia's economic dynamism generated by China's emergence as a great power in East Asia co-exists with a number of specific security challenges. These include flashpoints such as Northeast Asia and the Korean Peninsula, the thorny China-Taiwan relationship, and the tense South China Sea imbroglio that involves unresolved territorial disputes, competition to secure marine resources, and freedom of navigation issues.<sup>36</sup> It became aware that the prudent conduct of U.S. foreign policy in Asia must consider the broad trends of the region's economic dynamism, China's rising power, and its predecessor's rebalancing strategy.

Consequently, the Trump Administration reworked the Obama Administration's *constraintment* policy by treating China as a strategic competitor rather than a potential responsible stakeholder. It eventually abandoned any delusion of power sharing with China. This is because it saw China's expanding comprehensive capabilities in terms of: a) undermining America's role as the off-shore strategic balancer in the Asia-Pacific region; b) exacerbating old territorial disputes and contested

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<sup>34</sup> Julianne Smith, Erik Brattberg, and Rachel Rizzo, *Transatlantic Security Cooperation in the Asia-Pacific: Recommendations for the Next Administration* (Washington, D.C.: Center for New American Security, October 2016), 2.

<sup>35</sup> Martin S. Indyk, Kenneth G. Lieberthal, and Michael E. O' Hanlon, "Scoring Obama's Foreign Policy: A Progressive Pragmatist Tries to Bend History," *Foreign Affairs* 91, 3, (May/June 2012): 33.

<sup>36</sup> James J. Przystup and Phillip C. Saunders, *Asia and the Trump Administration: Challenges, Opportunities, and a Road Ahead* (Washington D.C.: National Defense University Press, June 2017), 12-13.



historical issues; and c) flaunting to Washington that unchallenged U.S. military dominance in the region is about to end because of China's emergence as a great power in East Asia.

The Trump Administration sees China's actions and goals as the major destabilizing element in the Indo-Pacific region. From this administration's perspective, ensuring American primacy in the Indo-Pacific region requires doing away with any delusion of integrating China into the liberal world order. For several American national security and foreign policy experts, the old strategy of accommodation and engagement with China had simply failed.<sup>37</sup> From their point of view, U.S. engagement with China has not stopped Beijing from persistently bending the rules of international trade in service to China's voracious mercantilism, erecting steep tariffs, and forcing U.S. corporations to surrender intellectual property through cyber espionage. Instead, the Chinese Communist Party (CCP) has used this rapidly growing comprehensive power to crack down on domestic dissent, bully its neighbors, and challenge American leadership in Asia and other parts of the world.<sup>38</sup>

The failure of the engagement policy with China leaves "the U.S. no choice but to compete, deter, and win in this competitive environment."<sup>39</sup> Prominent American Sinologist Professor Robert Sutter described the Trump Administration's emerging strategy as a shift away from America's longstanding China "strategy of engagement plus hedging" to a more forceful whole of (U.S.) government pushback versus China.<sup>40</sup> The Trump Administration replaced the Obama Administration's carrot and stick approach with an outright balancing strategy that involves: a) challenging China's assertive behavior as an emergent power in the Indo-Pacific region; b) maintaining the regional balance of power in favor of the United States; c) supporting countries that have competing territorial claims with Beijing as a means of confronting the geostrategic challenges poised by a more assertive and powerful China; and d) preparing a strategic response to defeat China's growing anti-access and area-denial (A2/A2) capabilities. Consequently, it has put the United States in a head-on and protracted competition with China for power and influence in the Indo-Pacific region.<sup>41</sup> These developments, in turn, have created the prospect of a systemic or a great powers' war in the second decade of the 21<sup>st</sup> century.

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<sup>37</sup> James Kitfield, "The U.S. and China: A Colder Peace or Thucydides Trap?" *Air Intel and Cyber, Sea, Strategy and Policy*, December 12, 2018: 2.

<sup>38</sup> *Ibid.*, 3.

<sup>39</sup> Department of Defense, *Summary of the 2018 National Defense Strategy of the United States of America* (Washington, D.C.: Department of Defense, 2017), 1.

<sup>40</sup> John S. Van Oudenaren, "What Does Growing U.S.-China Rivalry Mean for America's Allies in Asia? Could They End Up Having to Choose Sides?" *National Interests*, December 13, 2018: 1.

<sup>41</sup> Shambaugh, "U.S. Relations with Southeast Asia," 4.

## The Regional Security Architecture

A regional security architecture refers to the overarching and comprehensive institutional structure within a geographic region that facilitates the coordination, governance, and resolution of a range of policy objectives, primarily on security matters, to states in a given region. Compared to Western Europe, Asia's security architecture lags behind in every area in the construction and institutionalization of explicit and cooperative multilateral security arrangements.<sup>42</sup> Prior to the 1990s, the region was regarded as too diverse and too distrustful to accommodate multilateral security institutions. The prospect for multilateral security cooperation remained bleak until at the least in the early 1990s.<sup>43</sup>

Consequently, throughout much of the Cold War, bilateralism remained the dominant mode of security cooperation in Asia. In this respect, the U.S. system of bilateral security alliances became the region's primary and only security architecture.<sup>44</sup> Its main manifestation took the form of the U.S.-led network of bilateral security alliances, which is referred to as the San Francisco system of alliances.<sup>45</sup> The most prominent and durable of America's bilateral security alliances in Asia are the U.S.-Japan security alliance, the U.S.-South Korea alliance, and the U.S.-Philippines alliance.<sup>46</sup> These three bilateral alliances assigned the United States the role of East Asia's primary security guarantor as Washington dominated the conditions of these security arrangements.<sup>47</sup> These alliances have then an enduring effect on the U.S. and its allies' security and foreign policies way into the 21<sup>st</sup> century. These bilateral alliances enabled the United States to exercise greater ability to restrain and diffuse tensions over three regional flashpoints: the Korean Peninsula, the East and South China Seas; and the Taiwan Straits. Most significantly, they gave the United States the strategic initiative to directly persuade China not to move toward predominance of power in East Asia.

The only successful Cold War multilateral security institution that evolved way into the 21<sup>st</sup> century is the Association of Southeast Asian Nations (ASEAN). Prior to the early 1990s, the ASEAN's influence, however, was limited to Southeast Asia. The ASEAN, however, would have an impact on the regional security architecture in the mid-1990s with the formation of the ASEAN Regional Forum

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<sup>42</sup> Brendon Taylor, "Conceptualizing the bilateral-multilateral security nexus," *Bilateralism, Multilateralism and Asia-Pacific Security: Contending Cooperation* (Eds.) William T. Tow and Brendon Taylor (London and New York: Routledge, 2013), 8.

<sup>43</sup> *Ibid.*, 8.

<sup>44</sup> *Ibid.*, 8.

<sup>45</sup> Andrew Yeo, *Asia's Regional Architecture: Alliances and Institutions in the Pacific Century* (Stanford, California: Stanford University Press, 2019), 28.

<sup>46</sup> *Ibid.*, 28.

<sup>47</sup> *Ibid.*, 28.

(ARF) and other ASEAN-related multilateral arrangements such as the ASEAN Plus Three (APT), the East Asian Summit (EAS), and the ASEAN Defense Ministers Forum (ADMM).<sup>48</sup> The ASEAN approach to security is reflected in the formation of the ASEAN Regional Forum (ARF) in 1995 and its subsequent foray into regional security affairs. The ARF was formed during a three-hour, low-key gathering in July 1994 immediately after the Association of Southeast Asian Nations (ASEAN) Foreign Ministers' Meeting. It is ASEAN's first and tentative venture into the field of regional security. The ARF is not an institution for collective defense, nor is it a concert for the management of regional security. It is based from the ASEAN-derived approach of cooperative security which involved the building of trust on a multilateral basis with the goal of mitigating existing disputes, and eventually finding means of resolving them.

The ARF's end goal is to create a regional order based on 1) transparency in strategic intent and threat perceptions; 2) mutual trust and confidence with regard to the member-states' military capabilities and deployment; and 3) habit of cooperation which will facilitate the peaceful resolution of existing and future conflicts. The late Michael Leifer observed that "the ARF aims to contribute to the promotion of a predictable and constructive pattern of relationship in the Asia-Pacific."<sup>49</sup> As such, the ARF is similar to other forms of behavior and mechanism that regulate relations among states. Such patterns of managing interstate relations include the Concert of Europe, alliance systems, crisis management, bipolar alliance structures, spheres of influence, and systems with features resembling the more traditional balance of power. However, what differentiates the ARF from these examples is its objective to foster an international (or regional) order that deviates from the use of force in settling interstate disputes. Like in collective security, arms control, and the development of international law, the ARF wants a certain degree of institutional or cultural constraint on the use of force in effecting change in the system.<sup>50</sup> As a result, since the mid-1990s, the ASEAN has the initiative on multilateral security formation. The regional organization has reconstructed the norm of common and cooperative security in the Asia-Pacific region so that its institutional expression mirrors the ASEAN Way as the main platform for developing a wider and more inclusive Asia-Pacific regional security architecture.<sup>51</sup>

In recent years, several middle powers have formed multilateral security arrangements that have evolved along different lines in terms of scope and accessibility. With respect to the size of their

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<sup>48</sup> Taylor, "Conceptualizing the bilateral-multilateral security nexus," 9.

<sup>49</sup> Michael Leifer, *The ASEAN Regional Forum: Extending ASEAN's Model of Regional Security*, (London: New York Oxford University Press, 1996), 45.

<sup>50</sup> Michael Yahuda, *The International Politics of the Asia-Pacific* (New York; Oxon: Routledge, 2013), 199.

<sup>51</sup> Yeo, "Asia's Regional Architecture," 53-54.

memberships, middle powers like Australia, Japan, and South Korea have formed small or minilateral rather than multilateral security groups.<sup>52</sup> They remain plurilateral rather than multilateral because their memberships remain exclusive in nature—available to established middle powers only.<sup>53</sup> Minilateral and plurilateral arrangements provide stronger defense and security ties between middle powers that are linked by common security interests and political values.<sup>54</sup> This is the case of Japan and Australia, two middle powers that have developed their respective geographic strategic complementarity and forged their own special bilateral security partnership.

### **International Governance amidst Strategic Competition**

The primary challenge for effecting international governance in the Indo-Pacific region is to manage the current U.S.-China strategic competition. This requires countries in the region to convince both major powers to develop and foster mutual expectation of the peaceful transition of power in the region. This necessitates that regional structures assist the two competitors in changing their perceptions of their vital national interests wherein both sides should consider war as a destructive and illegitimate instrument of pursuing their strategic and political objectives. However, this is easier said than done given the fact that the United States and China are locked in managing four major flashpoints in the region that could trigger a major or a systemic war.

These flashpoints are: a) the South China Sea; b) the Senkaku Islands in the East China Sea; c) the Korean Peninsula; and b) the Taiwan Straits. The four flashpoints manifest frozen inter-state contentions that have the potential to escalate into militarized conflicts between China and the United States. These flashpoints are projections of interacting states' mutual animosity, suspicions, and contention. They trigger a major conflict if the conditions are right, because these flashpoints are occurring amidst a major systemic change in the 21<sup>st</sup> century when the U.S. unipolar moment is strategically being challenged by China, and in a certain degree, also Russia.

Looking at the possibility of a direct-armed conflict between China and the United States (and its allies) originating in any one of these flashpoints, an American academic notes:

Should Beijing and Washington find themselves in a conflict, the huge U.S. advantage in conventional forces would increase the temptation for

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<sup>52</sup> Ajin Choi and William T. Tow, “Bridging Alliances and Asia-Pacific Multilateralism,” in *Bilateralism, Multilateralism and Asia-Pacific Security: Contending Cooperation* (Eds.) William Tow and Brendan Taylor (London and New York: Routledge, 2013), 27.

<sup>53</sup> *Ibid.*, 27.

<sup>54</sup> *Ibid.*, 27.

Washington to threaten to or actually use force. Recognizing the temptation facing Washington, Beijing might in turn feel pressure to use its conventional forces before they are destroyed. Although China could not reverse the military imbalance, it might believe that quickly imposing high costs on the United States would be the best way to get it to back off.

...Under such circumstances, both Beijing and Washington would have incentives to initiate an attack.<sup>55</sup>

It is imperative, therefore, to look into the prospect of resolving, not simply managing, the U.S.-China strategic competition at the most opportune time. This goal must be pursued amidst the emerging power reconfiguration in East Asia. This requires transforming the U.S.-China relationship into a schema of stable peace. Stable peace can be realized in a state system where the probability of war, especially among the major states, is minimized.<sup>56</sup> From an interactive perspective, it means a greatly reduced probability of political units (states) resorting to violence to achieve their political and strategic ends.

American Academic Charles Kupchan provides an interesting and bold account of how states can free themselves from geo-strategic rivalry via rapprochement or even reconciliation.<sup>57</sup> He studied cases of how stable peace was achieved in the following cases: U.S.-UK relations; Norway-Sweden relations; Brazil-Argentina relations; the Concert of Europe; the European Union; and the ASEAN. In these cases, a zone of stable peace emerged when strategically proximate states started considering war among themselves as unthinkable, effected demilitarization policies, and denounced the use of force as an instrument of statecraft.<sup>58</sup> According to him, the path to a stable peace is a sequential process consisting of four distinct phases:<sup>59</sup>

- A) *Unilateral accommodation of one party*—In a dispute, one party must make an initial concession to the other states as an opening gesture of goodwill and trust. It is then up to the targeted states to reciprocate with their own acts of accommodation. During this stage of extending concessions, the parties to the dispute seek to discern the intent behind such moves and begin to entertain hope that they are dealing with a potential partner rather than an implacable adversary.
- B) *Reciprocal restraint*—Expectations of reciprocity promote successive rounds of accommodation among the parties. Then they evaluate one another's broader motivation, not just their narrow

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<sup>55</sup> Avery Goldstein, "China's Real and Present Danger: Now is the Time for Washington to Worry," *Foreign Affairs* 95, 5 (September/October 2013): 138-139.

<sup>56</sup> John Vasquez, *The War Puzzle* (Cambridge, UK: Cambridge University Press, 1993), 264.

<sup>57</sup> See Charles A. Kupchan, *How Enemies Become Friends: The Sources of Stable Peace* (Princeton, New Jersey: Princeton University, 2010), 1-15.

<sup>58</sup> *Ibid.*, 29-30.

<sup>59</sup> *Ibid.*, 35-36.

intentions with respect to specific concessions. Eventually, hope leads to mutual confidence and understanding that their competition and rivalry can lead to peace, and possibly, long-term cooperation.

- C) *Societal integration*—Parties in the dispute begin interacting with increasing frequency and intensity, as they attribute benign qualities to one another’s political or diplomatic character.
- D) *Generation of New Political or Diplomatic Narratives*—Using the discourse of a newly- formed community, the former disputing parties embrace a compatible, shared, or common identity and expectations of peaceful relations that will have a “taken-for-granted” characteristic, generating a sense of social solidarity.

When applied to the U.S.-China strategic competition, the process involves these stages: The first stage necessitates one party in the dispute to initiate a unilateral accommodation by sending a message of benign intent to the other parties and offering an unambiguous concession on a matter of common interest or concern to them. In this case, the party that should initiate a unilateral accommodation is China. This unilateral accommodation requires the following set of actions on the part of China.

- 1) China, as the emergent power, to make the initial diplomatic and strategic concessions to the U.S., its allies, and other regional stake holders as an opening gesture of good will. This will require China abandoning its expansive maritime claims in the first island chain and moderating its behavior against the littoral states.
- 2) China must seek to discern its benign intention behind such moves and to foster expectations in other states that it is a potential partner in maintaining regional stability rather than an implacable adversary and a revisionist power bent on unravelling the regional order.
- 3) China must convince the United States, its allies, and other regional countries to exercise mutual restraints to promote successive series of mutual accommodation by both sides. These efforts are aimed to moderate the competition, avert any possible rivalry, foster durable peace and stability, and generate programmatic cooperation.
- 4) China, jointly with the United States, its allies, and ASEAN, must stride for integrative ventures such as preferential or free trade agreements, customs union, and common markets, complemented by multilateral and cooperative security arrangements such as confidence-building measures and preventive diplomacy.

With its size and location in East Asia, a robust economy, and growing military might, China is the most able to initiate a unilateral accommodation and diffuse the current geostrategic competition. Such course of action will confirm that China does not want a geo-strategic competition in the Indo-Pacific region. It will also discourage other states from joining a counter-balancing coalition led by the United States and supported by Japan and Australia. If China pursues such policy, the geostrategic competition between the United States and China would either lead to: a) a U.S.-Sino (G2) Condominium where the United

States will accept compromises that will accommodate China's core interests in the region leading to a *de facto* Chinese sphere of influence in the Indo-Pacific, or b) a Sino-centric order where the Chinese economy becomes the center of the regional economy, China assuming the role of the primary guarantor in regional security matters, and Asians resolving Asian security and diplomatic issues with limited or without interference from external powers. This development will eventually ease the U.S. out of the region without any major conflict. If China effects a peaceful change, it will eventually be able to ease the U.S. out of the region without a systemic war. This will be a case of what Sun Tzu prescribed in the Art of War, "to win, without actually fighting." China's failure to take a unilateral accommodation will only prolong the current regional balance of power system, which is marked by constant but relatively stable competition between two great powers and their allies. The worst-case scenario, that will mean the failure of international governance to manage the U.S.-China competition, will be the culmination of the Thucydides Trap through the consequent outbreak of a systemic war between a status quo superpower and its allies versus an emergent power in the Indo-Pacific region.

## Conclusion

At stake in ongoing U.S.-China strategic competition is not simply the control of a huge and strategic region. More importantly, it is the future of the Indo-Pacific region. Will the region avoid the various competitions, conflicts, and wars that Europe experienced prior to 1945? Alternatively, will Europe's past be East Asia's future? China's delaying tactic inevitably directs the region towards the second scenario where "Asia's uncertain future will be Europe's bellicose and violent past."<sup>60</sup> However, this worst-case scenario is avoidable if China changes its approach as an emerging power in the region. The long-term resolution of the current strategic competition will start by China's unilateral accommodation of the interests of most East Asian states and the United States. Taking this first step entails enormous constraints as well as diplomatic flexibility and more importantly humility on the part of an emergent power. China, the United States, and other countries in the Indo-Pacific region should reflect on E. H. Carr's aphorism on international change: "Everyone, will however, agree that war and revolution are undesirable in themselves. The problem of peaceful change is, in national politics, how to effect necessary changes without revolution and, in international politics, how to effect such changes without war."<sup>61</sup>

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<sup>60</sup> Aaron L. Friedberg, "Ripe for Rivalry: Prospects for Peace in a Multipolar Asia," East Asian Security (eds) Michael E. Brown, Sean M. Lynn-Jones, and Steven E. Miller (Cambridge, Massachusetts; London, England: The MIT Press, 1996), 5.

<sup>61</sup> E.H. Carr, *The Twenty Years' Crisis* (New York, New York: Palgrave, 2001), 191-192.

## References

- Allison, Graham, *Destined for War: Can America and China Escape Thucydides Trap?* (Boston; New York: Houghton Mifflin Harcourt, 2017).
- Blackwell, Robert D. and Harris, Jennifer M., *War by Other Means: Geoeconomics and Statecraft* (Massachusetts: Belknap Press, 2016).
- Carr, E.H., *The Twenty Years' Crisis* (New York, New York: Palgrave, 2001).
- Choi, Ajin and Tow, William T., "Bridging Alliances and Asia-Pacific Multilateralism," in *Bilateralism, Multilateralism and Asia-Pacific Security: Contending Cooperation* (Eds.) William Tow and Brendan Taylor (London and New York: Routledge, 2013).
- Cossa, Ralph A. and Glosserman, Brad Glosserman, "The Pivot is Dead, Long Live the Pivot," *Comparative Connections: A Triannual E-Journal on East Asian Bilateral Relations* 19, 1 (May 2017).
- Dutton, Peter, "Three Disputes and Three Objectives: China and the South China Sea," *Naval War College Review* 54, 4 (autumn 2011).
- Friedberg, Aaron L., "Ripe for Rivalry: Prospects for Peace in a Multipolar Asia," East Asian Security (eds) Michael E. Brown, Sean M. Lynn-Jones, and Steven E. Miller (Cambridge, Massachusetts; London, England: The MIT Press, 1996).
- Glaser, Bonnie and Vitello, Jacqueline, "China Makes Strides with AIIB and A Great Wall of Sand," *Comparative Connections: A Triannual E-Journal on East Asian Bilateral Relations* 17, 2, May 2015.
- Goldstein, Avery, "China's Real and Present Danger: Now is the Time for Washington to Worry," *Foreign Affairs* 95, 5 (September/October 2013).
- Indyk, Martin S., Lieberthal, Kenneth G. and O'Hanlon, Michael E., "Scoring Obama's Foreign Policy: A Progressive Pragmatist Tries to Bend History," *Foreign Affairs* 91, 3, (May/June 2012).
- Kato, Yoichi, "China's Naval Expansion in the Western Pacific," *Global Asia* 5, 4 (Winter 2010).
- Kitfield, James, "The U.S. and China: A Colder Peace or Thucydides Trap?" *Air Intel and Cyber, Sea, Strategy and Policy*, December 12, 2018.
- Krepinevich, Andrew F. Jr., "How to Deter China: The Case for Archipelagic Defense," *Foreign Affairs* 94, 2 (March/April 2015).
- Kupchan, Charles A., *How Enemies Become Friends: The Sources of Stable Peace* (Princeton, New Jersey: Princeton University, 2010).
- Leifer, Michael, *The ASEAN Regional Forum: Extending ASEAN's Model of Regional Security*, (London: New York Oxford University Press, 1996).
- Mearsheimer, John J., *The Tragedy of Great Power Politics* (New York, London. W.W. Norton and Company, 2001).



- Mearsheimer, John J., *The Tragedy of Great Power Politics* (New York, New York: W.W. Norton and Company, 2014).
- Przystup, James J. and Saunders, Phillip C., *Asia and the Trump Administration: Challenges, Opportunities, and a Road Ahead* (Washington D.C.: National Defense University Press, June 2017).
- Scott, David, *China Stands Up: The PRC and the International System* (Oxon; New York: Routledge, 2007).
- Segal, Gerald, "East Asia and the Constraintment of China," in *East Asia Security* (Eds) Michael E. Brown, Sean M. Lynn-Jones and Steven E. Miller (London; Cambridge: The MIT Press, 1996): 159-187 and Michael Yahuda, "Gerald Segal's Contribution," in *Regional Military Power, Does China Matter? A Reassessment* (Eds) Barry Buzan and Rosemary Foot (London; New York: Routledge, 2004).
- Shambaugh, "U.S. Relations with Southeast Asia".
- Sharman, Christopher H., *China Moves Out: Stepping Stones toward a New Maritime Strategy* (Washington D.C.: National Defense University Press, April 2015).
- Smith, Julianne, Brattberg, Erik and Rizzo, Rachel, *Transatlantic Security Cooperation in the Asia-Pacific: Recommendations for the Next Administration* (Washington, D.C.: Center for New American Security, October 2016).
- Swaine, Michael D., "The Real Challenge in the Pacific: A Response to "How to Deter China," *Foreign Affairs* 94, 3 (May/June 2015).
- Taylor, Brendon, "Conceptualizing the bilateral-multilateral security nexus," *Bilateralism, Multilateralism and Asia-Pacific Security: Contending Cooperation* (Eds.) William T. Tow and Brendon Taylor (London and New York: Routledge, 2013).
- Taylor, "Conceptualizing the bilateral-multilateral security nexus".
- Van Oudenaren, John S., "What Does Growing U.S.-China Rivalry Mean for America's Allies in Asia? Could They End Up Having to Choose Sides?" *National Interests*, December 13, 2018.
- Vasquez, John, *The War Puzzle* (Cambridge, UK: Cambridge University Press, 1993).
- Yahuda, Michael, *The International Politics of the Asia-Pacific* (New York; Oxon: Routledge, 2013).
- Yeo, Andrew, *Asia's Regional Architecture: Alliances and Institutions in the Pacific Century* (Stanford, California: Stanford University Press, 2019).
- Department of Defense, *Summary of the 2018 National Defense Strategy of the United States of America* (Washington, D.C.: Department of Defense, 2017).
- International Institute for Strategic Studies, *The Military Balance 2011: The Annual Assessment of Global Military Capabilities and Defence Economics* (London: The International Institute for Strategic Studies, 2011).
- National Institute for Defense Studies, *East Asian Strategic Review 2016* (Tokyo, Japan: The Japan Times Press, 2016).

National Institute for Defense Studies, *East Asian Strategic Review 2017* (Tokyo, Japan: The Japan Times Press, 2017).

National Institute for Defense Studies, *NIDS China Security Report* (Tokyo: National Institute for Defense Studies, 2011).

National Institute for Defense Studies, *NIDS China Security Report 2014* (Tokyo: National Institute for Defense Studies, 2015).

## **India's Foreign Policy towards Japan: Special Partnership amid Regional Transformation**

**Astha Chadha<sup>1</sup>**

### **Abstract**

India and Japan have upgraded their cordial relations to a special strategic partnership. The deepening of this relation is particularly evident since 2014, when Narendra Modi was sworn in as the Prime Minister of India, thus leading the nation to embark on a new journey of consolidating regional influence and establishing itself as a regional power amid the rise of China and regional transformations. India is very keen on furthering the special partnership with Japan, which not only allows Indian presence in regional strategic and security architecture, but also does not hinder the Indian autonomy. This paper, through the analysis of India's Japan strategy, security and infrastructure agreements, especially since 2014, seeks to address how India's foreign policy towards Japan has undergone changes to allow for India's greater role in Asia and what factors have led to these changes in India's Japan policy. The paper argues that realist perspective of balance of power in the backdrop of the rise of China as well as constructivist perspective of India's principle of non-alignment (despite strategic friendships), have been the base of India's Japan policy under Modi government, to pursue and promote greater Indian presence in geo-political and geo-strategic spheres. The paper analyses the India-Japan partnership as a response to emerging regional security challenges, explores the prospects of the partnership and charts the course of changing Indian diplomacy towards Japan.

**Keywords:** India-Japan, China, Modi, Abe, Indian diplomacy

India, the largest democracy of the world has actively maintained cordial relations with Japan mainly since the beginning of the twenty first century. Though their relationship majorly depended on ODA and FDI, it has expanded into an alliance of strategic nature which has surpassed the realm of quantifiable measures of economic progress. Today, the momentum and direction of India's policy towards Japan can be evaluated through the triad of attractiveness of India's political values,

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This paper is the \*Best Paper Award-Winning Article of the 17th Annual Asia Pacific Conference: "Governance in the Asia-Pacific: Politics, Economics, Business, and Environment," November 30-December 1, 2019, Ritsumeikan Asia-Pacific University (APU), Beppu, Oita, Japan.

\* For graduate students

diplomatic ideals and foreign policy initiatives towards Japan as a special strategic international partner to India. This is clearly reflected in India's growing affinity towards Japan through various agreements and initiatives signed between the two countries and the increased elements of defense and security in these initiatives which mirror the affinity between Prime Minister Shinzo Abe and Prime Minister Narendra Modi since 2014.

Indian Prime Minister Modi decided to visit Japan as the first nation outside India's immediate neighborhood, owing to his close relations with the Japanese counterpart Prime Minister Abe since 2002, when Modi was the Chief Minister of the state of Gujarat. Japan became the largest donor of ODA to India in 2017 reaching over \$2 billion, with most of the funding for social and economic infrastructure. One key driving force behind the increased momentum of the Indo-Japanese partnership is the strong bonding between the leaders of the two countries- Prime Minister Narendra Modi who won a second term in 2019 with an even higher majority, and Japanese Prime Minister Shinzo Abe who has been keenly aligning Japan's Indo Pacific strategy with India's Look East Policy.

An important factor in the evaluation of India's policy towards Japan is the rising regional influence of China in domains of defense, security, economy as well as politics. Beijing has been consistently strengthening its position in the Indian Ocean region, which is of grave concern to New Delhi. India has responded to growing Chinese assertion by launching a deeper partnership with Japan within its boundaries and beyond. A second factor is India's long-standing foreign policy ideal of non-alignment, which has guided the Indian foreign policy for decades. But the regional transformations and security challenges close to its land and seas has led India to revise the ideals underlying its decision making and diplomacy by forging closer friendships with nations such as Japan.

This paper seeks to analyze India's policy towards Japan in 2014-2019 to answer the two main research questions. First, how India's foreign policy towards Japan has transformed since 2014 under Prime Minister Modi given the rising influence of China. Second, how has India responded to these regional transformations by partnering with Japan given the constraints of its foreign policy ideal of non-alignment. The study of India's Japan diplomacy through the lens of economic, political and strategic perspectives along with India's diplomatic ideals as a factor help evaluate the underlying significance of the Indo-Japanese relationship under the Modi government.

The key arguments raised in this paper are three-fold. First, India's Japan policy which is a combination of geo-economic, geo-political and geo-strategic factors has been influenced by Chinese assertiveness in and beyond the Indian subcontinent. Second, though India still maintains a relatively cautious stance in its growing partnership with Japan, India's diplomatic ideal of non-

alignment has diluted considerably under Modi since Japan offers India an incomparable partnership that neither presses for strong open stance against any power, nor does it diminish India's strategic autonomy in any way. Third, Indo-Japanese cooperation in parts of Africa, South Asia and Iran, offers for India some new diplomatic avenues beyond its own borders to create a strong international presence for itself and elevate its bilateral partnership with a key nation like Japan in years to come. The succeeding section lays down the analytical frameworks for empirical analysis.

### **India's Japan policy: Under the constraints of Chinese might and Non-alignment policy**

Rapid economic growth through its policy reforms has brought India's importance in achieving Asian peace and security, into the limelight. India-Japan relations have been analyzed by scholars through various angles. One of these is the significance of Japan in India's Look East or Act East policy (Bajpaee, 2017; Lee, 2016; Wojczewski, 2016), wherein it has been argued that India's leadership has sought to "Japan's place at the heart of India's Look East Policy" with the successful conclusion of "Special Strategic and Global Partnership" between India and Japan in September 2014, this is more of an outcome of expanded relations between the two sides since 2000s than a standalone outcome of India being proactive in the recent past towards partnering with Japan. Another aspect in the past studies is the prominence of India-Japan relations in fostering economic, security and infrastructure growth in India over a couple of decades (Sahoo & Bishnoi, 2016; Jain, 2016; Yoshimatsu, 2019a; Brewster, 2010a). The authors have highlighted that since India, Japan and China comprise most of the geopolitical issues in Asia, Indo-Japanese collaboration would not only elevate India as a potential economic power against China but would also curb China's expansionary moves. India's foreign policy towards Japan has seen the onset of various infrastructure development projects including the flagship Shinkansen project, Prime Minister Modi's industrial acceleration programmes *viz.*, Make in India, Skill India, Digital India etc. India's rigorous engagement with Japan and USA shows the relevance of the China factor into India's changing foreign policy (Ishibashi, 2018; Paul, 2012; Basu, 2016). India's invitation to Japan in its security-sensitive projects, like in Andamans and northeast India, has elevated Indo-Japanese relations to a new strategic level from a former close economic relation (Jain, 2018; Ahuja et al., 2018; Boon, 2016; Saint-Mézard, 2016; Chaudhuri, 2016). The authors have concluded that Modi's Indian Ocean policy is very reliant on support of Japan.

The past scholars have theoretically and empirically examined the India-Japan relationship from the Indian foreign policy perspective mainly as a dire need for India's economic development and security objectives. Though India has never come to the fore front with its capability to be an Asia power hub, constant friction with seven decade-old rival neighbor Pakistan along with Chinese threat on land and seas has led India to shift its foreign policy stance towards countries like Japan in

search of greater cooperation that extends beyond economic gains and transcends into security concerns.

In this regard, there is a shortcoming in the approach and focus of the previous literature in three aspects. Firstly, in the past research India's security needs have been highlighted with the underlying idea that they are a part of the larger framework of bilateral economic ties India has with Japan such as in Jain (2018), Ahuja et al. (2016), Sahoo & Bishnoi (2016) and Garge (2016). There are fewer studies such as Brewster (2010a) that focus on India's policies towards Japan exclusively as an instrument of pushing India's defense aims and geopolitical objectives in the Asian region in the backdrop of India's rise as a potential power in Asia. Secondly, from a theoretical perspective, past studies are relatively weak in identifying India's ideational approaches to foreign policy. Past research has maintained focus on realist and liberalist perspective to analyze India's changing foreign policy stance, but not constructivist. Jain (2018), Ahuja et al. (2016), Garge (2016) and Chaudhuri (2016), have all mainly focused on economic and security objectives, and their arguments are more material and utilitarian in analytical focus, which is centered around the material power of India-Japan strategic partnership. Brewster (2010a; 2010b) and Wojczewski (2016) have examined the norms and ideals Indian foreign policy has long maintained since Nehruvian times. But no recent research particularly considers the approach to study India's foreign policy stance towards Japan in light of these ideational factors. Thirdly, with India gaining prominence on the international front, India's rising power as against Chinese increased influence in Asia has not been covered by literature. There are very limited studies that highlight how India could establish itself as a potential Asian power by drawing from the strength of India-Japan ties to serve the needs of the two economies and address the contemporary security concerns.

In order to address these shortcomings, this paper analyzes the policy development of India's policy towards Japan since the swearing in of Prime Minister Modi in 2014 in light of its relations with China. In that aspect the paper explores the Indian strategies in partnering with Japan under two frameworks: the realist framework of balance of power in Asia and the constructivist framework of India's foreign policy ideal of non-alignment.

Realism as a theory of international relations explains the nation state as being the center for all decision making in a country. Within the realist thought, the balance of power theory which basically is a theory of equilibrium among great powers, is based on works of Thucydides, Hobbes and Rousseau, and have been extended into classical realist theory by Carr (1964) and Morgenthau (1963). The theory suggests that possession and concentration of military and material capabilities with the great powers is kept in check and balanced out due to major powers trying to survive and maintain their supremacy in the international system, thus restoring equilibrium. According to the theory, the balance can be achieved through internal military capacity building (when economic

wealth is transformed into military prowess), forging counterbalancing alliances, ‘passing the buck’ of balancing to other state, etc. India’s shift in its policy stance towards Japan from economic progress to the building of military capabilities showcases this realist aspect of foreign policy. The theory is helpful in explaining why China’s potential competitor, India is striving to mark its presence especially in the Indian Ocean region, through diplomatic measures such as aligning with Japan to safeguard its economy, security and autonomy-all soft balancing indicators.

Moving away from realism’s underlying materialism, constructivism states that while ideas and processes define the social construction of identities and interests, these ideas and processes create a structure of their own which is ideational (not material) and influences the international actors. Since identities are representations of an actor’s understanding of who they are, which in turn signals their interests, identities constitute interests and actions. Norms are standard of appropriate behavior for actors with a given identity (Kratowil, 1999). These norms and principles help build identity of a state, since they become the defining characteristic of that state. India’s policies have underlying principle of non-alignment principle that has been the foundational guide to India’s policy towards rest of the world and has given India the identity of a non-aligned state. Born out of the need to maintain strategic autonomy and sovereignty as a nation during Cold War, the principle of non-alignment as a compass of state’s foreign policy was meant to distance the foreign policy of nations hurt by imperialism in the past, from the two blocs of the capitalist West and the communist Soviet. Non-alignment has since then become the Indian stance in its dealings with large and middle powers to maintain cordial relations with other countries without forging formal “alliances” with them. However, the changing power-dynamics in the world involving the US, medium-powers like Japan and Australia, as well as new emerging powers like China have pushed India to revise its strategies and step into more active engagement with countries such as Japan that share similar challenges and aspirations as a potential regional power. The theory would help to study if India has retained its traditional ideal of non-alignment or shifted its foreign policy stance to engaging with several powers under a multi-aligned policy.

The paper analyses India’s Japan policy in three steps. First, it describes India’s foreign policy towards Japan and traces its evolution from 2014 till 2019, encompassing strategic, economic and defense domains to track India’s partnership with Japan under the Modi government. Second, the paper discusses the impact of the increasing Chinese influence in Indian Ocean region to analyze whether it has pushed or held back growth in Indo-Japanese relations. Thirdly, the paper examines to what extent India has based its Japan policy on the ideal of non-alignment and what are its effects on the policy. The scope of analysis is the period of the first Modi administration (2014-2019).

## Policy Development

India is facing a conundrum in the currently active, assertive and aggressive international political theatre which has necessitated more assertive foreign policy for India in order to establish a leadership position for itself along with securing its land and seas. In that sense, India feels compelled to engage with China because of a variety of reasons- both countries share land borders and aim at keeping them secure and stable, both nations are growing at a fast pace and competing for a stronger position economically and politically. The key policy measures India undertook with Japanese support was in the spheres of economic development, strategic infrastructure, defense and an extended collaboration in other countries.

First, India signed the India-Japan Civil Nuclear Arrangement with Japan during Modi's November 2016 visit to Japan. India had already secured Japanese support for entry into Nuclear Suppliers Group, as mentioned in the India-Japan Vision 2025 statement. The deal came into force in July 2017, making India the first country to enter such an arrangement with Japan despite not being signatory to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT). Also, this came immediately after India failed to get entry into the elite 48-countries' Nuclear Suppliers Group, which controls the export of nuclear material and technological know-how, due to the Chinese objection against India and support for Pakistan (Press Trust of India, 2019). India overcame this threat by signing the iconic deal with Japan to secure its economic and energy needs. Second, India chose to offer to have its bullet train project through Japan instead of China in 2015 for 81 percent of the total cost being financed by the Japanese government with a \$13.8 billion soft yen-loan at 0.1 percent rate of interest, successfully outbidding the Chinese proposal for the same project. The project is important for Japan since it lost bids against China for similar projects in Indonesia and Thailand, so India's decision to choose Japan as its development partner was received well in Japan with Hiroshi Hirabayashi, the former ambassador of Japan to India and author of *India: The Last Superpower* stated that "India is not Indonesia or Thailand. It is a great nation, totally autonomous...It does not need to submit to Chinese pressure."

India pushed for Japanese investment and collaboration in the geo-strategic region of North East India which also contains the disputed state of Arunachal Pradesh, a state claimed by China as "South Tibet." India's north-east comprises eight states which account for about eight percent of India's landmass. The region, which is relatively less developed economically than the rest of the country, holds extreme geographical, political as well as strategic importance for India due to its borders with Bangladesh, China, Myanmar, Nepal and Tibet. Abundance of natural resources and history of secessionist movements in the North-East Indian region have made it even more crucial for India to integrate and connect the region with not just the rest of India but also with neighboring countries of Myanmar and Bangladesh to boost economic development and achieve security



objectives. Of the five loan agreements signed during Modi's visit to Japan in October 2018, three were for projects in the north-eastern region, namely JPY5.5 billion for reconstruction and modernization of a hydroelectric power station in Meghalaya, JPY25.5 billion for better connectivity between Dhubri, Assam and Phulbari, Meghalaya through construction of a 20 km bridge making it India's longest bridge, and JPY12.3 billion for a sustainable forest management project in Tripura. India and Japan decided to establish Act East Forum in September 2018, to lead development projects for this region and offer a platform for India-Japan collaboration under India's Act East Policy and Japan's Free and Open Indo-Pacific Strategy. This project is part of the larger Indo-Japan corridor for the Indo-Pacific region extending to eastern Africa under the Asia-Africa Growth Corridor. This is also significant due to both Japan and India's non-participation in the Chinese Belt and Road Initiative (BRI). The north-eastern India neighbors Bhutan, Nepal, China, Myanmar and Bangladesh, and is geo-strategically important for India's connectivity to ASEAN.

Another important collaboration between India and Japan is in the Andaman and Nicobar Islands, an archipelago of 572 islands, which form a key location for India in the Indian Ocean region due to its proximity to Myanmar (22 nautical miles) and Indonesia (90 nautical miles). India partnered with Japan to develop a 15-megawatt diesel power plant in the South Andaman Island. This is one instance of Indian foreign policy shift since India has been rejecting any proposals for foreign assistance in the strategic islands of Andaman & Nicobar.

The meeting between the defense ministers, Japan's Itsunori Onodera and his Indian counterpart Nirmala Sitharaman, organized at New Delhi on August 19-20, 2018 was very crucial for two reasons. One was the agreement to kick-start negotiations on ACSA (acquisition and cross-servicing agreement) for their armed forces to allow mutual exchange of food, fuel, ammunition, and equipment. In that meeting, India also agreed to have Japan's Air Self-Defense Forces participate as an observer in the next joint air drills by U.S. and Indian forces which are aimed at restricting Chinese influence in the Indian Ocean region (Kuronuma, 2018).

On the international front, India has been quick and keen in partnering with Japan on key projects such as in Iran, Sri Lanka and Africa (through the Asia Africa Growth Corridor). The case of Sri Lanka is particularly interesting since it is almost like a contest arena for India as China has already established an assertive position on the island country's takeover of Hambantota port. In December 2017, Sri Lanka officially handed over its Hambantota port on a 99-year lease to China, over non-payment of over a billion-dollar loan Chinese loan for construction of the port which proved to be unprofitable. This came months after China officially opened its military base in Djibouti in August 2017. India considers Sri Lanka's strategic location as its backyard and is alarmed at growing Chinese influence in the region. As a result, India has been trying to counterbalance China's growing influence in Sri Lanka through not just Trincomalee port but

another project for co-development of Colombo port with Japan (announced on May 28, 2019), in which India has nearly 70% of its transshipment business.

India's policy towards Japan in the recent times is being partly, if not largely, affected by increasing Chinese influence in the Indian Ocean region and abroad (Jaishankar, 2018). India has responded in a mixed way to ensuing disputes with China. The border dispute close to North-East Indian borders has seen more aggressive stand-off from both sides, China-Pakistan Economic Corridor (CPEC) has been seen as a credible threat due to its closeness to disputed Kashmir territory and India completely refused to be part of the ambitious Belt and Road initiative by China fearing the alleged String of Pearls<sup>2</sup> Chinese strategy of building military bases in Indian Ocean (MacDonald, Donahue, Danyluk & Hamilton, 2004). India's circumspect response to it has been to strengthen its own presence in the Indian Ocean region. The key observation regarding these developments is Indian foreign policy stance towards Japan, in which India has found an ideal partner for economic development, a strategic partner for infrastructure projects in India and in larger Indian Ocean region and African sub-continent and a congruent partner in terms of diplomatic ideals that stand for rule-based order in larger Indo-Pacific. However, it is a subject of analysis as to how India has liberated or constrained itself due to its non-alignment identity.

#### **Analysis: The China factor in India's Japan policy**

India had been cautious about Chinese "anti-piracy" activities in Indian Ocean since September–November 2014 docking of China's Song-class submarine in Colombo port, Sri Lanka. Besides, there was an increase in the number of China's naval ships reported approaching India's Andaman and Nicobar Islands around the same time—all indicating towards China's string of pearls strategy coming to practical play. In fact, a prominent 'open-seas' presence had been highlighted as a necessary step in Beijing's 2015 defense white paper. In such a scenario Japan is the ideal partner, not just for Indian ambitions in expanding its prowess in the seas but also for conducting joint defense and maritime exercises.

The Malabar exercise of 2015 was different from all earlier versions that were restricted between US and Indian navies only. Japan had just been given an observer status and had been trying to upgrade itself to a full member in the strategic maritime exercise. Chinese Foreign Ministry responded, "Our position is very clear. It is hoped that the relevant country will not provoke

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<sup>2</sup> String of Pearls is a geopolitical concept introduced by US Department of Defense in 2004, regarding China's alleged geo-economic and geo-strategic aims in the Indian Ocean region through Chinese military and commercial infrastructure along its sea lines of communication from Chinese mainland to Port Sudan in the Horn of Africa, and is a threat to India's regional power, trade and national security.

confrontation and heighten tensions in the region,” showing that Beijing regards Exercise Malabar as the military manifestation of a trilateral alignment between Washington, Tokyo and New Delhi, directed at containing China. Just months before the 2015 edition of Malabar exercise, a Chinese Type 041 Yuan-class submarine was reported to be in the Indian Ocean for a week at Karachi, Pakistan raising concerns in India regarding possible infringement on its littoral. India agreed to trilateralize Malabar exercise of October 12-19, 2015 and add Japan as an official permanent member in the exercise for the first time.

While India is not against the infrastructure development in Asia for growth, it is certainly cautious about the strategic implications of the Chinese Belt and Road Initiative (BRI) as it has put participating nations in debt traps and also does not respect the territorial integrity of other countries. The Japan-India Act East Forum (JIAEF) has as its policy priority, resilient infrastructures in North East India through its projects on enhancing connectivity as well as the technical cooperation of “Capacity Development Project on Highways in Mountainous Regions (JIAEF, 2018).” The constant underlining of the significance of North-East India’s development and connectivity for India and Japan’s role in the same was clear in Prime Minister Modi’s statement in November 2016, “India-Japan’s partnership is of great substance and purpose which rests on the strong pillars of India’s ‘Act East Policy’.” Indian Foreign secretary, S. Jaishankar also stated that Japanese investment into the northeast “would give legs to our Act East policy.” This statement had in its backdrop the geo-economic and security-led move by India when it had twice refused to participate in or promote China’s BRI because of mounting Chinese interference close to its borders such as the infringement of Indian sovereignty due to China-Pakistan Economic Corridor (CPEC) passing through disputed Kashmir territory as well as Chinese growing presence in Indian subcontinent, such as in Pakistan, Sri Lanka, Maldives etc. through infrastructure development. The other geo-strategic and security-led was the 73-day standoff in Doklam area between Indian and Chinese soldiers that began in June, 2017 which led to the Ministry of External Affairs in Indian issuing a warning statement, “Such construction would represent a significant change of status quo with serious security implications for India.” India’s push to move Indo-Japanese relations beyond bilateral sphere to more geostrategic, geo-political and geo-economic realm was clear when the 12<sup>th</sup> India-Japan Summit was organized in India in September 2017, just weeks after the Doklam stand-off ended after ten weeks of military engagement between India and China. In a lengthy joint statement, India and Japan said deepening security links was paramount and included research into unmanned ground vehicles and robotics and the possibility of joint field exercises between their armies. In addition to the above, the Andaman and Nicobar Islands joint-infrastructure development by India and Japan is not just a domestic economic development project funded by Japanese ODA but has various geo-strategic objectives. Andaman and Nicobar Islands lie alongside western tip of Malacca Strait and act as an entrance to the Indian Ocean. India is clearly concerned about Beijing’s growing presence in the Indian Ocean region and considers it as a

threat, which were illustrated by China's successful win over domestic turmoil in Maldives as well as upper hand over 99-year lease of the Hambantota port in Sri Lanka. Additionally, India is wary of the feared Chinese "string of pearls" strategy with ports such as in Sri Lanka and Maldives as its "pearls" to surround the Indian peninsula. More than the infrastructure development itself on the islands by Japan including power, communications and optic fiber cables in Bay of Bengal, the Indo-Japanese collaboration in Andaman and Nicobar Islands has a lot of symbolic value. It is a reassurance to other countries in ASEAN region who are struggling with claims against China in the South China Sea. The strategic position of these islands in the Indian Ocean region provide an alternate military base to India, as a counter to the "string of pearls" route charted out by China in the Indian Ocean Region. The key is that India is finding in Japan a partner to build its frontiers and connect the otherwise secluded regions of the country.

The India Japan bilateral summit meeting of October 2018 was crucial for laying the foundation stone of the two nations' strategic and defense cooperation in the field of sharing military bases through the Acquisition and Cross Service agreement (ACSA) which would permit Indian navy to use Japanese base in Djibouti and Japan's navy to access Indian base in Andaman and Nicobar Islands. In their joint statement release after the summit, the two countries announced the beginning of negotiations for the ASCA (Gady, 2018). The agreement is important since India has been concerned about increasing Chinese naval presence in the Indian ocean, apart from its base in Djibouti where China has a strong hold. The ASCA would ensure greater cooperation between Indian Navy and Japanese Maritime Self-Defense Forces that would be able to share defense capacities, fuel and ammunition under the agreement.

An example of geo-political and geo-strategic move of the India-Japan relations is New Delhi's successful endeavor to influence Bangladesh's decision to choose Tokyo for development of its Matarbari project. Bangladesh had sought China's assistance in building a deep-sea port at Sonadia in 2010 and was on the verge of signing the contract with Chinese state-owned China Harbor Engineering Company Ltd., a few months after Prime Minister Sheikh Hasina's visit to Beijing in July 2014, but Bangladesh called off that project and awarded the development of Matarbari port to Japan. Bangladesh Planning Minister A.H.M. Mustafa Kamal said that "some countries, including India and the United States, are against the Chinese involvement" in the [Sonadia] project (Kumara, 2015). Hasina's government has had good relations with India and this turn of events has a much larger history than evident, under the Modi government in India. In 2014, India ended a three-decade old dispute with Bangladesh over 25,000 sq km strategic resource-rich area in the Bay of Bengal, by accepting the UN Tribunal ruling in Bangladesh's favor, for which New Delhi was praised internationally and more so in Dhaka. The move showed new Prime Minister Modi's focus on building closer regional ties in the region. To secure deeper ties in the region, India won bids to construct power

plant in Bangladesh, which was reported in Indian media as a “second setback” for Beijing, following the failure of a long-planned Chinese deal with Bangladesh to build the huge Sonadia deep-sea port near Chittagong, Bangladesh’s major port (Ruff, 2016). India used its influence to make Bangladesh government award the Matarbari port to Japan which subsequently led to the cancellation of the Sonadia project with China, to cut-off Beijing’s string of pearls route (Brewster, 2018). While Japan has the technical expertise and financial muscle, it is India’s influence in Bangladesh that is the major obstacle in the way of Beijing’s ambitions in the Bay of Bengal.

In another geo-strategic move, India developed the Chabahar Port in Iran as parts of India’s Indo-Pacific strategy to increase connectivity in the region. Though the talks between Iran and India to develop Chabahar had initiated in 2003, owing to India’s keen interest in bagging a civil nuclear deal with US as well as America’s strict sanctions on Iran led to delays till May 2016, when a formal deal was signed between India and Iran for Chabahar Port development during Prime Minister Modi’s Tehran visit in May 2016. Being only 72 kilometers away from the Chinese-backed, Pakistani port of Gwadar, which is seen as a key “pearl” in the Chinese Maritime Silk Route, the project is seen as a strategic play to limit the influence China seeks to gain and wield through its Belt and Road Initiative. Chabahar also allows the bypassing of a Pakistani bottleneck in terms of India-Afghanistan connectivity, which is crucial for both India and Afghanistan to secure their economic trade, transportation, energy needs as well as unrestricted flow of material aid by circumventing Pakistan. Japan’s interest in the Chabahar port gave a strategically favorable edge to India who wanted to keep Pakistan or China out of Chabahar port construction. In July 2018, Japan expressed alacrity to build an industrial complex in Chabahar (Parashar, 2018). Given that Japan is can potentially not be a part of Chabahar project in event of US sanctions on Iran (such as in April 2019), India’s involvement of Japan is key to secure India’s partnership with Japan in Central Asia which is quintessential to India’s energy, geo-political and geo-strategic moves.

Another geo-economic and geo-strategic project is AAGC (Asia Africa Growth Corridor), launched in India in May 2017 by Modi and Abe as an Indo-Japanese effort for intercontinental connectivity between Asia and Africa. It is a symbol of synergy between India’s “Act East Policy” and Japan’s “Expanded Partnership for Quality Infrastructure.” Though the AAGC is by far only on paper and has quite often been termed as an ambitious vision, AAGC was jointly announced right after India refused to take part in the Chinese international forum in Beijing for BRI to which India had objected regarding the CPEC. AAGC is thus a strong alternative of financing and growth to under-developed and developing countries in Africa, who had so far been dependent on Chinese funding for development. AAGC maritime corridor could also be a legitimate India-Japan partnership to better integrate the economies of South, Southeast, and East Asia with Oceania and Africa.

India-Japan cooperation has extended beyond their domestic boundaries into the strategic regions of the Indian Ocean, as demonstrated by the initiation of infrastructure projects undertaken jointly by India and Japan in Sri Lanka through the development of East Container Terminal of Colombo Port as well as Trincomalee port in east Sri Lanka. India's interest in development of Sri Lanka's Trincomalee port, in joint construction with Japan has geostrategic implications not just due to the India-Japan partnership in port development in Indian Ocean but also due to their joint countering of the Chinese BRI. In a statement by India's foreign secretary S Jaishankar on July 12, 2018, he stated that India will help in development of both Colombo and Trincomalee ports in Sri Lanka (Chaudhary, 2018). Unlike the previous Mahinda Rajapaksa regime in Sri Lanka, the current regime in Colombo since 2015 showed a more balanced approach between India and China, by giving India a stake in Hambantota airport, Colombo port project and a key expressway. India, in collaboration with Japan, then announced the infrastructure and connectivity projects in the island country. The Trincomalee port is especially important geo-strategically, since the 99-year old handover of Hambantota port in Sri Lanka to China after failure to pay off debt by the former to the latter. With Chinese influence on the rise in Indian Ocean region along with its interest in ports in Maldives, Sri Lanka, Pakistan and Bangladesh, retired Adm. Jayanath Colombage of Sri Lanka stated that "We welcome anyone, only they shouldn't come with the intention of harming anyone, especially India." The Trincomalee port, considered to be one of the best deep-water natural harbors in the world, is also the gateway to Bay of Bengal which is of extreme importance geo-strategically and geo-economically to South and East India, Sri Lanka, Bangladesh and Myanmar. May 2019 saw the signing of the plan to co-develop Eastern Container terminal of the Colombo port in Sri Lanka, between India and Japan. Although the involvement of India since the beginning of talks became a cause of uproar and internal political turmoil in Sri Lanka, which led to the dismissal and the reinstatement of its Prime Minister. The involvement of India and Japan in the project is being seen as a big development aimed at neutralizing the growing influence of China, which has poured money into the South Asian island nation under its mammoth BRI plan.

### **Analysis: (Non)-Alignment and India's policy towards Japan**

India's Japan policy is being increasingly affected by the increasing Chinese influence and India has been striving to balance the Chinese power along with balancing the threat from Chinese naval expansion in the Indian Ocean region. In the realist perspective, Chinese influence should have made India more proactive in pursuing strategic security partnership with Japan, however, some cases defy the anticipated India proactiveness and are exceptions to the realist theory. That can be explained by India's strong and resolute foreign policy ideals that guide the foreign policy of India towards Japan-non-alignment. Non-alignment is basically the foreign policy ideal of orientation towards autonomous

and independent decision making in pursuing international relations as well as domestic developments, without owing allegiance to any foreign power at the cost of own sovereignty and territorial integrity.

Though India has gone ahead since 2014 partnering with Japan on various strategic, defense relate and economic projects, there are certain instances where India has defied the strength of its friendship with Japan and paused or slowed initiatives to avoid being seen as a Japanese ally against another power. The non-alignment ideal is very clear in in India's policy towards Japan in two main ways—either by refusing to openly ally with Japan through formal commitments or by taking a long precautionary period of time to decide the future course of action despite constant Japanese push.

The evidence of this is the fact that despite carefully building a security partnership with Japan in order to counter Chinese influence in the Asian political theatre, India has been very cautious about not mentioning China particularly either in its verbal communication through ministers or written documents such as joint agreements or statements signed with Japan regarding infrastructure development in North East India, port development in Indian Ocean countries or Asia Africa Growth Corridor initiative. India's clear refusal to mention China as an antagonist in any of the joint statements with Japan is a sign of India not being an ally of any nation in order to gang up against another.

This was also evident for a long time in India's policy towards Japan when despite Japan's consistent efforts for elevation of India-Japan 2+2 dialogue to ministerial level, India remained reluctant to let the form expand beyond vice-minister level engagement. The dialogue that kick-started in 2010 at the vice-ministerial level, was proposed for upgradation by Japan ever since but India was hesitant to do so owing to New Delhi's careful stance of not threatening Beijing, and India cited hindrances in finalizing a date for such meetings as a reason for the delay. It was not until April 2018, when the informal Indo-Chinese Wuhan summit concluded well and India's softer stance towards China showed signs of improving relationships, that India decided to reconsider its policy towards 2+2 dialogue with Japan. India's attitude softened this year as its relationship with China improved following a summit between its leaders in April. India has valued the principle of balanced diplomacy, hence India's reluctance to Japan's urge for upgrading 2+2 was not a surprise. It was only during Modi's 2018 Japan visit that he agreed to upgrade the 2+2 to defense and foreign minister level.

India is likely to continue to resist getting engaged in any South China Sea related conflict involving China and Japan due to its policy of not forming any alliances against China. It has been a complaint of the Japanese that though Indian Navy always shows alacrity for greater maritime ties, they are very slow in action or committing to anything that seems anti-China (Patranobis, 2014). Thus, India is unlikely to participate multiple times in any patrols in South China Sea with Japan to avoid angering China. India also did not comment on China's defense white paper in 2019, since it did not want to comment on Chinese perspective regarding maritime affairs.

In a clear illustration of its cautious and domestic-oriented decision making despite the deepening bilateral relations with Japan, India decelerated the negotiations regarding purchase of defense equipment from Japan in 2016 and again in 2018, before it was finally agreed in the second half of 2019. The potential purchase of the Japanese Shinmaywa US-2i Aircraft (potential deal initiated 2014) and Soryu class submarines by India had been symbolic of a step further in the Indo-Japanese defense ties. In April 2018, an MoU was signed by Indian company Mahindra Group and Japanese company ShinMaywa Industries Limited to manufacture the U2 amphibian planes in India, but no deal was reached in the India Japan bilateral Summit meeting of October 2018 (Ayappan, 2018, April 11; Gady, 2018). Soryu class submarines are one of the most sophisticated technologies that exist in maritime defense domain and Japan has been very selective in not sharing the technology even with countries like Australia. However, despite this exclusive opportunity offered to New Delhi, both purchase deals showed no signs of fructification even after several years of bilateral discussions, mainly due to high cost of the sophisticated Japanese defense equipment as well as non-fulfillment of “Make in India” clause wherein, the Japanese equipment needed to be manufactured in India to boost domestic production of defense goods (Singh, 2017 September 10). Rejecting the first of its kind defense deal with Japan showed that India's reluctance in not rushing too fast into projecting too close Indo-Japanese defense ties, something that has always caught China's attention. This also shows India's attitude regarding Indo-Japanese relationship, which primarily bases itself on India's growing economy that finds a good investor and FDI source in Japan. Though no official statements have been released for the deal, the deal was finally on track in 2019 with Japan agreeing to not only lower the price of the aircraft but also committed to manufacturing them in India through transfer of technology for potential export to other countries in future (Siddiqui, 2019).

In his first visit to Japan as the Indian Prime Minister, Narendra Modi asserted that growth and development in India offered immense economic prospects to Japan in conjunction with reinforcing global democracy, regional stability and prosperity (Modi, 2014). That has become one way for India to reinforce its identity as not a non-aligned but a multi-aligned nation in the recent past. Modi has been very careful and tactical in articulating the idea of multi-alignment through political discourse as well as cultural diplomacy.

Under cultural diplomacy is the unique and first-of-its-kind symposium series instated through the collaboration between India and Japan called “Samvad,” meaning dialog in the ancient Indian language of Sanskrit. Samvad symposium was conceived as an idea in 2015 under Modi-Abe initiative to facilitate discussion among Asians on conflict avoidance, and philosophical and cultural heritage of the main Asian religions of Buddhism and Hinduism. Among the four conferences held so far in the Samvad framework in New Delhi (2015), Tokyo (2016), Yangon (2017), the 4<sup>th</sup> edition held in Tokyo (2018) was themed on “Shared Values and Democracy in Asia” with scholars from India,



Japan, Indonesia, Malaysia, Thailand, Sri Lanka, the Philippines and China. Modi and Abe stated in the series that democracy was not a western concept but a shared value in India and Japan. In fact, Modi and Abe published an India-Japan Vision Statement celebrating and highlighting the achievements over the course of 2014-18 in the Indo-Japanese partnership and SAMVAD made it to the top focus in the statement as follows:

The India-Japan Special Strategic and Global Partnership, firmly rooted in history and based on common values is the mainspring for advancing the two countries' shared strategic objectives and achieving peace, prosperity and progress to realize a better future for the people of the two countries. As the two Prime Ministers resonantly elucidated in the series of SAMVAD dialogues, the universal values of freedom, humanism, democracy, tolerance and non-violence, which have been shared between India and Japan throughout a long history of academic, spiritual and scholarly exchanges, not only constitute the basis for the India-Japan bilateral relationship but also underscore the principles for the two countries to work together for the benefit of the Indo-Pacific region and the world at large. (MEA, 2018)

Though India seems to still follow the cautious path of partnering with other countries beyond economic and trade realm, its partnership with Japan has certainly transcended the clutches of non-alignment significantly, but not entirely. Japan is a comfortable partner for India, who is beginning to take more drastic decisions in the regional space of Indian Ocean. Unlike the Cold War era where India chose to be a non-aligned nation, defining its own foreign policy independent of the West or Soviet, the objectives of non-alignment seem to have changed for India since 2014 under Modi government that has redefined the non-alignment principle as a tool of exercising strategic autonomy and caution, instead of its former meaning of distancing from the large powers in the emerging global multipolar political order.

India's Japan policy can be reviewed under this ideal to explain India's reluctance in aligning with Japan despite the promise of influence the special partnership can offer to India. New Delhi's aversion to any formal alliance with Japan against the perceived threat from China's rising influence close to its land and ocean territory is not a new policy but Modi government's decision to still partner with Japan in a mutually beneficial partnership to realize mutual aspirations of rising to act in the face of regional political and security challenges. It is a strategy India is likely to follow not just with Japan, but also with other middle powers for strategic reasons by engaging in projects and yet waiting long enough to avoid any obvious sign of formalization of the "alliance" with one particular country to enrich its capabilities. This fresh hint of foreign policy ideal for India is more akin to a multi-alignment principle and a circumspect policy stance. The non-alignment as a foreign policy ideal is much more diluted than ever before in the diplomatic history of independent India due to the proactive stance of Modi administration since 2014 to address the security and political needs of the changing power

dynamics in the Indian Ocean and close to Indian territorial borders but at the same time, India is maintaining a highly cautious stance to avoid being seen as economically or militaristically bandwagoning against China. Thus, despite being engaged on multiple levels with Japan, India's foreign policy stance is cautious as well as symbolically mildly "non-aligned" till it fully allies with Japan and the US to counter China. In that respect, India's Japan policy can also be assessed as that of bold partnership with non-alignment in the undercurrent.

### **Concluding Remarks**

Despite a strong and vigorous India-Japan economic partnership, the bilateral relationship has been functioning much below its capacity in terms of eco-political security and defense initiatives. More initiative is needed to achieve the unrealized potential of several decades of missed opportunities where the countries could have jointly collaborated and progressed. India-Japan relations could deepen with strategic efforts like first, employing Japanese ODA in Northeast India, the Andaman and Nicobar Islands, and other such strategic spots in the Indian Ocean region close to Indian land and maritime borders, second, engaging more intensely through defense forces of navy, air force and army of the two countries and third, by showing greater commitment to supporting each other in the international issue concerning each other.

However, there is room for complications on the Indian foreign policy side such as first, India would have to leave behind strategic autonomy and sovereignty in its foreign policy rhetoric to engage more actively in defense sales and arms production/procurement. Second, India would face a challenge garnering support from Japan for taking a pro-India stance regarding the threat from Pakistan. Third, India's non-alignment strategy, though diluted, would continue to hold it back from being very engaged with Japan in its vision for greater participation of India in the security related joint decisions since India is unlikely to commit to any long-term military alliances.

Nevertheless, the ever-expanding vistas for the Indo-Japanese partnership in new arenas such as in India's geo-strategically important states, west coast of African continent and in the outer space exploration can potentially provide a new dimension to the age-old India-Japan bonds. In that sense, India is moving very tactically to secure Japan's partnership in fields where the two countries have complementary fortes. These avenues for partnership will create a strong counter to China. Moreover, it is a clear opportunity for India to spring up and play a larger role globally.

References

- Abe, S. (2007). Confluence of the two seas. Speech by H.E. Shinzo Abe, Prime Minister of Japan at the Parliament of the Republic of India. Retrieved November 11, 2018, from <https://www.mofa.go.jp/region/asia-paci/pmv0708/speech-2.html>
- Abe, S. (2012). Asia's Democratic Security Diamond. *Project Syndicate*, 27 December. Retrieved November 11, 2018, from <http://www.project-syndicate.org/commentary/a-strategic-alliance-for-japan-and-india-by-shinzo-abe>
- Ahuja, A., & Kapur, D. (2018). India's geoeconomic strategy. *India Review*, 17(1), 76–99. doi: 10.1080/14736489.2018.1415282
- Ayappan, V. (2018, April 11). DefExpo 2018: Amphibious aircraft US-2 to be made in India. *Times of India*. Retrieved April 13, 2019 from <https://timesofindia.indiatimes.com/business/india-business/defexpo-2018-amphibious-aircraft-us-2-to-be-made-in-india/articleshow/63713866.cms>
- Bajpae, C. (2017). Dephasing India's look east / act east policy. *Contemporary Southeast Asia*, 39(2), 348–372. Retrieved April 13, 2019, from [www.jstor.org/stable/44683773](http://www.jstor.org/stable/44683773)
- Basu, T. (2016). Japan in Prime Minister Modi's Vision for India. *Asia Pacific Bulletin* No. 337. Retrieved May 10, 2019, from <http://hdl.handle.net/10125/39990>.
- Boon, H. T. (2016). The hedging prong in India's evolving China strategy. *Journal of Contemporary China*, 25(101), 792–804. doi: 10.1080/10670564.2016.1160527
- Brewster, D. (2010). The India-Japan security relationship: an enduring security partnership? *Asian Security*, 6(2), 95–120. doi: 10.1080/14799851003756550.
- Chakraborty, D., & Chakraborty, A. (2017). Economic and Political Cooperation between India and East Asia: The Emerging Perspective, *Journal of Economics and Political Economy*, 4(2), 144–158. Retrieved April 10, 2019, from <http://www.zbw.eu/econis-archiv/bitstream/handle/11159/885/1273-4458-1-PB.pdf?sequence=1>
- Chaudhuri, P.P. (2016). New Delhi at Sea: The China Factor in the Indian Ocean Policy of the Modi and Singh Governments. *Asia Policy*, 22, 27-34. doi:10.1353/asp.2016.0044.
- Dasgupta, J. (2002). Japanese in Andaman & Nicobar Islands: Red Sun Over Black Water. *New Delhi: Manas*.
- Garge, R. (2016). The India–Japan strategic partnership: evolving synergy in the Indo-Pacific. *Australian Journal of Maritime & Ocean Affairs*, 8(3), 257–266. doi: 10.1080/18366503.2016.1235362
- Gady, F. (2018, October 30). India, Japan begin negotiations over military base sharing agreement. *The Diplomat*. Retrieved July 24, 2019, from <https://thediplomat.com/2018/10/india-japan-begin-negotiations-over-military-base-sharing-agreement/>
- Ghosh, M. (2008). India and Japans Growing Synergy: From a Political to a Strategic Focus. *Asian Survey*, 48(2), 282–302. doi: 10.1525/as.2008.48.2.282
- Ishibashi, N. (2017). Japans policy toward India since 2000: for the sake of maintaining US leadership in East Asia. *The Pacific Review*, 31(4), 515–532. doi: 10.1080/09512748.2017.1396355

- Jain, P. (2015). Japans foreign aid: old and new contests. *The Pacific Review*, 29(1), 93–113. doi: 10.1080/09512748.2015.1066415
- Jain, P. (2018). Japan's development assistance to India: a strategic edge. *Japan Forum*, 1–21. doi: 10.1080/09555803.2018.1530283
- Jaishankar, D. (2018). A Confluence of Two Strategies: The Japan–India Security Partnership in the Indo-Pacific. *India and Japan Politics of South Asia*, 43–64. doi: 10.1007/978-981-10-8309-9\_3
- Paul, J. M. (2012). India–Japan Security Cooperation: A New Era of Partnership in Asia. *Maritime Affairs: Journal of the National Maritime Foundation of India*, 8(1), 31–50. doi: 10.1080/09733159.2012.690290
- Kratochwil, F.V. (1999). *Rules, Norms and Decisions: On the Conditions of Practical and Legal Reasoning in International Relations and Domestic Affairs*. Cambridge: Cambridge University Press.
- Lee, L. (2016). Abe's Democratic Security Diamond and New Quadrilateral Initiative: An Australian Perspective. *The Journal of East Asian Affairs*, 30(2), 1-41. Retrieved April 10, 2019, from <http://www.jstor.org/stable/44160973>
- Lynch, T.H. & Przystup, J.J. (2017). India-Japan Strategic Cooperation and Implications for U.S. Strategy in the Indo-Asia-Pacific Region. *Institute for National Strategic Studies Strategic Perspectives*, 24.
- MacDonald, J.A., Donahue, A., Danyluk, B. & Hamilton, B. A. (2004). *Energy Futures in Asia: Final Report*. Booz-Allen & Hamilton.
- Mearsheimer, J.J. (2001). *The Tragedy of Great Power Politics*. New York: Norton.
- Nune, S. (2018, January 16). China's cabbage strategy in South China Sea & implications for India, *Jagran Josh*. Retrieved November 29, 2018, from <https://www.jagranjosh.com/current-affairs/dachinas-cabbage-strategy-in-south-china-sea-implications-for-india-1516026682-1>
- Onuf, N.G. (1989). *World of our Making: Rules and Rule in Social Theory and International Relations*. Columbia: University of South Carolina Press.
- Parashar, S. (2018, July 12). Japan interested in Chabahar project, *Economic Times*. Retrieved May 09, 2019, from <https://economictimes.indiatimes.com/news/defence/japan-interested-in-chabahar-project/articleshow/54166416.cms>
- Patranobis, S. (2014, April 23). Ties with China looming over Indo-Japan naval relations. *Hindustan Times*. Retrieved April 13, 2019, from <https://www.hindustantimes.com/world/ties-with-china-looming-over-indo-japan-naval-relations/story-oX1fHUqW28PRFC9rh7D2O.html>
- Press Trust of India. (2019, July 21). China rules out India's entry into NSG without 'consensus' on allowing non-NPT countries, *Economic Times*. Retrieved June 30, 2019, from <https://moderndiplomacy.eu/2016/06/19/increasing-geopolitical-rivalry-china-india-and-japan-focus-on-bangladesh/>
- Ruff, A. (2016, June 19). Increasing geopolitical rivalry: China, India and Japan focus on Bangladesh, *Modern Diplomacy*. Retrieved May 08, 2019, from <https://economictimes.indiatimes.com/news/defence/china-rules-out-indias-entry-into-nsg-without-consensus-on-allowing-non-npt-countries/articleshow/69893448.cms>

- Sahoo, P., & Bishnoi, A. (2016). Role of Japanese official development assistance in enhancing infrastructure development in India. *Contemporary South Asia*, 24(1), 50–74. doi: 10.1080/09584935.2015.1135307
- Saint-Mézard, I. (2016). India's Act East policy: strategic implications for the Indian Ocean. *Journal of the Indian Ocean Region*, 12(2), 177–190. doi: 10.1080/19480881.2016.1226753
- Siddiqui, H. (2019, July 01). Amphibious wings for the Navy and Coast Guard: US-2i back on track, *Financial Express*. Retrieved December 22, 2019, from <https://www.financialexpress.com/defence/amphibious-wings-for-the-navy-and-coast-guard-us-2i-back-on-track/1625052/>
- Singh, A. (2017, September 10). India-Japan defense ties are soaring but high-profile deals unlikely, *Business Standard*. Retrieved July 22, 2019, from [https://www.business-standard.com/article/economy-policy/india-japan-defence-ties-are-soaring-but-high-profile-deals-unlikely-117092000307\\_1.html](https://www.business-standard.com/article/economy-policy/india-japan-defence-ties-are-soaring-but-high-profile-deals-unlikely-117092000307_1.html)
- Waltz, K. N. (1979). *Theory of International Politics*. New York: Random House.
- Wendt, A. (1999). *Social Theory of International politics*. Cambridge: Cambridge University Press.
- Wojczewski, T. (2016). China's rise as a strategic challenge and opportunity: India's China discourse and strategy. *India Review*, 15(1), 22–60. doi: 10.1080/14736489.2015.1092748
- Yoshimatsu, H. (2019). Partnership against the rising dragon? Japan's foreign policy towards India. *The Pacific Review*, 1–27. doi: 10.1080/09512748.2018.1563210
- Yoshimatsu, H. (2018). The Indo-Pacific in Japans strategy towards India. *Contemporary Politics*, 25(4), 438–456. doi: 10.1080/13569775.2018.1556769

**Review Comments on the Best Paper Award-Winning Article of the 2019 Asia Pacific Conference  
“India’s Foreign Policy towards Japan: Strategic Partnership and Regional  
Transformation” by Astha Chadha**

**Yoichiro Sato<sup>1</sup>**

The paper analyzes the evolving strategic partnership between India and Japan from the perspective of India’s strategy. The paper argues that the rise of China as a realist factor and India’s “non-aligned” ideology as a constructivist factor are both useful in explaining India’s strategy toward Japan. The paper also presents an argument that the bilateral partnership extends diplomatic opportunities into South Asia, Africa and Middle East.

The paper has a good organization and smoothly flowing arguments. Some key events and terms need to be elaborated to provide more contexts for the discussion, without assuming all readers are empirically knowledgeable. Richness of empirical support is a major strength of this paper, but time since its writing has mostly robbed this strength by the time of entering the Best Paper Award competition. For publication, the paper needs to be updated.

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## Mobile Payments: The Economic Impact of Today's Financial Payment Tools

Francisco R. Vassallo<sup>1</sup>

### Abstract

This paper examines the causal relationship between the adoption of mobile payment systems and economic growth on a panel of the 19 countries in the Eurozone. To do this it relies heavily on previous studies examining the relationship of cashless payment systems in general, using Real GDP as a proxy for economic growth. To determine this relationship this paper executes several tests to determine the manner of the nature of the adoption of these payment systems, with a focus on determining the existence of a long-run equilibrium. To ascertain the specific effect of mobile payment systems, this paper proposes the use of the value of transactions utilizing Electronic Money and the Mobile Payment-Enabled Operating Systems' market share as proxies by which to measure the economic activity produced by mobile payment systems. To test the validity of this claim, correlation and causal tests are performed, followed by the inclusion and update to the existing regression models that are tailored to deal with cashless payment systems in general. This paper finds evidence that supports the literature's conclusion of the existence of a long-run positive relationship between the adoption of cashless payments and Real GDP, and this relationship can be extended to the entirety of the Eurozone as opposed to just a few highly developed member states. Further, this paper finds that E-Money and Mobile Payment-Enabled Operating Systems' market share can be considered causally related, thus the interaction between these two represent a powerful variable to measure the impact of mobile payment systems in a macroeconomic fashion. Lastly, in the regressions performed in this paper, a statistically significant positive relationship between the adoption of mobile payment systems and Real GDP growth is found.

**Keywords:** Cashless, Mobile Payment, Electronic Money, Eurozone

### Introduction

Despite numerous advances in technology, when speaking of the medium by which we settle payments, this field has remained largely untouched until that is, the introduction of cards and the ability to perform telegraphic transfers in the late 20<sup>th</sup> century. While cashless payment systems had long been a fixture of the global economy in the form of cheques, it was only with the introduction of cards (credit and debit cards) that this fixture gained true preeminence, and while it has not been

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universally adopted these new forms of cashless payments have become one of the developmental goals of a number of developing and developed economies, such as Nigeria's 2012 push for the adoption of cashless payments (mainly cards) by the Central Bank (Yaqub, Bello, Adenuga, & Ogundeji, 2013), the more recent push from Indonesia to adopt mobile cashless systems (Agusta, Joshua Widjaja, 2018), and Japan's latest move to promote the adoption of mobile payment systems (Backed et al., 2017). In general however, most government financial institutions at the very least regard the adoption of cashless payment systems as a desirable objective, even if they do not outright put policies in place to promote it. These new forms of cashless payments have become so preeminent to policymakers partly because of the slew of normative benefits that are said to come with them:

1. The reduced transaction costs, not only in the actual fee of transacting but also on the time cost saved from not using ATMs or bank cashiers. (Oyewole, Gambo, Abba, & Onuh, 2013)
2. The increase in government tax revenue and financial transparency since it is assumed that cashless payment platforms incentivize formal ownership of bank accounts. (Oyewole et al., 2013)
3. As well as a financial stimulus, because of this generally perceived requirement of a bank account by cashless payment systems (Koç & Dusansky, 2009), normally a significant amount of cash in an economy remains immobile, lost or ineffectively used. If this cash were to be transferred into bank accounts and used directly from them as the users find the need for it, an additional boon for cashless systems can be found by increasing the efficiency of the circulation of money (Berentsen, 1998; Devlin, 1995).
4. To the criminal and political, because of the individual authentication methods used in cashless platforms it is also assumed that they would de-incentivize thieving, and because of the prior mentioned assumed bank account requirement and therefore also logging it would increase the risk for illicit payments. (Moshi, 2012; Oyewole et al., 2013).

It is against this backdrop that mobile payment systems have emerged as a forerunner of financial innovations in the realm of payment settlements. Melding the ability to transact without the use of cash, with the ability to carry mobile wallets separate from formal financial institutions. Mobile payments encompass a highly diverse set of transaction platforms, that have emerged in tandem with the globalizing popularity of the smartphone. These mobile payments represent the target of this paper, with regards to their economic impact.

To a large extent the empirical literature surrounding the discourse on cashless systems either assumes these benefits outright, like the various studies evaluating the advance towards a cashless society (Ewa Abbas, 2017), or is focused primarily and almost solely on a microeconomic study of this benefit, like Wakamori & Welte's study (2017) they found a statistically significant proof that



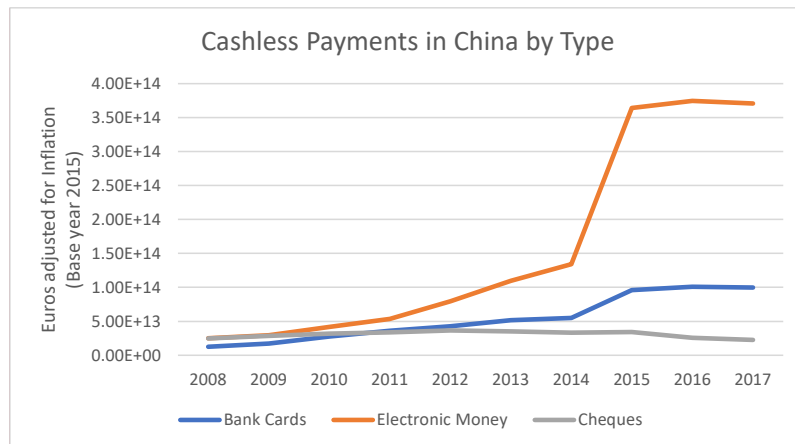
the adoption of cashless systems boosted consumer spending, meaning based on the study it was found people were more likely to part with cash if they transacted through a cashless medium. The few macroeconomic empirical studies that have been conducted looking into the question of the economic impact of cashless payment systems come either from the perspective of credit cards being the cyclical reports published by Moodi Analytics (Zandi, Koropecykj, Singh, & Matsiras, 2016; Zandi, Singh, & Irving, 2013), or more generally cashless payment systems and their economic effect (Tee & Ong, 2016). It is starting from these studies that this paper will seek to test a long-run causal link between the adoption of mobile payment systems and economic growth.

### **Mobile Payment Systems**

Mobile Payment systems allow users to transact without the use of credit cards, cash, cheques, or anything but the ubiquitous item that is a smartphone. To perform these transactions a payment platform is required, which provides a settlement system by which the transaction can take place. The way by which these payment systems go about making this a reality, as mentioned before varies greatly. Some platforms like Samsung Pay rely on the infrastructure already in place for credit cards, using credit card information to electronically perform a “swipe” of the digital credit card stored in the phone (Alimirucchi, 2017). This makes this platform accepted everywhere where bank cards are accepted. However, because of this property, payment platforms such as this will not appear in the data available for this paper as the transactions mentioned above would be counted into the aggregate payments by credit card. Instead this paper will be looking at mobile payment platforms that possess digital wallets and will be focusing on Electronic Money (E-Money) and Operating System’s market share as proxies for mobile payment usage.

A fundamental question being tested by this paper is the question of critical mass, the concept is fairly common in the literature of payment systems. It is the idea that payment systems are only truly useful and attractive but until they are widely accepted as a legitimate means of payment (Dinh, Nguyen, & Nguyen, 2018). This is the primary reason why so many innovative payment schemes have failed to achieve true relevance in the broader economy. The question addressed as a by-product of this research then is: if mobile payment systems generate enough economic activity to even be able to achieve statistically significant outcomes this early into their adoption cycle.

E-Money has long been present in economies around the globe as a source of cashless transactions, this can be visualized by services such as PayPal (Schulte, 2017). Yet throughout the years its always been marginal at best. It is only in the last decade with the rise in popularity of smartphones that E-Money has become statistically significant, and this is most evident in China where E-Money have skyrocketed in tandem with the rise and popularization of smartphones overtaking any other means of payment, as shown in graph 1.



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Graph 1. Source: Payment and Clearing Association of China.

Here in Graph 1, the year 2009 can be seen as the year in which the value of E-Money payments skyrocketed. This is also the year of the introduction of the first iPhone. As mentioned before this is replicated not just in China, but in most countries, and is the initial motivating factor in seeing E-Money as a potential proxy for the economic activity coming from mobile payment systems. This hypothesis will of course be subjected to causal statistical tests across the panel data.

In summary this choice of E-Money as a proxy for mobile payment systems is based on our choice of subject being mobile payment platforms that contain the option for a digital wallet, and the observation that while E-Money includes non-mobile payments, most of the payments reflected in the E-Money statistic seems to reflect mobile payments or rather, mobile balances. To confirm this hypothesis, correlation and causation tests will be carried out with the growth Mobile Payment-Enabled Operating systems, to confirm that the growth witnessed in E-Money payments can be attributed to the growth of mobile payment systems.

**Objectives and Relevance**

This paper will be seeking to accomplish three major research objectives:

1. In taking inspiration and being instructed by Tee and Ong's research (2016) on the effect of cashless payment systems on 5 European economies, the first objective of this paper will be to update the results with recent data up to 2017 (The original paper's time period was from 2004 – 2013).
2. Secondly this paper would like to expand these tests and models to cover the entirety of the Eurozone.

- Using E-Money, alongside an added variable to describe the market share of mobile-payment-enabled operating systems as proxies for mobile payment systems, this paper will test for the long-term economic impact of mobile payment systems.

In so doing this would represent the first empirical macroeconomic research on the economic impact of mobile payment platforms.

### Data and Timescales

In order to serve these objectives, this paper will be utilizing the payment data for the 19 countries of the Eurozone, within the period of 2000 – 2017. The summary of the variables included being:

VARIABLES	LABELS		MEAN	STD.	OBSERVATIONS
RGDP	Real Gross Domestic Product	overall	4.51E+11	6.91E+11	N = 337
		between		6.86E+11	n = 19
		within		1.65E+11	T-bar <sup>2</sup> = 17.7368
CHEV	Value of Cheque Payments	overall	2.77E+11	4.90E+11	N = 319
		between		4.59E+11	n = 19
		within		1.76E+11	T-bar = 16.7895
BV	Value of Payments Using Bank Cards (Credit + Debit)	overall	5.38E+10	8.81E+10	N = 341
		between		8.38E+10	n = 19
		within		3.27E+10	T-bar = 17.9474
TTV	Value of Telegraphic Payments	overall	7.11E+12	1.65E+13	N = 342
		between		1.44E+13	n = 19
		within		8.64E+12	T-bar = 18
EV	Value of Electronic Money payments	overall	8.02E+10	1.86E+11	N = 342
		between		1.71E+11	n = 19
		within		8.21E+10	T-bar = 18
OS	Mobile-Payment Enabled Operating systems (Android + iOS)	overall	16.15211	14.87664	N = 152
		between		6.14242	n = 19
		within		13.61374	T-bar = 8
OSI	Integrated Variable of Operating Systems and E-Money	overall	6.12E+09	2.26E+10	N = 333
		between		8.88E+09	n = 19
		within		2.08E+10	T-bar = 17.5263

Table 1. Summary of Variables

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<sup>2</sup> T-bar here, is the average observations within each panel. That is, N represents the number of total observations, n the number of panels (the 19 countries of the Eurozone) and T-Bar the average number of observations from each country.

The source of this data is primarily the European Central Bank (ECB) Data Warehouse, with the data concerning the different payment methods; cheques, bank cards, telegraphic transfers, and E-Money, all being sourced from the ECB. The Real GDP data is sourced from the World Bank, with the operating system data being sourced from the globalstats website. All variables are represented in Euros with the exception of the data on operating systems which is represented as a percentage from 1-100.

Real GDP is presented by Nominal GDP in Euros adjusted for inflation with the base year being 2015, in this context being a proxy for economic performance. CHEV represents the value of payments done using cheques within the calendar year, and BV is the value of the summation of Credit Card payments and Debit Card payments with and without E-money functions within the calendar year. For telegraphic transfers “also known as electric fund transfers, are payments made through real-time request or offline, TTV is computed by summing up the credit and transfers from the respective countries” (Tee & Ong, 2016). E-Money is the remaining value stored at the end of the period in electric devices or online wallets. Summing up each of these variables would equal a total of “Value of Cashless Payments” reported by each country.

The operating system variable is reflective of the market share of all operating systems across all devices whose data are collected by Globalstats. This means this variable can be expressed as:

$$\frac{\text{market share of Android + iOS (Iphones)}}{\text{Android + iOS + Windows + Mac OS + Blackberry + Windows Phones + others}} \quad (1)$$

These two operating systems, Android and iOS, have been chosen purposely. While smartphones of different operating systems are still in use, in particular, Windows Phones and Blackberry OS enabled phones, and while the mobile payment platforms here discussed have no theoretical technical impediment to being offered in these alternatives, at least for the major payment platforms worldwide these are only offered officially within these two options, Android and/or iOS. Beyond this limitation, Android and iOS cover more than 99% of the market share of Mobile Operating systems, with an outlier being Japan which is the only country with a statistically significant Blackberry Market share in 2017. Furthermore, mobile payment systems are not offered across devices, meaning payment systems are not available to be used with computers even if users tried. This makes the OS variable a good indicator of smartphone ownership and usage in each country.

## Methodology

To accomplish each of the research objectives enumerated previously, this paper proposes to follow three different models. To update the literature and generalize its conclusions this paper will be starting using the following model from the paper published by Tee & Ong (2016):

$$RGDP_{ct} = \beta_{1c} + \beta_{2c}TTV_{ct} + \beta_{3c}BV_{ct} + \beta_{4c}CHEV_{ct} + \beta_{5c}EV_{ct} + e_{ct} \quad (2)$$

This model is tailored for the examination for the long-run relationship of the different payment systems and economic growth proxied as RGDP. The simplicity of the model is due in part to the nature of the task at hand, that being examining a long-run relationship (20 years in this case), where if examining for more short term changes, additional control variables would be required; however, it is also due to the nature of the subjects, the Eurozone, with a number of homogenized economic factors, but more importantly all stable, developed countries.

Using this literature model (2) with the data of the 5 countries used in the literature (France, Austria, Belgium, Germany, and Portugal) first updating the results with a newer timeframe, and secondly expanding the area covered by the model to the entire Eurozone. Incorporating later, the Operating systems variable, which alongside E-Money will be used as a proxy for the usage of mobile payment systems, model (3) will be used;

$$RGDP_{ct} = \beta_{1c} + \beta_{2c}TTV_{ct} + \beta_{3c}BV_{ct} + \beta_{4c}CHEV_{ct} + \beta_{5c}EV_{ct} + \beta_{6c}OS_{ct} + e_{ct} \quad (3)$$

In a final instance, an Integrated variable of OS and E-Money will be used to combine the effects of these two within a single variable. This new variable OSI is meant to be taken as a measure of the economic activity that results from the use of mobile payments within E-Money. Thus it results in the model (4). Here, because of the constraint of the OSI variable, the E-Money variable (EV) is replaced with OSI instead of being added to avoid multi-collinearity among these variables.

$$RGDP_{ct} = \beta_{1c} + \beta_{2c}TTV_{ct} + \beta_{3c}BV_{ct} + \beta_{5c}CHEV_{ct} + \beta_{6c}OSI_{ct} + e_{ct} \quad (4)$$

The viability of this model rests in proving to the extent possible that the observation, that Smart Mobile devices (proxied as Market share in OS) in an economy cause the rise of Electronic Money Transaction (EV), if this is done satisfactorily OSI can be taken to represent a decent measure of the economic activity that results of mobile devices.

Autocorrelation can be assumed but will be tested among all regressions, as a response to this all regressions will be run with the robust option. In order to test the causality of the relationships here enumerated and avoid spurious regressions, all series will be subjected to unit root

tests as well as Pedroni tests for long-run equilibrium, using the Im, Pesaran and Shin (IPS) test and the ADF-Fisher panel unit root test. These two tests will be seeking to verify the existence of stationary data sets, data sets with a stable variance, and mean.

After performing these tests and finding proof of non-stationarity, a Pedroni panel cointegration test will be carried to confirm the existence of a long-run equilibrium. The estimated residuals for the cointegration tests following model (2) being as follows:

$$\hat{\epsilon}_{ct} = RGDP_{ct} - \hat{\beta}_{1c} - \hat{\beta}_{2c}TTV_{ct} + \hat{\beta}_{3c}BV_{ct} + \hat{\beta}_{4c}EV_{ct} + \hat{\beta}_{5c}CHEV_{ct} \quad (5)$$

$$\Delta \hat{\epsilon}_{ct} = \rho \hat{\mu}_{ct-1} + \sum_{k=1}^{k_c} \gamma_{ck} \Delta \hat{\mu}_{ct-k} + v_{ct}$$

With all models (2), (3), (4) all being tested. With  $\gamma_{ck}$  and  $k_c$  being allowed to vary. The null hypothesis (Ho) is that there is no cointegration within the model. Thus after being able to reject the null hypothesis in the first difference and establishing the presence of cointegration, we can safely take the regression at level to represent an approximation of the long-run equilibrium. This model is not designed to explain short term changes in RGDP. For this reason, the added step of performing regressions with residuals is obviated and the focus shifted entirely to the long-run equilibrium.

After these tests, the results of our fixed effect regression model will be showcased, as the Fully Modified Ordinary Least Squares model used in the literature is inapplicable in our case, since our panel includes a large number of countries as well as time-periods. This model afterwards, will be subjected to a granger causality test to further the reliability of the results.

### Findings and Results

According to the research objectives delineated previously the results will be shown for 3 series, to update the model, the second to expand the said model to the entire EU and the third to localize the effect of mobile payment systems using E-Money and Operating systems as proxies.

### Updating the Literature

Table 2 represents the results of the unit root tests taken on the variables from the literature applied only to the 5 countries that were tested in the literature, (Tee & Ong, 2016) those being Austria, Belgium, France, Germany and Portugal. The results of the tests show a failure to reject the null hypothesis at level, which is that all panels contain a Unit Root, which suggests nonstationary at level, with the opposite being true on first difference which indicates at least some stationarity at first difference.

VARIABLE	IPS UNIT ROOT TEST				ADF-FISHER UNIT ROOT TEST			
	At Level		First Difference		At Level		First Difference	
	Intercept	Intercept & Trend	Intercept	Intercept & Trend	Intercept	Intercept & Trend	Intercept	Intercept & Trend
RGDP	4.1574	-0.5008	-3.4797***	-3.0727***	2.6267	14.6771	36.699***	38.146***
CHEV	2.397	-0.6686	-4.342***	-3.359***	4.5646	11.7962	49.577***	39.9294***
BV	8.1436	1.5129	-1.2765*	-2.4064***	0.0238	8.247	15.3715*	29.4527***
EV	3.2956	3.7319	-2.3969***	-2.6507***	0.7245	0.9307	30.9217***	40.0978***
TTV	0.114	0.4519	-6.7444***	-5.7613***	7.6208	9.6405	81.8878***	67.3473***

Table 2. Existing model Unit Root tests on 5 countries: Austria, Belgium, France, Germany, and Portugal, Model (2). \*, \*\*, \*\*\* representing rejections of the null hypothesis at 0.1, 0.05, and 0.001 respectively.

The IPS tests show that the panel variables have a Unit Root at level, and the ADF-Fisher Unit Root Test reveal the presence of nonstationarity. This leads us to the set of cointegration tests, the Pedroni, and Kao cointegration tests. These are searching for the long run equilibrium within nonstationary sets of data. The results of these tests are shown in Table 3.

	MODIFIED PHILLIPS-PERRON T	PHILLIPS -PERRON T	AUGMENTED DICKEY-FULLER T	UNADJUSTED MODIFIED DICKEY-FULLER T	UNADJUSTED DICKEY-FULLER T
KAO TEST	-0.9378*	-1.3624**	0.9122*	-3.7278***	-2.6603***
PEDRONI	2.131***	-1.0213*	-0.9182*		

Table 3. Kao & Pedroni Cointegration Tests of the 5 country panel. \*, \*\*, \*\*\* representing rejections of the null hypothesis at 0.1, 0.05, and 0.001 respectively.

Here the rejection of all hypothesis implies cointegrated data sets, and therefore possess a long-term equilibrium. This confirms the results glimpsed in the literature and updates these results with more contemporaneous data.

A long-term statistical equilibrium exists between the adoption of cashless payment systems and Real GDP. A long-term equilibrium as shown in the unit root tests can not be discerned in the short term.

#### All the Euro-Zone

Following the success of updating and verifying results from the literature we move on from the restriction of 5 countries to the entirety of the Euro-zone being comprised of 19 countries.

VARIABLE	IPS UNIT ROOT TEST				ADF-FISHER UNIT ROOT TEST			
	At Level		First Difference		At Level		First Difference	
	Intercept	Intercept & Trend	Intercept	Intercept & Trend	Intercept	Intercept & Trend	Intercept	Intercept & Trend
<b>RGDP</b>	5.626	-0.6816	-5.67***	-4.19***	20.4189	68.3589	137.2199***	112.786***
<b>CHEV</b>	0.4787	-0.6825	-4.58***	-2.60***	77.0928***	42.1368	94.5516***	71.5559***
<b>BV</b>	13.311	3.7092	-1.576**	-1.1773*	1.7248	31.5351	63.3738***	64.3316***
<b>EV</b>	8.87	5.5326	-2.62***	-2.211**	26.1973	27.3684	121.0684***	114.185***
<b>TTV</b>	-1.11***	1.3116	-5.55***	-4.10***	95.4269***	27.8122	112.3961***	91.1002***

Table 4. Unit Root tests on the Data of All 19 Eurozone countries. \*, \*\*, \*\*\* representing rejections of the null hypothesis at 0.1, 0.05, and 0.001 respectively.

Overall, the unit root tests' result remains similar in table 4 as in table 2. Even as Cheque payments (Chev), and Telegraphic Transfers (TTV) in the ADF-Fisher unit root tests were both able to reject the null hypothesis at level, the lack of rejection in the intercept implies the inability to call these variables stationary with statistical significance. With the same being applied to TTV in the IPS Unit Root Test, these clarified results allow us to safely progress towards Table 5 and the cointegration tests.

	MODIFIED PHILLIPS-PERRON T	PHILLIPS-PERRON T	AUGMENTED DICKEY-FULLER T	UNADJUSTED MODIFIED DICKEY-FULLER T	UNADJUSTED DICKEY-FULLER T
<b>KAO TEST</b>	2.2679**	2.9509***	3.8759***	1.2345*	1.7482**
<b>PEDRONI</b>	3.7692***	-1.6262**	-1.8437**		

Table 5. Kao & Pedroni Cointegration Tests incorporating the entirety of the Eurozone (2). \*, \*\*, \*\*\* representing rejections of the null hypothesis at 0.1, 0.05, and 0.001 respectively.



It is here in the series of cointegration tests that a significantly higher degree of certainty can be ascertained as to the existence of a long run equilibrium between Real GDP, and cashless payments adoptions. With each of the different tests improving on the results of just the 5 countries.

**Incorporating Mobile Payment systems**

Having incorporated the entirety of the EU into the test and ascertained the existence of a long run equilibrium. We will then move to the incorporation of the data concerning market share of operating systems. This variable (OS) represents the summation of Android and iOS market share vis-à-vis the entirety of the digital ecosystem, including Windows and Mac OS for example. So it is a variable that in this context is meant to represent the degree to which the members of an economy own mobile payments-enabled operating systems.

In the first instance this paper would make use of pairwise correlation with sigma value, as well as a panel granger causality test. To confirm the hypothesis that E- Money is caused by the growth in Mobile Payments. In Table 6 the results of these two tests can be visualized. In the first order the null hypothesis of the pairwise correlation is that there is no correlation between E-Money and the adoption of mobile payment systems, this null hypothesis can be rejected given the low possibility of error, and we can ascertain that there is a statistically significant correlation between the growth of E-Money, and the adoption of Mobile Payments-Enabled Operating systems.

	<b>GRANGER CAUSALITY TEST</b>		
	Pairwise Correlation	Z-Bar	Z-Bar Tilde
<b>OS ON EV</b>	0.1195**	39.5743***	29.3644***
<b>EV CAUSES OS</b>	-	-	-
<b>OS CAUSES BV</b>	0.0522	-0.3568	-0.4663
<b>OS CAUSES TTV</b>	0.1486*	0.9306	0.6160
<b>OS CAUSES CHEV</b>	0.0354	0.2863	0.0172

*Table 6. Correlation & Causality Tests for OS variable on E-Money, \*, \*\*, \*\*\* representing rejections of the null hypothesis at 0.1, 0.05, and 0.001 respectively.*

The second part of the test involved using the granger causality test to determine as to whether this correlation reflected a causal relationship. The null hypothesis in this test is that OS does not granger-cause E-Money. This null hypothesis again, can be easily rejected, which means that OS does granger-cause E-Money for at least one of our panel countries.

Moving on to the unit root tests in Table 7 and 8, two variables were included, first the Operating Systems variables, and second, the Interaction variable between OS and E Money.

**IPS UNIT ROOT TEST**

VARIABLE	At Level		First Difference		Second Difference	
	Intercept	Intercept & Trend	Intercept	Intercept & Trend	Intercept	Intercept & Trend
<b>OS</b>	24.5839	8.191	0.7093	-2.4528	-14.7263***	-12.418***
<b>OSI</b>	18.7551	70.3816	-0.0587	-0.7105	-13.7760***	-12.0995***

Table 7. Operating Systems IPS Unit Root Tests. \*, \*\*, \*\*\* representing rejections of the null hypothesis at 0.1, 0.05, and 0.001 respectively.

**ADF-FISHER UNIT ROOT TEST**

VARIABLE	At Level		First Difference		Second Difference	
	Intercept	Intercept & Trend	Intercept	Intercept & Trend	Intercept	Intercept & Trend
<b>OS</b>	0.1626	6.0091	65.0503	38.9704	411.8997***	151.638***
<b>OSI</b>	32.2803	90.2506***	176.1964***	156.1967***	530.8326 ***	316.8486***

Table 8. Operating Systems ADF-Fisher Unit Root Tests. \*, \*\*, \*\*\* representing rejections of the null hypothesis at 0.1, 0.05, and 0.001 respectively.

For the IPS test the results of both variables are similar. It is only possible to reject the null hypothesis on the second difference. This confirms the existence of Unit Roots in all panels, at level and in the first difference. For the ADF-Fisher in contrast, it is possible to reject the null hypothesis for the interacting variable (OSI) in the first difference, similar to all the other cashless payments variables, with both variables being able to reject the null hypothesis on the second difference, implying nonstationarity at level and first difference.

For the Panel Cointegration test the recentness of the advent of mobile payment platforms becomes an obstacle that limits our options significantly, because these tests are looking for a long run equilibrium. Nevertheless, the kao tests does offer a few tentative yet promising results as shown in Table 9.

	UNADJUSTED FULLER T	MODIFIED DICKEY-FULLER T	UNADJUSTED DICKEY-FULLER T
<b>KAO TEST</b>	1.0237**		1.5348***

Table 9. Model Incorporating OS variable, Model (3). \*, \*\*, \*\*\* representing rejections of the null hypothesis at 0.1, 0.05, and 0.001 respectively.

The rejection of the null hypothesis in these two tests seems to indicate the existence of a long run equilibrium, but as of the time of writing this paper the data available does not allow for a more robust statistical proof.

By comparison the model using the interacting variable (OSI) generate very positive results as shown in Table 10.

	<b>MODIFIED PHILLIPS- PERRON T</b>	<b>PHILLIPS- PERRON T</b>	<b>AUGMENTE D DICKEY- FULLER T</b>	<b>UNADJUSTED MODIFIED DICKEY- FULLER T</b>	<b>UNADJUSTE D DICKEY- FULLER T</b>
<b>KAO TEST</b>	3.0579***	4.1622***	3.8634***	2.3256***	3.0125***
<b>PEDRO NI</b>	3.4036***	-3.0034***	-3.0729***		

*Table 10. Kao & Pedroni Cointegration Tests for the Incorporated OSI variable, Model (4). \*, \*\*, \*\*\* representing rejections of the null hypothesis at 0.1, 0.05, and 0.001 respectively.*

This last cointegration test confirms the existence of a long-term equilibrium when accounting for mobile payment systems which seems to back the tentative results from the Kao test on the OS variable.

#### **Panel Regression and Results**

Having concluded these tests, we can proceed to the panel regressions, results are shown in Table 11. Four regression series were done firstly one following the model used for cashless payments on the 5 countries initially, then expanding the model to the entire European Union, and finally two regression sets incorporating the new Operating Systems variable, one simply incorporating it into the model, and the last incorporating the interacting variable of Operating systems market share and E-Money.

**PANEL REGRESSIONS RESULTS**

<b>RGDP</b>	5 Countries Model (2)	Eurozone Model (2)	Incorporating OS Model (3)	OS and E-Money Incorporated Model (4)
<b>CHEV</b>	0.030839	0.034988	-0.0017	-0.00725
<b>BV</b>	4.663995***	4.26839***	0.168667***	0.218262***
<b>EV</b>	1.028783***	0.282543***	0.003685*	
<b>TTV</b>	0.005635***	0.005971***	0.174105***	0.156573***
<b>OS</b>			0.002222***	
<b>OSI</b>				0.005261**
<b>_CONS</b>	2.21E+11*	1.75E+11***	16.95389***	16.40493
<b>NO. OF OBS</b>	90	140	120	120
<b>R SQUARED</b>	0.6686	0.8125	0.9222	0.9465
<b>OVTEST (F-VALUE)</b>	13.51	23.69	2.19*	0.44

Table 11. Panel Regression with fixed effect model. \*, \*\*, \*\*\* representing rejections of the null hypothesis at 0.1, 0.05, and 0.001 respectively.

コメントの追加 [辰史4]: Is this correct? In my understanding any p-values are less than or equal to 1. These figures look like those of chi square or F-value. ?????

The result of incorporating the OS variable directly into the model, which in accordance with our causality and correlation tests did appear to capture to a large degree the effects attributed to E-Money, is noteworthy, this is the reason why we incorporated OS into the E-money variable, and the results show a statistically significant positive relationship between RGDP and Mobile payment systems reflected by the proxies, E-Money, OS, and the integrated variable OSI.

Having done this, the following Table 12 represents the results of the causality tests being performed on the variables of model (4), to further corroborate the results of Table 11. The second column of the table is highlighted in bold to mark the relationship shown in the last column of Table 12, Model (4). The rest of the table is set to further corroborate the results shown in the literature.

**GRANGER CAUSALITY TESTS**

<b>CAUSATION</b>	<b>RGDP</b>	<b>BV</b>	<b>CHEV</b>	<b>TTV</b>	<b>OSI</b>
<b>RGDP</b>	-	1.2824	-0.0402	1.0870	-
<b>BV</b>	<b>3.9875***</b>	-	1.9926*	-0.2794	-
<b>CHEV</b>	<b>5.2642***</b>	3.5283***	-	1.7497*	-
<b>TTV</b>	<b>3.8586***</b>	3.3765***	4.2605***	-	-
<b>OSI</b>	<b>2.1355**</b>	2.8153***	5.7184***	0.0306	-

Table 12. The result of the Granger Causality tests performed on model (4). \*, \*\*, \*\*\* representing rejections of the null hypothesis at 0.1, 0.05, and 0.001 respectively.

Here all variables committed to Model (4) have been found to be in a granger causal relationship with RGDP. This is the only relationship that this paper sets out to showcase; however, the rest of the results of the table further corroborate the results found in the literature. The different types of payment do appear to affect one another.

### **Discussion and Limitations**

The regression results of Table 11 show a distinct positive relation between RGDP and all payment systems, a relationship that we can call a long run cointegrated equilibrium. This is further complimented by the results of the causality tests in Table 12. It is worth noting the coefficient of the Value of Bank Cards consistently being the largest across all models, particularly our improved model (4). This does not necessarily indicate an increased benefit to bank cards over other forms of payments, rather it could be caused by bank cards achieving a “critical” mass required to more fully benefit from their adoption. When looking at the effect of the economic activity that comes from Mobile Payment Systems (OSI) based on the model with the low levels of penetration in the EU, it seems to have a positive relationship with RGDP.

The choice of RGDP in the literature as well as in this paper as the proxy for “economic impact” is based on the different normative assertions, that while benefit arising from transaction costs might be more easily seen perhaps on Consumption; the benefit of increased government oversight, as well as the increased financial efficiency could be more easily seen by other metrics. RGDP promises to be able to observe holistically the effect of the cashless payment systems in the economy. Furthermore, a study covering these two alternate benefits would require the creation of entirely new models of analysis, and as such, is beyond the scope of this paper, although it would be an area of interest upon which to expand the existing field of study.

A further limitation of this methodology is the reliance on the different statistical tests, as the Unit root tests, the Pedroni tests, and the granger causality tests require an exceptionally balanced panel data. They also require at least 9 periods of observation to be successfully performed. This is the reason the paper by Tee & Ong (2016) chose those 5 European countries in a particular time. The fact that we can now expand on these findings with a data set covering 10 additional years of data, and being able to cover the entirety of the eurozone is a testament to both the increasing reliability of the publication of data in the EU, and the limitations of this methodology. As it would be unthinkable to perform a similar research in any other area of the world due to the gaps in the data.

To perform an impact assessment over other regions of the world would require instead a short-term model tailored specifically to that cause, including a range of additional control variables, and lacking on the statistical weight given by the tests here performed. This is the primary reason

this paper opted to focus on a single region, with a single model receiving minor tweaks and modifications to tailor it towards mobile payment systems.

In the section about mobile payment systems it was mentioned as well the issue with “critical mass” and while Europe as a region remains with a relatively low adoption rate of Electronic Money, it is in general one of the most cashless economies in the world, dwarfing, for example, the United States, Japan, or South Korea when it comes to cashless payments overall. Part of the reason for the reliability of the model here proposed lies in this unusual attribute.

### **Conclusion**

All research objectives have been accomplished to the degree that can be hoped for. In the first instance, this paper confirmed prior results, confirming the existence of a long-run equilibrium in the relationship between Real GDP and cashless payment systems within the 5 countries studied; Germany, France, Belgium, Austria, and Portugal. This paper was also able to expand these results covering the entire 19 countries of the Eurozone, with similar significant results. Across the Eurozone there exists a statistically significant long-run equilibrium in this relationship between economic growth and the adoption of cashless payments.

For the major innovation of this study, it was established a granger causal relationship between E-Money and Mobile Operating Systems confirming the hypothesis that the growth of E-Money could be directly attributed to the growth in popularity of Mobile Payment systems, making these two variables important proxies in determining the economic impact of mobile payment systems.

The incorporated variable for both E-Money and Operating Systems showed a similar long-term equilibrium in the cointegration test. With all cashless payment systems showing positive statistically significant results in the regressions performed with the notable exception of cheques. The interacting variable of E-Money and Operating Systems reveal a positive and statistically significant relationship with Real GDP.

## References

- Agusta, Joshua Widjaja, N. (2018). Mobile Payments in Indonesia: Race to Big Data Domination. *MDI Ventures*.
- Alimirucchi, W. (2017). Analyzing Operational and Financial Performance on the Financial Technology (FINTECH) Firm (Case Study on Samsung Pay). 2017.
- Backed, K. E. Y. P., Pay, W., Korea, S., Response, Q., Communication, F., Pay, A., ... Financial, A. (2017). Decoding Alipay : mobile payments , a cashless society and regulatory challenges. *Butterworths Journal of International Banking and Financial Law*.
- Berentsen, A. (1998). Monetary Policy Implications of Digital Money. *Kyklos*, 51(1), 89–118. DOI:10.1111/1467-6435.00039
- Devlin, J. F. (1995). Technology and innovation in retail banking distribution. *International Journal of Bank Marketing*. DOI:10.1108/02652329510082915
- Dinh, V. S., Nguyen, H. V., & Nguyen, T. N. (2018). Cash or cashless?: Promoting consumers' adoption of mobile payments in an emerging economy. *Strategic Direction*. DOI:10.1108/SD-08-2017-0126
- Ewa Abbas, A. (2017). Literature Review of a Cashless Society in Indonesia: Evaluating the Progress. *International Journal of Innovation, Management and Technology*. DOI:10.18178/ijimt.2017.8.3.727
- Koç, Ç., & Dusansky, R. (2009). Demand for cash balances in a cashless economy. *International Journal of Economic Theory*, 5(3), 301–313. DOI:10.1111/j.1742-7363.2009.00111.x
- Moshi, H. P. B. (2012). *Implications of Cash-Dominated Transactions for Money Laundering*.
- Oyewole, O., Gambo, J., Abba, M., & Onuh, M. (2013). Electronic Payment System and Economic Growth: A Review of Transition to Cashless Economy in Nigeria. *International Journal of Scientific Engineering and Technology*.
- Schulte, P. (2017). Mobile Technology: The New Banking Model Connecting Lending to the Social Network. In *Handbook of Blockchain, Digital Finance, and Inclusion*. DOI:10.1016/B978-0-12-812282-2.00013-9
- Tee, H.-H., & Ong, H.-B. (2016). Cashless payment and economic growth. *Financial Innovation*, 2(1), 1–9. DOI:10.1186/s40854-016-0023-z
- Wakamori, N., & Welte, A. (2017). Why Do Shoppers Use Cash? Evidence from Shopping Diary Data. *Journal of Money, Credit and Banking*. DOI:10.1111/jmcb.12379
- Yaqub, J. O., Bello, H. T., Adenuga, I. A., & Ogundeji, M. O. (2013). The Cashless Policy in Nigeria: Prospects and Challenges. *International Journal of Humanities and Social Science*, 3(3), 200–212.
- Zandi, M., Koropeckyj, S., Singh, V., & Matsiras, P. (2016). The impact of electronic payments on economic growth. *Moody's Analytics*. DOI:10.1016/j.autcon.2012.11.024
- Zandi, M., Singh, V., & Irving, J. (2013). The Impact of Electronic Payments on Economic Growth. In *Economic & Consumer Credit Analytics (Moody Analytics)*. DOI:10.1002/ana.23871