

How Exclusive is the G20?  
Prospects for Non-Members and Small States  
in International Organizations

An honors thesis for the International Relations Program

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## **ABSTRACT**

The Group of Twenty (G20) is a premier annual forum for leaders of the largest 19 economies to discuss, coordinate and propose new directions for collaborative processes. The current composition of the G20 has led to great discourse on the organization's lack of representation. This thesis attempts to understand the nature of representation in the G20. Using a probability regression technique, an admission criterion is constructed to illustrate the conditions that led to its existing composition. This is applied to a list of invited countries that have been invited to the G20 Summits, understanding if and how they fit in with the criteria. Singapore, a small city-state in Southeast Asia, which has since been invited 5 times to G20 Summits, is used as a case study to analyze how it differentiates itself from other countries to increase its G20 involvement. My thesis speaks for greater voice from non-members and smaller states that might be excluded from the G20 process, and approaches which countries can adapt to improve their participation in international politics.

## **CHAPTER 1**

### **INTRODUCTION**

The Group of Twenty Summit, or commonly known as the G20 Summit, is an annual forum for the heads of 19 member states, and the European Union, to discuss and streamline their global policies in areas including finance, security, environment and human rights. The G20 remains an exclusive setting for 20 of its permanent members, which includes the United States, the European Union, China and France. Annually, non-G20 members are also invited to attend the Summits, and since its inception in 2008, countries such as Singapore, Kazakhstan and New Zealand have been invited. Initially conceptualized in 1999 by then-Canadian Prime Minister Paul Martin, the G20 was not fully institutionalized until 2008, when then-US President George Bush inaugurated an annual Summit for G20 leaders at the wake of the US sub-prime mortgage crisis. Since then, the G20 has become the focal point of policy decision-making for finance and economic related issues. The most recent Summit in November 2014 was hosted by the city of Brisbane, Australia.

After the G20 was established, academics and leaders have criticized the organization for its poor representation. The current list of members comprise mainly of countries from the European and Asian-Pacific regions<sup>1</sup>, while the Middle East and Africa are only represented by 1 member country<sup>2</sup>. This creates biasness in the issues and conclusions drawn by the G20, and thus threatens the legitimacy of the organization in delivering its objectives (Vestergaard et al, 2013).

My thesis hence attempts to explore the nature of representation in the G20. Specifically, I will argue that, as a result of the economic objectives of the organization, the G20 has representational criteria that do not have to agree with the existing discourse. To do this, I will consider the socioeconomic characteristics that deemed which countries to be part of the G20 when the financial crisis struck in 2008.

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<sup>1</sup> Currently, the member countries in Europe are Germany, France, United Kingdom, Russia and Italy. Member countries from Asia Pacific include Japan, China, Indonesia, India, South Korea, Turkey and Australia.

<sup>2</sup> The Middle East is represented by Saudi Arabia, and Africa is represented by South Africa.

By identifying a set of commonalities between G20 countries, I attempt to establish an empirical model that determines G20 admission, and use that to explain the current composition of the G20.

The G20 website currently indicates that the member states in the group account for “85% of the world’s gross product, 80% of world trade, and two-thirds of the world population”. This may elicit that economic and physical factors have strong correlation to their attendance in the G20 Summit in 2008. A quantitative analysis of different economic and non-economic factors, however, can produce measureable and even unexpected results. Is it possible that for some countries, such as South Korea, soft power – as measured by a country’s cultural influence – was a stronger determinant? Could a country’s alignment with the United States be another influential factor for the G8’s choice of new members in forming the G20 Summit, explaining the admission of only Saudi Arabia and Turkey in the Middle Eastern and Eurasian regions respectively?

I will therefore use econometric analysis in this thesis to yield further information on the effects of these economic indicators. While it is easy to establish that countries with the highest GDP and physical landmass will be admitted into the G20, the magnitude and directionality of these effects will require careful quantitative measurement. For policymakers in the G20 states, a clear indication of the country’s economic advantage vis-à-vis others, can be a useful tool for prioritizing financial resources and diplomacy measures.

Besides invited members, the G20 has also established an invitation system that allows host countries to include non-members to the annual Summit. Although this system attempts to address the representation issue by attracting more perspectives from non-members, it can still remain biased for hosts to invite countries that can best serve their personal agenda (Carin et al, 2010). Interestingly, Singapore, a small Southeast Asian city-state with no more than 5.5 million people, has been invited 5 times since the Summits began in 2008. Apart from Spain, which is a permanent invited member, Singapore is the only country that has been invited for more than 3 times in the history of G20 Summits.

While Singapore is not able to meet the G20's criteria for admission, the organization has clearly expanded its engagement with non-members through the invitation system. By understanding Singapore's relevance and role to the G20, I attempt to dissect the organization's nature of representation and composition, and potentially draw lessons for non-G20 member countries. This study will also add to the existing literature on the formation and composition of international organizations.

My thesis will read as follows: the next chapter reviews the historical contexts behind the G20's conception in 1999 and highlight its rise in importance in 2008. I establish that, given the merits and problems in the G20, it remains a crucial organization for academic study. In particular, I highlight that representation in the G20 has been established as a problem in its future success. I then explain the probability regression models that are used for conducting quantitative analysis for G20 admission. My results illustrate that total GDP and population are key indicators that differentiated G20 members from non-members, implying that an interaction between the two variables forms a criterion for admission. This allows me to set up a two-way graphical model of total GDP and population, and prove that, due to the economic focus of the G20, the existing composition is a result of regional differences in economic development. Thus, condition on economic differences, the G20 does not appear to have under or overrepresentation between regions in my model.

Using the same model, I follow up with an analysis of previously invited countries and where they are positioned relative to the criterion. My results point out that invited countries do not meet the criterion, implying that a different criterion was adopted for their inclusion. I therefore use Singapore, a 5-time invited country, to qualitatively analyze the reasons for involvement in the G20. I establish that Singapore managed to differentiate itself from other Asian and Southeast Asian countries through its trade openness, successful economic development, good governance, strong relationship with the United States and other G20 hosts, and its involvement in the Global Governance Group (3G). These factors helped to overcome its lack of economic influence that was empirically determined for G20 admission. Finally, I

seek to crystalize my findings with potential lessons for other non-G20 members to improve their participation in the G20 and other international organizations in the future.

My research and findings remain novel in the existing literature of the G20, which has always been focused on the merits and problems surrounding the organization's operations. Understanding the composition and formation of the G20, on contrast, is a key area that allows for its lessons to be extrapolated to future international organizations. As global issues take on more complex roles and involve stakeholders from different regions of the world, the G20 – a steering committee for cross-cutting and intergovernmental policies – will grow in prominence (Bradford and Linn, 2009). New international organizations of different natures and purposes will surface to meet different objectives, and understanding how the existing G20 composition was formed will help to initiate a discourse in future academic research in new organizations.

Ultimately, I hope that the findings from this thesis will be helpful for a vast group of audiences, including policymakers, academics and students who are interested in political science. First, understanding the factors that influenced the formation of the G20 can help member and non-member states prioritize their resources for diplomacy and international law, but this has greater benefits for non-members who are able to extract focus areas for their future explorations into international diplomacy. For small states with little economic resources, these factors can create new strategies for them to increase their chances of admission into future organizations.

Second, academics that are highly involved in international relations and diplomacy will find that the quantitative results can illustrate a new explanation for the growth of intergovernmental organizations in the recent decade. With the formation of more selective groupings, the global political system is experiencing a decentralization of power from a single state to a more collaborative, multilateral one. This research can thus be extrapolated to other intergovernmental groupings – regional or international – and

further used to predict membership of different states in future international organizations, especially at the turn of the next economic cycle.

Finally, readers, like yourself, and students who share a keen interest in political science can gain an understanding of the inner-workings of the G20, and most importantly, appreciate the existence of underlying determinants in the formation of inter-state groups. Since these factors are ranked and calculated quantitatively, this research will prove to be a useful illustration of operationalizing even abstract variables in the political sciences, and provide a model for future work in this field.

In a new political environment that is increasingly directed by a smaller group of influential countries, it is timely to have a better understanding of how a grouping such as the G20 was formed at the beginning. As members of this new international community, we will need to be more informed of our position and capabilities in this new global climate. This thesis therefore attempts to draw the necessary connections for us to understand the dynamics of this new direction in global governance – with the G20 at its helm.

## **CHAPTER 2**

### **UNDERSTANDING THE G20 PROCESS**

The G20 was institutionalized in 2008 when the financial crisis struck the global economy. Sensing that countries needed to coordinate their policies for a faster recovery, then-US President Bush initiated the first G20 leaders' Summit in Washington DC (White House, 2008). The Summits became an important platform for leaders to discuss intergovernmental issues and propose collaborative solutions to these problems. Today, the G20 has evolved to become one of the focal points for leaders from developed and developing countries to discuss pertinent global issues.

Even though other platforms and international organizations exist for countries to meet and coordinate their domestic policies, the G20 is novel in its exclusivity and approach in engaging both the developed and developing nations (Brusk and Henry, 2009). Its structure, however, has drawn both criticism and acclaim. This section will therefore explore existing literature that assesses the legitimacy and operation of the G20. Special attention will be paid to the representative nature of the organization. I will follow up on this analysis by providing a counter narrative to this discourse in the rest of my thesis.

Regardless of its shortcomings, I will close this section by illustrating how, on balance the G20 will be likely to remain important in the foreseeable future. The G20 model of engagement between leaders of the developing and developed countries will likely set a precedent for future international organizations. This is why understanding the nature of representation in the G20 will help to draw lessons for other international organizations in the future.

#### *Merits and Shortcomings of the G20*

The G20 was formed in 1999 after a similar grouping between the United States and its allies, the Group of Eight (G8) realized a greater need to engage emerging economies in the international economy (Kharas et al, 2012; Bradford and Linn, 2011). For the next 9 years, the G20 remained an informal



platform for financial representatives from G8 countries to meet with their counterparts in the wider G20 process (Hajnal, 2007). Leaders of the G20 members did not formally meet until 2008, when the global financial crisis struck both the United States and Europe – two of the biggest economic regions in the world. The success of the first Summit in Washington DC spurred further meetings between 2008 and 2009, and has since become a regular process between G20 members.

As the G20 began to grow in prominence in the last decade, an extensive literature has emerged, analyzing its success and legitimacy. Applauding the G20 for successfully smoothing out the effects of the 2008 financial crisis, Dadush and Suominen (2011) highlighted the organization's role in spearheading the coordination of a recovery and stimulus program, ensuring that payouts from the International Monetary Fund (IMF) were distributed appropriately. The G20 was further instrumental in building trust and curtailing the use of protectionist policies in the pursuit of domestic recovery (Geraets and Wouters, 2012). This is particularly driven by the flexible and open nature of the organization, allowing countries to respond quickly to an impending crisis. Providing a legitimate and regular platform for world leaders to streamline a recovery process, the G20 was one of the key organizations that steered the global economy from a recession (Dadush et al, 2011).

While authors such as Wiltse (2013) acknowledge that the G20 process has made more progress in global affairs than its predecessor – the Group of 7 (G7), the G20 has also often be criticized for its lack of legitimacy. This is largely reflected in the delays in institutionalizing the Basel III financial regulatory agreement, which was supposed to promote “strong, sustainable and balanced growth” (Vestergaard and Wade, 2013). In the same vein, the “stricter regulatory measures” proposed by the G20 also failed to curb Greek insolvency, which nearly led to the collapse of the Euro (Vestergaard et al, 2013).

The biggest challenges to the G20's legitimacy lie with its existing composition and nature of representation. With a large proportion of the G20 made up of G7 members, and with G7 countries

holding the majority of vote shares in Bretton Woods institutions, the process of initiating new development projects were considerably slowed by this asymmetry of power (Fotopoulos, 2009). Without a legal compliance framework, the G20's progress is further limited by its inability to gather consensus on their proposals (Bradley, 2013), and this often attracts divergent opinion from China and Russia, which are perceived as rivals to United States faction in the G20<sup>3</sup> (Vestergaard et al, 2013). This was particularly pertinent in the 2014 Brisbane Summit, when President Putin left prior to his foreign counterparts, reflecting a lack of agreement within the G20 (Wintour and Doherty, 2014).

### *Existing G20 Representation*

While existing literature constantly points out that the nature of representation in the G20 is undermining its legitimacy, the G20's current composition has its roots in history. When it was first established in 1999 by Canadian Finance Minister Paul Martin (Canada, 1999), it was an attempt to expand the representation of a similar grouping of countries – the Group of Eight (G8) – to “establish an informal mechanism for dialogue among systemically important countries within the framework of the Bretton Woods institutional system [emphasis added]” (G7, 1999). After the G7 experimented with groupings of different sizes – the G22 and G33, the G20 was perceived as a good balance that allows for broader representation without the ineffectiveness of groups that are too large (Kirton, 2005; Bradford et al, 2011).

Clearly, for a group that was initiated and expanded by the G8 (now the G7, after the departure of Russia as a result of the 2014 Crimean Crisis), the predominance of existing G7 members in the G20 is expected. Existing discourse on the G20's nature of representation, however, reflects a disagreement towards the G20's interpretation of “systemically important”: a vague, but crucial characteristic for determining which countries to be involved in the organization. Since 1999, the G20's list of members

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<sup>3</sup> This refers to group of countries that comprise of the United States and her historical allies (France, United Kingdom, South Korea, Japan, South Africa and Canada).

has not changed, and it includes 5 European countries (Germany, France, United Kingdom, Italy and Russia), 7 Asian-Pacific countries (Japan, China, Indonesia, India, South Korea, Turkey and Australia), 2 North American countries (United States and Canada) and 3 South American countries (Argentina, Mexico and Brazil). In contrast, for the Middle Eastern and African regions, only 1 country is part of the G20 (Saudi Arabia and South Africa).

The apparent over-concentration of Asian-Pacific and European countries in the G20 does seem to indicate some form of biasness and reflects the existing contention towards the G20's representativeness and legitimacy. To correct an over-exclusivity towards these regions, the G20 introduced an invitation system for hosts to include non-G20 members in the G20 Summits. However, this effectively gives host countries to authority and autonomy in deciding which countries to invite and can potentially worsen the asymmetry in power and resources for non-G20 members (Huza, 2013). Regardless, this system has allowed non-members such as Kazakhstan, Azerbaijan and New Zealand to be involved in the G20 process. In particular, Singapore, a small state in Southeast Asia and non-G20 member, was invited to the G20 Summits for 5 times in the past 3 years.

Strangely, Spain, a European country, has been listed as a “permanent non-member invitee” since the G20 Summits were established in 2008 (G20, 2014). The difference between a permanent invitee and a G20 member is often unclear and contentious. This, along with the apparent bias towards Europe and Asia-Pacific, creates general disapproval towards the nature of representation towards the G20. Although the G20 is more representative of global economy than previous grouping, it still appears to not fully and fairly represent the different regions on an equal scale. (Cieco, 2012; Vestergaard et al, 2013)

### *Role of G20 in International Politics*

While the G20's composition does seem strange and biased, the organization's importance cannot be downplayed in a new era of international politics. As the G20 transforms to “become the new

permanent council for international economic cooperation” (Brusk and Henry, 2009), it will play an increasing role in providing a platform for intergovernmental collaboration and determine new directions for global governance.

Apart from its role as an economic organization, the G20 has expanded its agenda, giving countries the platform to discuss issues pertaining to other areas in international development. Most significantly, the Multi-Year Action Plan (MAP) in Development was produced after the G20 Seoul Summit in 2010, and this has since been championed as the one biggest accomplishments of the G20 (Stern, 2011). The MAP has provided a crucial framework for G20 countries to align their developmental priorities, signaling their commitment to the IMF and providing Official Development Assistance (ODA) to the developing world. Evidently, the G20 has the potential to bring countries with differing interests to a consensus for commonly diverging issues. This requires G20 members to take the leadership role in making necessary changes to their domestic policies, setting a standard and precedence for others to follow suit.

The structure of the G20 also remains a novelty for international politics. It was the first platform at which developed and developing countries were given equal opportunities to address their priorities and concerns (Wiltse, 2013). The rotating nature of the G20 host country also provided important tourist receipts for countries that might otherwise not have the chance to host events of this scale. In this view, the G20 is able to shift towards a “less hegemonic distribution of power”, reducing the influence of developed countries and the United States in the G7 (Fitoussi and Stiglitz, 2011).

Finally, the ad-hoc nature of the G20 has created the flexibility and spontaneity that was required during the financial crisis, but it has greater merits in delivering its other objectives. At the start, the lack of formal authority allowed for G20 countries to make changes and come to an agreement at high speeds – a pace that was necessary for a global economy that was on the verge of collapse (Ageloni and Pisani-Ferry, 2012). Later, this open nature of discussions made the G20 a more effective setting for establishing

guidelines towards crucial financial adjustments, in contrast with existing inter-governmental institutions such as the International Monetary Fund (IMF) or the United Nations (UN). The lack of a specific focus for the G20 also allowed for a myriad of issues to be discussed, and most importantly, gave countries broader assessments of the failure of existing mechanisms. Task distribution, agenda setting and consensus building became much more efficient in the G20 setting (Geraets and Wouters, 2012).

Although the nature of representation in the G20 has created some reservations towards the legitimacy of the organization, it is likely that the organization will remain relevant and important in international politics. Its novelty in engaging both developed and developing countries should be a process that is encouraged. While its representation is of great contention, most particularly due to the vagueness of the “systemically important” criterion and the asymmetric nature of Summit invitations, the G20 plays a crucial role in an increasingly interconnected world. Since the 2008 financial crisis, the G20 has initiated new focus areas in environment, human rights and other intergovernmental issues that will require cooperation and coordination between countries (Stern, 2011). As countries that are “systemically important” and influential in international politics, G20 members can help steer a more collaborative network of countries that has to be constantly engaged with one another.

With the G20 as a recognized platform with the right critical mass, it has managed to create new opportunities for developing countries – a group that was previously excluded in the G8 process. In fact, as the previously dominant group in international politics, the G8 felt no urgency in expanding the organization’s membership, preferring to maintain the “like-mindedness” between their existing members (Bradford and Linn, 2007). Having opened up the opportunity for new members to be part of the global leadership network, the G20’s future appears to be optimistic.

### *Purpose and Motivation*

Although the G20's current composition is often a cause for contention, the organization's role in international politics is increasingly vital in a new collaborative, networked system that requires mutual trust and cooperation. At this key juncture of our global history, studying the G20 and its nature of representation will create a framework that can be applied for future Group expansions or new international organizations. Besides, as I will argue in the following sections, the G20's nature of representation does have a measurable criterion that will reinforce its objectives and legitimacy. Establishing this criterion empirically can help to better articulate the organization's purpose for future discourse on the G20.

The ambiguity of the phrase "systemically important" has generated much discussion on ways to improve the G20's nature of representation. Some have proposed that the G20 be restructured into broader institutions such as a Global Economic Council that can complement the work of existing Bretton Woods organizations (Vestergaard and Wade, 2011). Others have addressed the issue of representation by allocating fixed, pre-determined weights to each region by their economic contribution to the global economy (Ocampo and Stiglitz, 2011), or by expanding the invitations to other international organizations (Carin et al, 2010). While the mechanics of G20's engagement and involvement with non-members definitely has room for improvement, there needs to be a stronger understanding of the underlying principles of the G20 composition before proposals can be tailored to fit the organization's objectives.

It is with this motivation that I seek to explore the G20's nature of representation in the next few sections, and attempt to deconstruct the composition of the G20 into an identifiable membership criterion for its existing members. With that, not only can future discourse better assess the limitations and constraints of the G20, non-members can also have a stronger benchmark to work towards for greater involvement in an intergovernmental organization like the G20. Ultimately, the results should prove to be useful for non-members to increase participation in the G20.

### CHAPTER 3 METHODOLOGY

When the G20 was formed in 1999, it was seen as a step forward in increasing representation in global governance – which had been dominated by the G8 (Kirton, 2005). Although its role was limited to only discussions between Finance Ministers, the G20 grew in prominence after the 2008 financial crisis (Perino, 2008). With the G20's transition to a “permanent council for international economic cooperation”, it has become evident that the organization will take up a bigger role in promoting collaboration and cooperation between countries (Brusk and Henry, 2009). It is therefore timely to explore the nature in which regions and countries are represented in the G20, so that we can draw lessons for future expansions or new international organizations.

The current composition of the G20 is usually explained in press releases made by the organization on their official website. This can be traced back to statement released by the G7 Finance Ministers in 1999, when the G20 was first established:

“(The G7 proposes) to establish a new mechanism for informal dialogue in the framework of the Bretton Woods institutional system, to broaden the dialogue on key economic and financial policy issues among systemically significant economies and promote cooperation to achieve stable and sustainable world economic growth that benefits all. We believe that discussions held in this group will prove useful to complement and reinforce the role of the governing bodies of the Bretton Woods institutions. [emphasis added]” (G7, 1999)

The statement appears to reveal that there was no clear or defining criterion in determining a country's admission into this organization. Although the G20 did not grow in importance until the Pittsburgh Summit in 2009, there were many opportunities for G7 members, or even President Bush to modify the group's constitution. Since these reforms did not occur, the 18 countries which were “systemically significant” in 1999 must have remained so in 2008, especially when the G20 was elevated to match the G8's status. Unfortunately, attempts to assess the relevance and importance of existing G20

countries have thus far been inconclusive. Apart from being able to “contribute to global economic and financial stability” and ensure “regional representativeness”, G20 countries are often analyzed using only a set of qualitative conditions and characteristics (Kirton, 2013).

The following two chapters therefore serve to formalize a relationship between G20 admission and a country’s economic, social and political characteristics. Ultimately, my analysis seeks to determine, with statistical evidence, the significance of these characteristics in affecting the country’s involvement in 2008. This analysis begins with a definition of the quantitative methods used for deconstructing the G20’s existing composition, while the subsequent chapters will showcase my empirical results to estimate a criterion that differentiated G20 members and non-members. I will use this criterion to illustrate the significance of economic objectives in determining G20 membership, and thus positioning a rationale for its current composition. This will explain if representation is indeed a problem in the existing G20 process.

The model will be further applied to invited countries and assessed if the same criterion is used on them. An important case study will be done on Singapore – a small city-state in Southeast Asia that has been invited 5 times in the past 7 years. I will attempt to explain how and why Singapore can be invited significantly more times than other larger, predictably more influential countries. Lessons can be drawn from Singapore for non-G20 members and small states to be involved in an international organization like the G20.

This chapter will focus on the methods that are used to conduct my analysis. I will begin with an overview of the models used for the subsequent quantitative analysis, and explain how the variables are defined. This will be followed by a list of my data sources and the subsequent modifications that were made for operationalizing my data. Results will be described in the next chapter.



## **Establishing a Model for G20 Admission**

The first part of my analysis will be to determine a set of characteristics that differentiated G20 members from non-members, leading to the current composition. This will be established as an empirical criterion for membership, and allow me to draw a model to explain the nature of representation in the G20.

The empirical analysis in this part will be based on the G20's self-assessment of its nature of representation:

“The G20 membership comprises a mix of the world's largest advanced and emerging economies, representing about two-thirds of the world's *population*, 85 per cent of *global gross domestic product* and over 75 per cent of *global trade*. [emphasis added]” (G20, 2014)

Using data from the World Bank, I will assess if the members' population, gross domestic product (GDP) and trade can account for their membership in the G20. While there is no clear definition on the level of GDP, population or trade that determines a country's membership, I foresee that member countries will have relatively higher GDP and population levels than non-members just justify their “systemic importance” to the G20. Trade, on the other hand, may not be a criterion that is satisfied by all the members because smaller countries tend to contribute more to world trade, but may not have the sufficient GDP and population to be considered for the G20.

To conduct this cross-sectional analysis, I will define 2008 as the year at which the G20 is formally established. Although the organization is formed in 1999, it did not grow in prominence or significance till the Summits were formalized into the international system. Therefore, all statistics used in my analysis will be referenced to that in 2008.

My empirical analysis of the countries' World Bank statistics is done at three different levels:

a. Ordinal Ranking

Using data from the World Bank, countries will be ranked separately according to their statistics on population, GDP per capita, and trade as a percentage of their GDP. By this ranking, I will observe if there are countries that meet these criteria but are not members of the G20.

b. Graphical Analysis

As I expect that not every G20 member will be ranked top in the 3 selected statistics, I will proceed to plot my data points graphically to observe the distribution of member and non-member countries according to their economic levels. I will use the same dataset from the first section to plot population against GDP per capita, highlighting the countries that are G20 members. Because I expect that trade volume will not be a significant indicator of “systemic importance” for G20 membership, I will not use data for trade in this level of analysis.

I foresee that majority of the member countries should belong to the upper left quadrant – high in both GDP per capita and population. After providing an overview the data, I will zoom in on the upper left quadrant, once again labelling countries that are not G20 members. With similar characteristics in GDP and population, these non-member countries are most similar to the existing G20 members, their characteristics – or substantial differences – will be therefore of huge importance in fully understanding a criterion for G20 admission and provide more intuition on the significance of a country’s economic traits on her membership in the G20.

c. Multivariate Regression

Finally, having established that GDP and population are the more influential indicators for G20 membership, I will continue to explore the interaction between the two in differentiating between members and non-members. I will use a probability regression model, the probit regression model, to

establish a metric that is a combination of GDP and population indicators for determining membership into the G20. This is done systemically with different sets of independent and dependent variables to better verify the relationship between the two variables, and validate my beliefs towards the limitation of trade data as an indicator of membership.

### *Model Set Up*

In my regression, I define the dependent variable as G20 membership, which is a binary variable of values either one for a G20 member or zero for a non-member. Because the dependent variable can only take on two values, using linear regression will not be an accurate way in estimating the slope or effect of each determining (independent) variable. The probability estimation or probit model was thus picked for its accuracy in determining probabilities for binary variables. This model measures the probability that a country will be granted G20 membership. Specifically, the model takes the following form:

$$\Pr (G20 \text{ Membership} = 1 | X) = \varphi (X' \beta) \text{----- (1)}$$

In equation (1), Pr denotes probability, X refers to a matrix of all independent variables or traits that determines G20 membership and  $\varphi$  is the cumulative distribution function for a Standard Normal Distribution where  $\sim N(0,1)$ .  $\beta$  is a parameter estimated for every independent variable used in the equation. It will be used to estimate the impact of a change in each independent variable on the probability of G20 membership.

### *Baseline Variables*

I use the 3 economic variables listed in the G20's self-assessment as baseline variables: a) population size, b) GDP per capita, and c) total trade. World Bank Data that was used earlier will also be used in my regression for consistency. These variables are used in the first model to test their significance

under a series of socioeconomic and political controls, and verify the effects that were observed in the first two levels of analysis.

To better test the interaction between population and GDP, I will use total GDP as an aggregate indicator in my second regression model. Because total trade is calculated as part of total GDP, I will replace total trade with openness, or trade as a percentage of GDP. I intend to explore if total GDP is a better differentiator of G20 membership than GDP per capita and population separately.

In my third model, I will replace total trade with openness to verify the significance of trade as an indicator. As I predict that trade will not be an effective variable to determine G20 membership, this model will further determine if my earlier hypothesis is accurate.

Finally, in my fourth model, I will include an interaction term between total GDP and GDP per capita to consolidate the effectiveness of total GDP as a determinant of membership for the G20. This will help to establish a stronger understanding on the effects of total GDP and population as an interaction term to differentiate G20 members from non-members.

#### *Alignment as the Fourth Baseline Variable*

Many academics, including Smith (2011), Kirton (2013) and Cooper and Thakur (2013), have noted that when the G20 was formed in 1999, the members were decided by officials from United States and Canada. In that sense, the United States can be seen as one of the important architects of this international grouping. This is even more evident when a large number of the non-G8 members are actually allies with the United States, including South Korea, Australia, Saudi Arabia and South Africa (Cooper and Thakur, 2013). This therefore appears to show that alignment with the United States can be an important determinant for G20 membership. I will be including alignment as the fourth baseline variable in all my regression models.

In defining alignment with the United States, I have used data from Voeten et al (2013). Adapting from a previous dataset by Lijpheart (1963), Voeten et al. (2013) created an index based on the voting agreement between countries in the United Nations. Countries are rated between 0 and 1, with 1 equating to ‘full agreement with the United States’ and 0 to complete disagreement.

### *Control Variables*

To make my regressions more robust, I include additional control variables to better determine the significance of my baseline variables when differences in political, social and geographical characteristics are accounted for. These additional controls will be grouped in terms of political characteristics, including e) democratic openness and f) existence of communist legacy, and socioeconomic and geographical characteristics, which includes g) size of land mass, h) financial openness, i) female participation in the labor force, and j) a regional dummy variable, which indicates the region of the world that each country is located. They will be described in the following sections.

### *Political Controls*

To measure the political characteristics, I use the Polity IV Political Regime Index to determine the level of democratic openness in the countries’ existing regimes. This is chosen over the more popular democracy index by Freedom House (FH) as the latter has high correlation (correlation coefficient,  $R^2 > 0.6$ ) with my measure of alignment with the US. In the Polity IV Index, each country is assigned a value between -10 and 10, with 10 for full democracy and -10 for autocracy.

The existence of communist legacy is determined by assigning 1 to countries that were previously or are still under Communist regimes. All other countries will be assigned 0. A correlation check between this and the alignment variable is found have a  $R^2$  value of 0.2344 – sufficiently low for my results to remain significant.

### *Geographical and Socioeconomic Controls*

To illustrate the differences in geographical attributes, I use data from the World Bank's World Development Indicators (WDI) to measure the country's land mass as measured at 2008. As there might be changes in territorial boundaries between the two years, only countries with consistent boundaries are included in the analysis.

Using a measure designed by Chinn and Ito (2008), I also include a country's financial openness as one of the economic controls. The index was constructed by aggregating the existence of dual or multiple currency exchange rates and restrictions on current and capital accounts as a way to capture the amount of capital controls in the each country. A score of -2.5 to 2.5 was assigned to each country, with 2.5 for little capital controls and -2.5 for tight or strong capital controls in the economy. I included this index to account for the presence of highly financially open countries such as the United Kingdom (scoring 2.5 on this index) and China (scoring -1.5) in the G20.

Next, in a study by Swamy et al (2001), corruption is found to be markedly lower in countries with high female labor participation. This is associated to a lower propensity for women to be involved in bribery or actions that were considered unethical. Including female labor participation thus helps to address gender equality in the research sample, but also allow corruption to be measured through a proxy variable. This is because in my initial models, corruption as a control was not favored, due to the measure's high correlation with GDP per capita ( $R^2 > 0.7$ ). Data from the World Bank database is used to capture each country's female labor participation rate, as a percentage of total population.

The final geographical control is a series of dummy variables which determine a country's region. There are 6 different regions used in this analysis: Asia-Pacific, Latin America and the Caribbean, Middle East and North Africa, North America, Sub-Saharan Africa and Europe. They are each assigned numbers 1 to 6 in that order, such that countries in Asia-Pacific are assigned 1, Latin America and the Caribbean

assigned 2, and so on. The regional boundaries are based on the definitions set by the United Nations. I have included them in my analysis as a measure of representation across different regions. As G20 literature often point out that Middle East and Eurasia are underrepresented, while Europe and North America are overrepresented, I will therefore attempt to hold a country's geographical location constant to determine if the 4 baseline variables remain significant.

### **Addressing Representation in the G20 with the Model**

After determining the significance of my baseline variables in explaining for G20 membership, I will apply my results to construct a model that can illustrate the regional representation in the G20. Specifically, I introduce a total GDP-population model in the form of a two-way scatterplot, drawing a cut-off line that separates members from non-members. This will be an arbitrary membership criterion that is constructed from my regression results earlier.

Addressing existing criticism against the G20 on the lack of representation, I apply this model to analyze the composition of the G20. Specifically, I will identify countries that are currently in the G20 and how they line up with my constructed criterion. Anomalies, such as countries that meet the criterion but are not included, or countries that do not meet the criterion but are included, will be addressed by assessing their non-economic characteristics. This section therefore seeks to apply my results to explaining the nature of representation of the G20. If my baseline variables in the previous sections are identified as significant, then this shows that composition is in line with the organization's economic objectives and its composition should be viewed in the context of its objectives.

## Assessing if Invited Members Align with the Model

Finally, I will also attempt to answer a broader question that was introduced in the early part of this thesis – what other factors can small states tap on to gain a voice in international organizations that are increasingly influential?

While existing G20 members have commonalities that allowed them to gain admission, countries that were invited to the G20 do not necessarily meet this admission criterion. What is of particular interest is the autonomy of the host country to decide who to invite, and countries often lobby host countries in an attempt to get invited (Carin et al 2010). It is therefore of academic interest to understand if, even for invited countries, there is a specific set of characteristics that can increase their chances of getting invited.

To address this, I apply the total GDP-population model to invited countries, showing if they also fall in line with the criterion established earlier. Due to the ad-hoc and undefined nature of G20 invitations, I do not expect data points for invited countries to be well aligned with my criterion. It is therefore likely that there are other characteristics that define a country's importance and relevance for that year's G20 Summit. Of specific interest will be to analyze Singapore's unique characteristics, as the only country to be invited more than 3 times for the past 7 Summits.

### *Singapore as a Case Study*

In the last part of my analysis, I highlight the geopolitical and socioeconomic conditions that underlie Singapore's uniqueness for the G20 process. In particular, I provide a qualitative and quantitative explanation for Singapore to be differentiated from other bigger, more economically powerful countries. This will provide a context in understanding how a small country can prove itself to be relevant and "systemically important" for an international organization that is traditionally dominated by large and resourceful countries.



### *Consolidating all the Factors*

Singapore's involvement in the G20 provides important lessons for other small, less endowed states to improve their importance and relevance to an international organization like the G20. This is the main question that I promised to answer at the beginning of this thesis. However, even though an empirically defined model can be useful to explain the differences between G20 members and non-members, the model is only an explanatory tool that is useful in the context of the organization. Drawing a criterion for membership can help the G20 improve its legitimacy, and as I have pointed out earlier, allows countries and academics to view the organization's composition in the context of its initial objectives.

Applying lessons from Singapore and the G20 will ultimately require an appreciation of the conditions that spurred its establishment in 2008. I hope that my model will be an effective tool for future discourse on the G20 to contextualize their analysis on the objectives that the organization was designed for.

### **Limitations of Analytical Method**

The regression analytical method illustrated above has helped to identify the significance of 3 baseline variables identified by the G20 itself – total GDP, population and trade volume – and the fourth baseline variable, a country's alignment with the US. While this quantitative method is useful to establish how these variables interact with one another to determine membership, it provides no assessment on the exact impact of each variable in influencing membership into the G20. In other words, I can only illustrate how the direction or significance of each variable changes under different conditions, but not an absolute magnitude of the changes. It is important to be mindful when interpreting my regression results later in my thesis.

While I identify Singapore as a useful case study for understanding how countries, even with little land area or resources, can be deemed influential and relevant for an international organization, the geopolitical context of Singapore is an important factor that limits the direct application of the lessons drawn from this analysis. I hope that the model built in this thesis, along with the case study, will provide an important starting point for greater discourse on the potential of smaller, non-G20 countries for participation in an international organization like the G20. The conclusions drawn in this thesis have to be interpreted with a realization of the unique conditions that any organization or country faces in the sphere of international politics.

## **CHAPTER 4**

### **DECONSTRUCTING G20'S MEMBERSHIP REPRESENTATION**

The task of understanding the G20 has been an ongoing one. Previous literature has since focused on the merits and problems of the organization, but has thus far overlooked an important distinction of the G20 from other intergovernmental organizations – the G20, a new coordination body amongst the world's leaders, is a novel attempt in involving both the developed and developing world in global decision making. At the very least, the G20 was able to provide new frameworks and goals for promoting “stable and sustainable economic growth” (G20 2014).

The importance of this organization cannot be understated, and as countries continue to connect and collaborate more extensively through multilateral platforms, new intergovernmental organizations will arise. As a novel attempt to engage a greater number of countries in global decision making, the G20 is therefore a contemporary illustration of successful intergovernmental cooperation. Understanding the common nature of different G20 states will provide clues to understand how the organization was formed. Not only can this provide fundamental knowledge for non-members to understand their relevance to the G20, an estimated membership criteria helps in predicting, in the future, what countries will be included in an expanded G20, or a new international organization that serves similar purposes.

This chapter will therefore formalize an empirical definition of the G20's self-assessment of “systemic importance”. I will use a series of empirical analyses to showcase the socioeconomic characteristics that allowed G20 states to be included in the existing organization. This will be applied into a model that indicates an estimated criterion for countries to be included in the G20. More broadly, I seek to establish that based on the objectives of the organization, the current composition of the G20 does not necessarily lack representation.

## Factors that determine G20 Membership

To find the factors empirically, I used a series of data to illustrate the common characteristics between G20 members. I analyzed them in three different stages: observation by ranking, observation by scatter plot, and probability regression.

### a) Observation by ranking

I arranged the data collected from the World Bank to determine if G20 countries have the highest (i) GDP per capita, (ii) total GDP, (iii) total trade, and (iv) population. Tables 4.1A-D show the results of the top 10 countries.

Top 10 countries by GDP per capita		Top 10 countries by Total GDP		Top 10 countries by Total Trade		Top 10 countries by Population	
1	<i>Monaco</i>	1	United States	1	United States	1	China
2	<i>Liechtenstein</i>	2	Japan	2	Germany	2	India
3	<i>Luxembourg</i>	3	China	3	China	3	United States
4	<i>Norway</i>	4	Germany	4	Japan	4	Indonesia
5	<i>Bermuda</i>	5	France	5	United Kingdom	5	Brazil
6	<i>Qatar</i>	6	United Kingdom	6	France	6	<i>Pakistan</i>
7	<i>Switzerland</i>	7	Italy	7	Italy	7	<i>Nigeria</i>
8	<i>Denmark</i>	8	Russia	8	<i>Netherlands</i>	8	<i>Bangladesh</i>
9	<i>San Marino</i>	9	Brazil	9	Canada	9	Russia
10	<i>Ireland</i>	10	<i>Spain</i>	10	South Korea	10	Japan

Tables 4.1A to D (left to right) - Top 10 countries with the highest GDP per capita, total GDP, total trade and population size. Non-G20 members are in *italics*. Source: World Bank (2008)

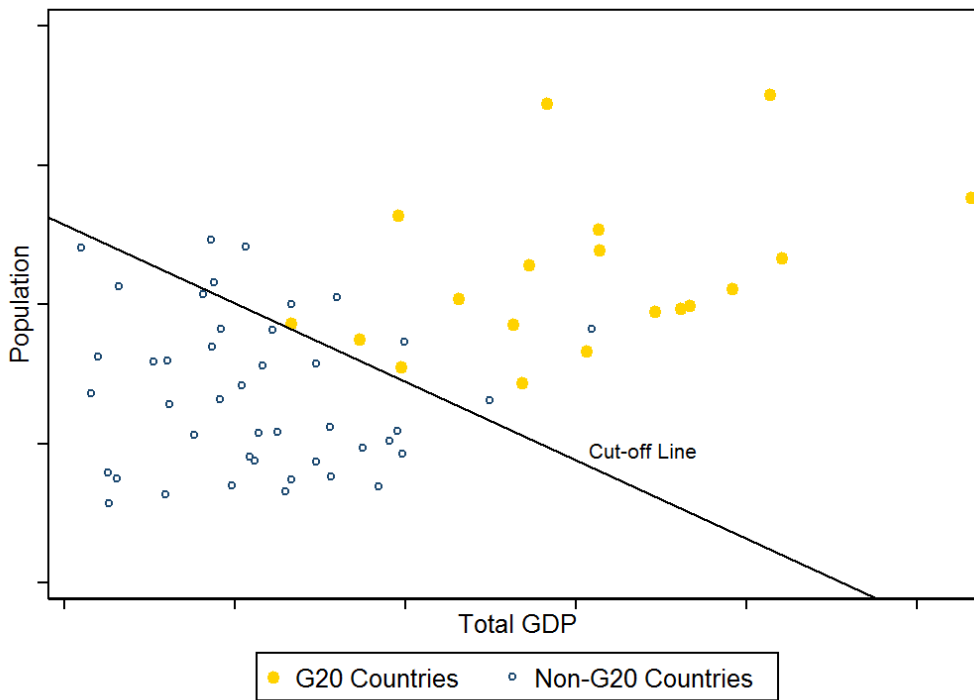
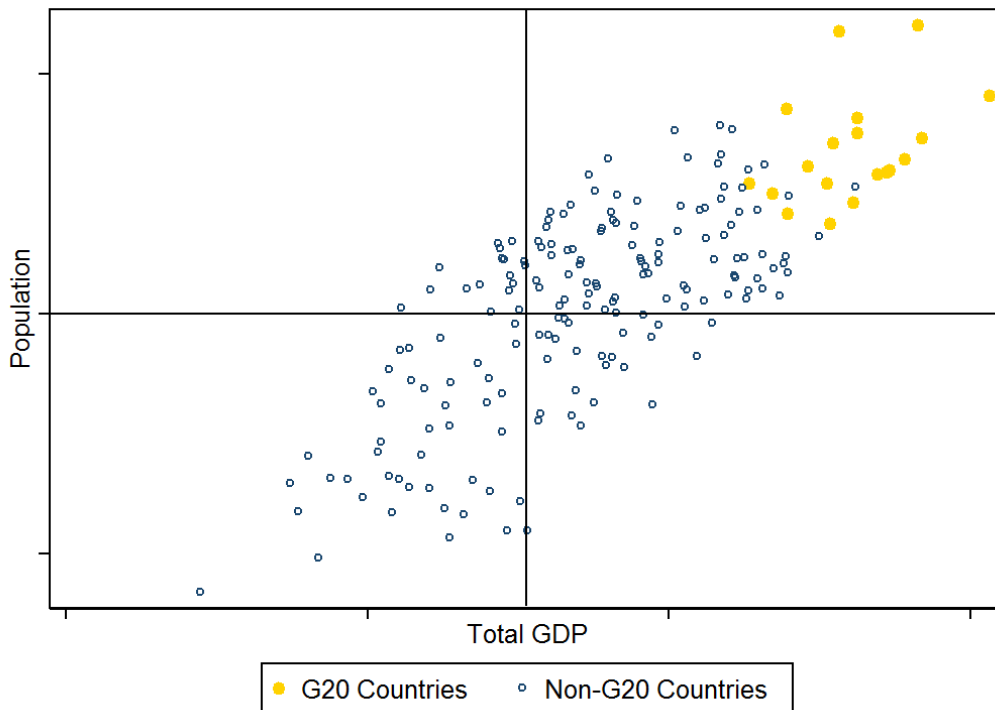
It is not surprising that most of the G20 countries make up the top 10 when they are ranked according to their socioeconomic status. After all, the G20's self-explaining criteria for admission is based on gross domestic output, total trade and population (G20, 2014). The absence of G20 members in the GDP per capita ranking is also expected, as many small countries, with their small land mass, tend to have high total GDP generated by their huge trade volumes. The larger proportion of G20 countries in the top 10 total GDP, as compared to top 10 population, does seem to hint that total GDP might be a more

deciding factor. In fact, in the next 10 countries with the highest population, only 4 of them are G20 countries, while only 3 *non-G20* countries are in the next 10 countries with the highest total GDP. To further understand the importance of total GDP and population in G20 membership, I proceed to the next stage of my data analysis.

b) Observation by scatter plot

To illustrate the relationship between total GDP and population in determining a country's admission into the G20, I plotted the countries' population size against their total GDP on a scatterplot. As the values are exponentially large, I have used the log of the dataset on both axes. I plotted the data at 2 different scales: the first to show an overview of the distribution of countries, and the second to show a close up of the data points at the top right quadrant – where countries have high population and high total GDP. As the observation from part (a) shows, G20 countries are more likely to be the top 20 in total GDP and population, and should thus lie in that region of the scatterplot. Graph 4.2A shows the overview, and 4.2B shows the close up.

Graph 4.2A validates my earlier prediction that the G20 countries lie in the top right quadrant, as they are countries with the higher population and total GDP values. Graph 4.2B shows a more complex distribution of G20 countries across the 2 axes. To better understand this relationship, I added a straight line to highlight an estimated cut-off for G20 membership. Some countries, Spain in particular, lie above the cut-off but are currently non-G20 members. While this complicates an otherwise direct correlation between total GDP, population and G20 admission, results from this scatterplot motivates the need for further investigation. The existence of non-G20 countries above the cut-off also reveals that admission into the G20 may include other unexplained factors. This therefore allows me to proceed to the next stage of the data analysis in the next section.



Graphs 4.2A and B (top and bottom) – Scatterplots of population against total GDP.  
 Only the top right quadrant is shown in Graph 4.2B. G20 members are marked in yellow **bolded** symbols.  
 Line showing cut-off is added in Graph 4.2B.

Source: World Bank (2008)

c) Probability regression

Observations from the earlier sections have hinted that there lacks a direct and definitive explanation for admission into the G20. Having recognized that there might be other factors at play, I conducted a regression of G20 membership (a binary variable) with a country's socioeconomic and political characteristics. I included the independent variables progressively to observe if the 4 baseline variables (identified in Chapter 3) will retain their statistical significance when more controls are added.

*Accuracy and Reliability of Results*

To improve the statistical accuracy of my results, I produced a correlation table of all the variables used in the regression. Table 4.3A shows the correlation coefficient ( $R^2$ ) of my variables. I observed that apart from total GDP and total trade ( $R^2 = 0.9207$ ), none of the other variables show significant correlation. The strong correlation validates that total trade is a component of total GDP, and thus exhibit strong collinearity. These 2 variables were therefore not used in the same regression model.

I also conducted a White's test of heteroscedasticity, and the p-value obtained was 0.043, indicating that homoscedasticity is present at 5% significance. In response, I have used robust standard errors to improve the reliability of my results.

Furthermore, the regression was repeated 4 different times, and I used variations of the baseline variables to improve my results' reliability. The sets of baseline variable used were: (1) GDP per capita, population and total trade; (2) total GDP and openness; (3) GDP per capita, population and openness; and (4) all variables in 3 with an interaction term between GDP per capita and total GDP.

Regressions 2 and 3 were offshoots of the first regression, in which I observed the existence of interaction effects between GDP per capita and population. To prevent the inclusion of total trade and total GDP, I used openness as a different measure of trade in regression 2 and this was further extended to

regression 3 to test its robustness. Openness is constructed by dividing total trade with total GDP, and is based on the work by Alesina and Spolaore (2003). It is predicted that openness of a country can measure its acceptance towards trade and therefore its importance to an increasingly trade-focused global economy. The openness variable was found to have little correlation with total GDP ( $R^2 = -0.1993$ ).

Regression 4 was added to illustrate the interaction effects between total GDP and GDP per capita, accounting for the fact that GDP per capita or total GDP alone is insufficiently significant to explain G20 membership. This term will help to validate an earlier prediction that total GDP has a stronger explanatory power than GDP per capita.



	GDP per capita	Population	Total GDP	Total Trade	Openness	Alignment with US	Land Area	Financial Openness	Democracy	Female Labor	Communist Legacy
GDP per capita	1										
Population	0.0917	1									
Total GDP	0.341	0.5079	1								
Total Trade	0.4376	0.4634	<b>0.9207</b>	1							
Openness	0.1762	-0.1745	-0.1993	-0.0005	1						
Alignment with US	0.5308	-0.0676	0.3028	0.3452	0.0142	1					
Land Area	0.0167	0.4232	0.4226	0.3432	-0.2239	0.0171	1				
Financial Openness	0.5449	-0.1606	0.1733	0.2331	0.2157	0.4324	-0.1059	1			
Democracy	0.1754	-0.0512	0.1571	0.1455	-0.1096	0.5094	-0.0128	0.4535	1		
Female Labour	0.1349	-0.0632	0.0739	0.0936	-0.0906	0.2239	0.0464	0.0045	0.1765	1	
Communist Legacy	-0.1095	0.0888	0.0081	0.0096	0.1061	0.237	0.1254	-0.0011	-0.0456	0.0516	1

Table 4.3A – Correlation coefficient ( $R^2$ ) of all variables used in the regression. The high correlation between total GDP and total trade is marked out in **bold**.

All other variables that do not have  $R^2 > 0.6$  are deemed sufficiently accurate to be used in a single regression.

Independent Variables	Model B1	Model B2	Model B3	Model B4	Model B5	Model B6	Model B7
GDP per capita	0.01271***	-0.005583	-0.012745	-0.021053	-0.17158**	-0.010738	-0.191055**
Population	2.072786***	1.4261***	1.37951***	1.98164***	0.853788*	1.29517***	0.448296
Total Trade		2.60939***	2.72796***	7.02088***	9.6132***	2.5656***	9.74818***
Alignment with US			1.57812	4.45964**	4.93951	2.15678	12.71239*
Land Area					18.3751***		22.6916***
Financial Openness					-0.275633		-0.505189
Democracy						0.025227	0.004879
Female in Labor Force						-0.023341*	-0.004753
Communist Legacy						-0.62357	-6.63044***
<u>Regions^:</u>							
Asia Pacific				4.203**			
Latin America and Caribbean				6.3783***			
Middle East and North Africa				5.12443**			
Sub-Saharan Africa				5.5691**			

Table 4.3B – Regression (1) Results with *GDP per capita*, *Population* and *Total Trade* as baseline variables.

Dependent variable is G20 membership (1 – G20 member; 0 – non-member). Statistical significance at \*\*\* 1%, \*\* 5% and \* 10%.

^ Reference group used was Europe. The North American region was omitted as the sample is too small.

Independent Variables	Model C1	Model C2	Model C3	Model C4	Model C5
Total GDP	2.6071***	3.26237***	3.477948**	2.79658***	2.24589***
Openness	-1.5418**	-1.3222**	-0.47104	-1.81436**	-0.71449
Alignment with US		-4.89455	-2.25986	-2.7021	1.30202
Land Area			9.73476***		15.6574***
Financial Openness			-0.38311		-0.22848
Democracy				0.013528	0.04729
Female in Labor Force				-0.02849***	-0.013195
Communist Legacy				-0.70662	5.29314***

Table 4.3C – Regression (2) Results with *Total Trade and Openness* as baseline variables.

Dependent variable is G20 membership (1 – G20 member; 0 – non-member). Statistical significance at \*\*\* 1%, \*\* 5% and \* 10%.

Independent Variables	Model D2 <sup>+</sup>	Model D3	Model D4	Model D5	Model D6	Model D7
GDP per capita	0.029723***	0.022303***	0.024388***	0.02400***	0.028486***	0.029045**
Population	1.72437***	1.75416***	1.89342***	1.9575***	1.50805***	2.1119***
Openness	-1.576353**	-1.5029**	-1.26658**	-0.49018	-2.05251**	-0.72947
Alignment with US		2.73331*	2.8218*	4.5588**	2.46467	4.81051**
Land Area				12.4261***		20.5193***
Financial Openness				0.09099		0.27357
Democracy					0.03046	0.66945
Female in Labor Force					-0.026025	-0.01419
Communist Legacy					0.017943	-4.73112***
<u>Regions<sup>^</sup>:</u>						
Asia Pacific			0.21491			
Latin America and Caribbean			0.68531			
Middle East and North Africa			0.44939			
Sub-Saharan Africa			0.13866			

Table 4.3D – Regression (3) Results with *GDP per capita*, *Population* and *Openness* as baseline variables.

Dependent variable is G20 membership (1 – G20 member; 0 – non-member). Statistical significance at \*\*\* 1%, \*\* 5% and \* 10%.

<sup>^</sup> Reference group used was Europe. The North American region was omitted as the sample is too small.

<sup>+</sup>Model D1 has the same results as Model B1 and is therefore omitted in this table

Independent Variables	Model E3 <sup>+</sup>	Model E4	Model E5	Model E6	Model E7	Model E8
GDP per capita	-0.008694	-0.009086	-0.00460	-0.009142	-0.000819	-0.00721
GDP per capita x Total GDP	0.4949**	0.04903**	0.0933**	0.04548***	0.05031**	0.03947***
Population	1.3668***	1.359***	1.7178***	1.3151***	1.1007***	1.0828***
Openness	-0.9354	-0.9253	-0.6111	0.065	-1.626*	-0.1653
Alignment with US		0.14648	0.1364	3.7834**	-0.8921	4.4362***
Land Area				12.0359***		17.672***
Financial Openness				-0.1326		-0.07022
Democracy					0.02014	0.0445
Female in Labor Force					-0.03082*	-0.01694
Communist Legacy					0.2176	-5.2395***
<u>Regions<sup>^</sup>:</u>						
Asia Pacific			2.5594			
Latin America and Caribbean			3.2147*			
Middle East and North Africa			3.1529*			
Sub-Saharan Africa			2.6960			

Table 4.3E – Regression (4) Results with the inclusion of Total GDP and GDP per capita as *interaction term*.

Dependent variable is G20 membership (1 – G20 member; 0 – non-member). Statistical significance at \*\*\* 1%, \*\* 5% and \* 10%.

<sup>^</sup> Reference group used was Europe. The North American region was omitted as the sample is too small.

<sup>+</sup>Models E1 and E2 have the same results as Models D1 and D2, and are therefore omitted in this table

### *Analysis of Regression Results*

Tables 4.3B to E show the results for regressions (1) to (4) respectively. In my first regression (Table 4.3B), GDP per capita lost its significance as more controls were added to the regression. In fact, GDP per capita became negative from Model B2 and the sign persisted across the regression models. This indicates that either some other variable, or a component of GDP per capita, was more significant in determining G20 membership. On the contrary, population and total trade persistently remained statistically significant with more controls added. In Model B5 and B7, the significance of population was reduced by the inclusion of land area, which remained always significant at 1%. This implies that the size of the country is definitely crucial in determining G20 membership, and either land area or population size can count towards admission, but not both.

My fourth baseline variable, alignment with the US, did not display any significance across the models (except for Model B4, which will be commented on later). This addresses the notion that the G20 is not a coalition of like-minded states, like the G7. The inclusion of countries such as Indonesia, China and Russia shows that the group addresses economic over political interests.

The relationship between population and GDP per capita is implied by the loss of significance to GDP when more controls were added. As many small countries tend to have high GDP per capita, the effect of GDP per capita on G20 admission is understandably insignificant. In fact, my results reinforce the notion that economic power is not projected merely by GDP per capita alone, but by a combination of possibly GDP per capita and population.

Although trade remained significant across the models, it is difficult to determine if trade, as a component of GDP, is an accurate determinant of G20 membership. Since it is likely that countries with more trade are also more likely to have high GDP per capita and population, I proceeded to regression (2) with a different set of baseline variables to assess the credibility of trade as a determinant.

In the second regression (Table 4.3C), total GDP remained significant across all 5 models, reinforcing my analyses from regression (1) that both GDP per capita and population have an aggregate effect on G20 membership. Of particular interest is the relationship between openness and land area towards G20 membership. My results show that not only is the effect of openness negative, it loses its significance when the size of a country – measured by its land area – is included in the regression.

Herein reflects that economic power is more strongly measured in a country's total GDP and not its openness to trade. In fact, the negative coefficient draws a conclusion that is contrary to that implied by the G20's self-assessment: while G20 countries constitute "75% of total world trade" (G20, 2014), it is not so much that they are more open to trade, but that they have larger economies and can thus form a larger proportion of global trade volumes. In other words, my results reveal that as long as the country has strong economic power – projected by its total GDP – its contribution to world trade does not matter as much in joining the G20.

A country's physical size, measured by its land area, had an effect that was also observed in regression (1). In this case, a country's openness lost its significance with the inclusion of land area, which further emphasized that a country's economic size is more significant than its openness to trade. A similar observation can be made for the alignment variable – countries' political alliances do not matter as much, if at all, in joining the G20, which prioritizes economic interests over political ones.

My third regression (Table 4.3D) verifies all the observations made in the earlier two regressions. Without trade as a variable, population and GDP per capita remained significant across all 6 models. This agrees with my earlier analyses that population and GDP per capita has an aggregate effect on G20 membership. Similarly, openness has a negative effect across all models, reinforcing a similar trend that was also observed in regression (2). Land area, when included, was also shown to be highly significant, but in this regression, it does not have the similar effect on population as it did in regression (1). Here, population remained significant at 1% when controlled for country size. This appears to further strengthen the notion that a country's economic power is

projected more strongly by its aggregate GDP, not so much by its sheer physical size. When controlled for land area, GDP and population still count as significant indicators of membership.

In addition, the alignment variable stood out in my third regression for remaining statistically significant across different models. Although its significance remained not more than 5%, it appears to show that it might be have some explanatory power as a secondary variable in determining membership. I will attempt to investigate the significance of this variable when exploring the data anomalies that are present in my model later.

My fourth and final regression (Table 4.3E) wraps up this analysis by indicating the consistency of population and GDP as significant determinants of G20 membership. The significance of the interaction term suggests that GDP per capita, which was found to be significant in regression (3), has greater explanatory power when a country's total GDP is also taken into consideration. This hence reveals that countries with both high total GDP and GDP per capita are necessary for getting invited as a G20 member. However, having observed that countries with high GDP per capita tend to be smaller countries with less influence to the global economy, I establish total GDP as a stronger indicator of membership for the G20.

After 4 different modes of analyses, I have attempted to determine empirically, a set of socioeconomic factors that can explain the composition and membership of the current G20. My findings have shown that on aggregate, a country's economic power is more significant in determining its membership into the G20, and this is projected by the size of its GDP, which can be deconstructed into its total GDP and population. A country's alignment with the US does not provide as much explanatory power towards G20 membership, but can have some influence if the countries' openness to trade are controlled for, and can possibly be deemed as a secondary explanatory variable. Although trade was believed to be significant towards G20 membership, a country's openness towards trade is shown to be insignificant and even negative. My results agree with the longstanding notion that the G20 serves to fulfill largely economic interests, and not political ones like the G7.

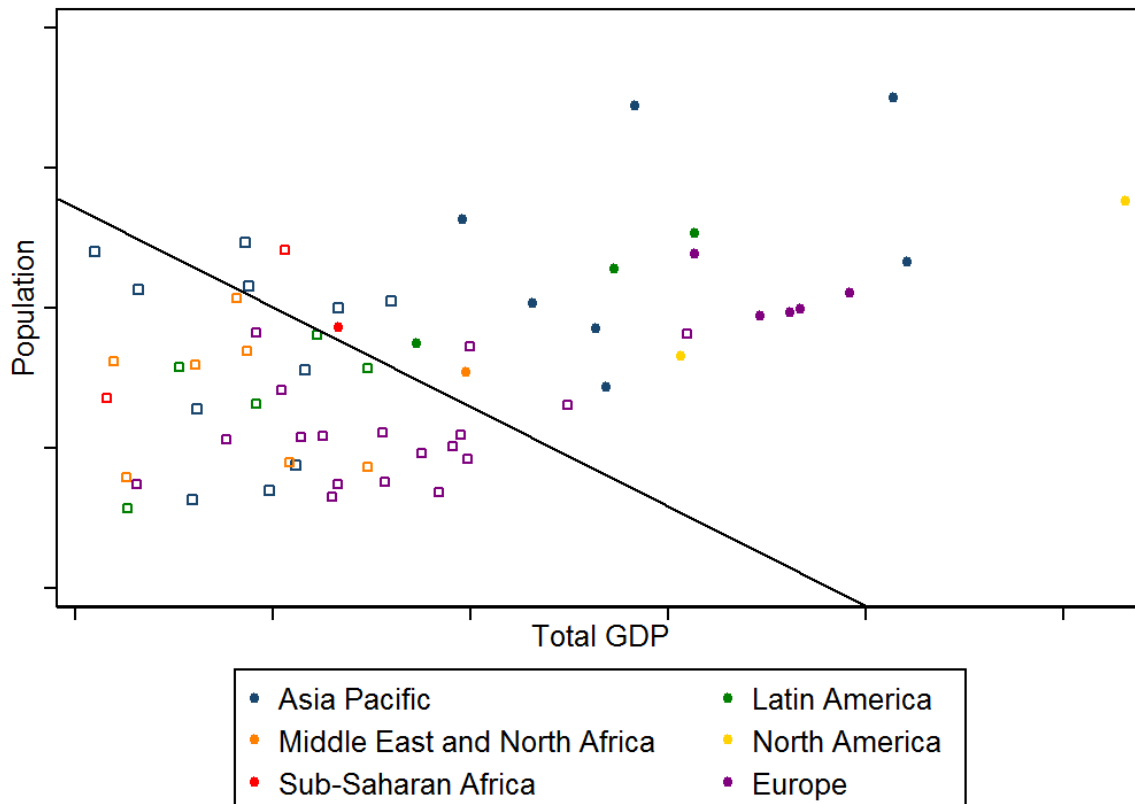


### **The Total GDP-Population Model for G20 Representation**

Having established that the G20 focuses on economic interests and thus accepts only countries with significant economic power, I return to my original intention of understanding representation in the G20. Given a specific characteristic – economic power – that the G20 needs in fulfilling its objectives, I will attempt to understand if existing literature, which observes underrepresentation or overrepresentation in the G20, can be validated.

I return to Graph 4.2B, in which I used a scatterplot to illustrate the connection between total GDP and population on G20 membership. I showed that there is a clear cut off in terms of total GDP and population – countries that are above the cut off are always usually admitted. In my regression results earlier, total GDP and population are found to be significant determinants of G20 membership. This shows that the total GDP-population model is consistent with my empirical findings, validating its usefulness in explaining the nature of representation in the G20.

Graph 4.4A shows a modified form of the earlier graph, with the countries' originating region marked out by different symbols. I will be using this graph to further analyze the distribution of regions that are represented in the G20, and if the existing admission criteria creates a representation problem.



Graph 4.4A – Scatterplot of population against total GDP, with each country’s originating region denoted. G20 members are marked with **bolded** symbols. Source: World Bank (2008)

Graph 4.4A illuminates an otherwise mysterious nature of G20 admission, especially with regards to its regional representation. When the countries’ regions are added, there is a clear indication that some regions have more representation than others. For instance, there are 6 countries from the Asian-Pacific region in the G20, but only 1 from the Middle East and North Africa, and 1 from Sub-Saharan Africa. The graph seems to imply a biased inclusion of Asian and European countries, which make up 12 of the 19 countries that are in the G20. The European Union, which was included as the 20<sup>th</sup> “country” makes representation a bigger contention in the G20. This seeming overemphasis on European power has spurred literature that delegitimized the G20 and accused the organization as a “self-appointed...body that has no authority to assume its current role” (Wade and Vestergaard, 2010).

To further understand the nature of representation in the G20, I reproduced 5 different variants of Graph 4.4A to identify the countries that are represented in each region. Graphs 4.4B to F show the spread of countries that are member or non-members of the G20 in each of the 5 regions. North America was omitted as both of its represented countries – USA and Canada – are in the G20.

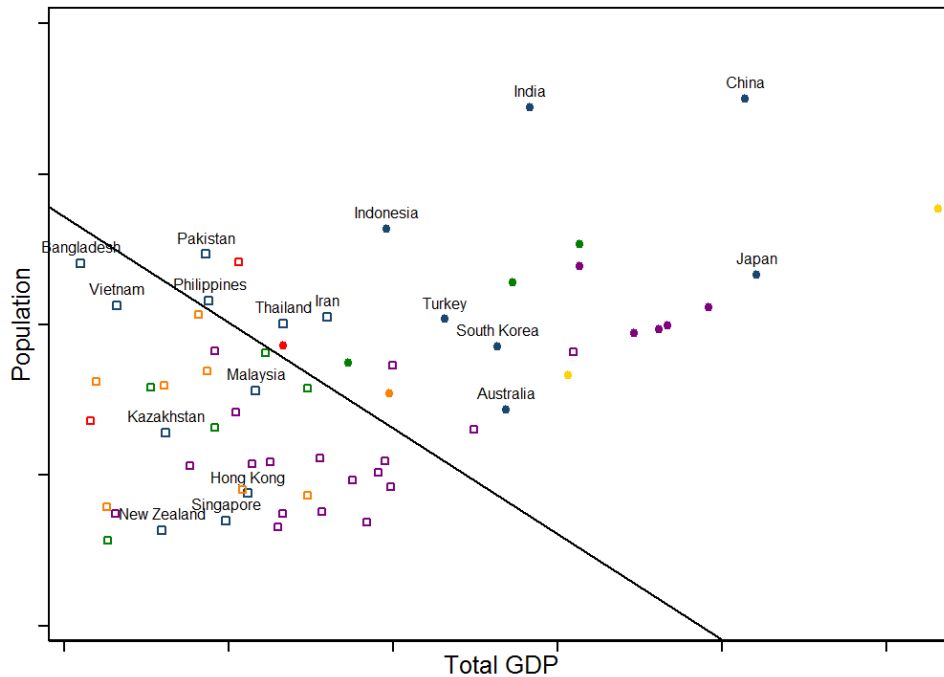
First, the distribution of countries in Sub-Saharan Africa (Graph 4.4D) and Middle East and North Africa (Graph 4.4C) revealed that South Africa and Saudi Arabia are the first countries in their respective regions to be above the cut-off between population and total GDP. In other words, these two countries are deemed to have the highest economic power in their regions and are granted G20 membership in view of their economic importance.

The scatterplot of countries in Europe (Graph 4.4F) shows a reverse trend. Because there are at least 5 countries that are above the cut-off, Spain, Poland and the Netherlands were excluded from the G20. In fact, the 5 countries that are present in the G20 are also the top 5 European countries in terms of population and total GDP. This appears to further explain the inclusion of Spain as a permanent invitee, given her economic power when measured by an aggregate of population and total GDP. I will explore Spain's admission into the G20 in the next section. This observation further formalizes Europe's influence and importance in the global economy.

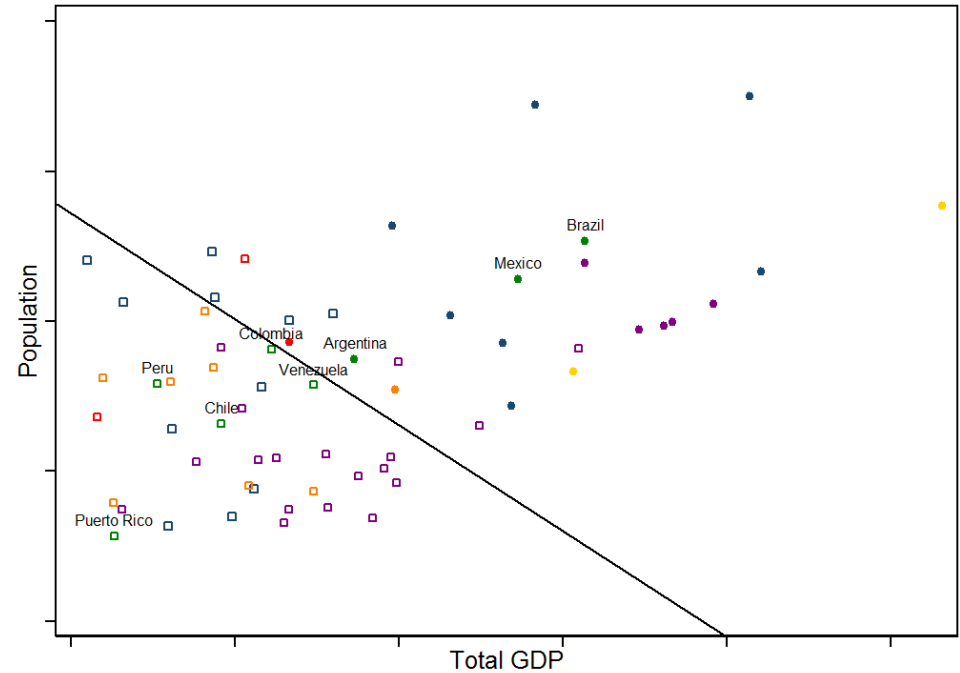
Graphs 4.4B to D – Scatterplots of population against total GDP, distributed by regions.

Regions represented are Asia-Pacific (Graph 4.4B), Middle East and North Africa (Graph 4.4C), Sub-Saharan Africa (Graph 4.4D), Latin America and Caribbean (Graph 4.4E) and Europe (Graph 4.4F).

Countries in each region are labelled. G20 members are marked with **bold** symbols. Non-members are shown in square labels. Source: World Bank (2008)

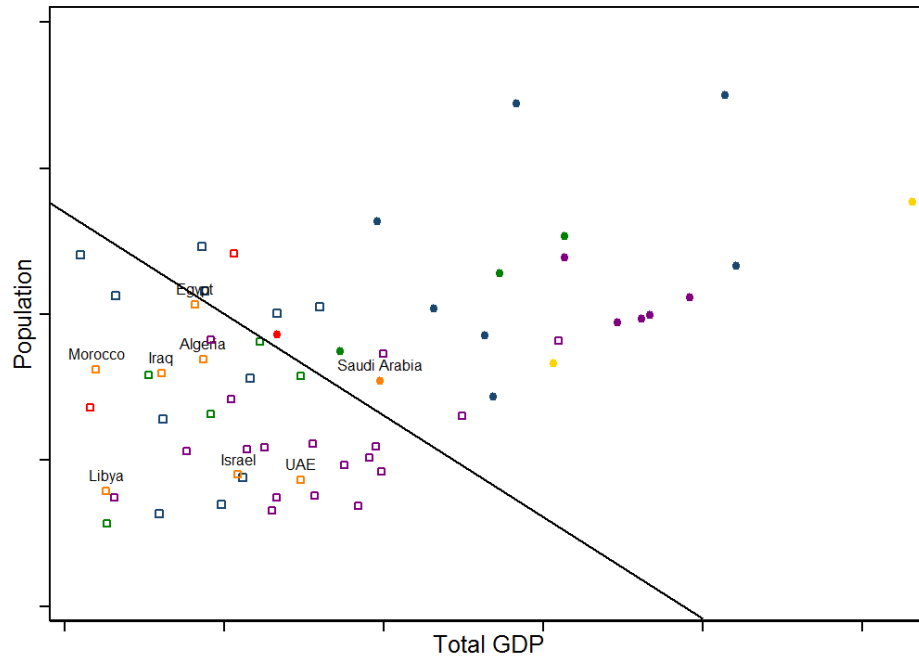


Graph 4.4B – Asia-Pacific

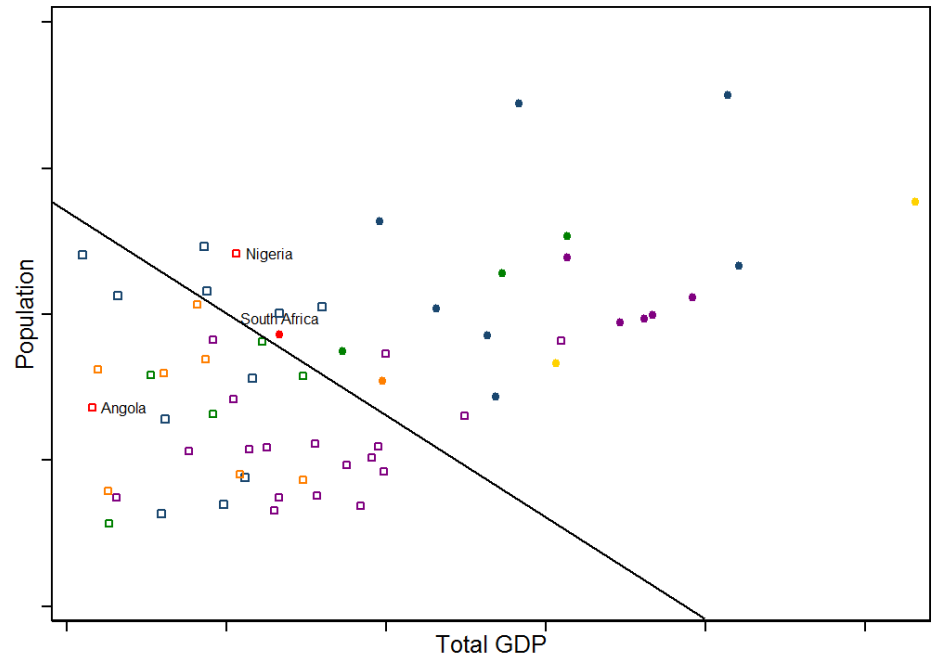


Graph 4.4C – Latin America

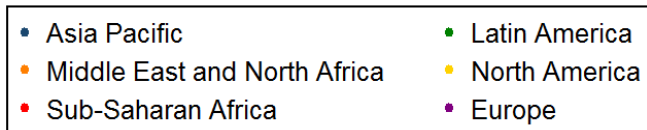


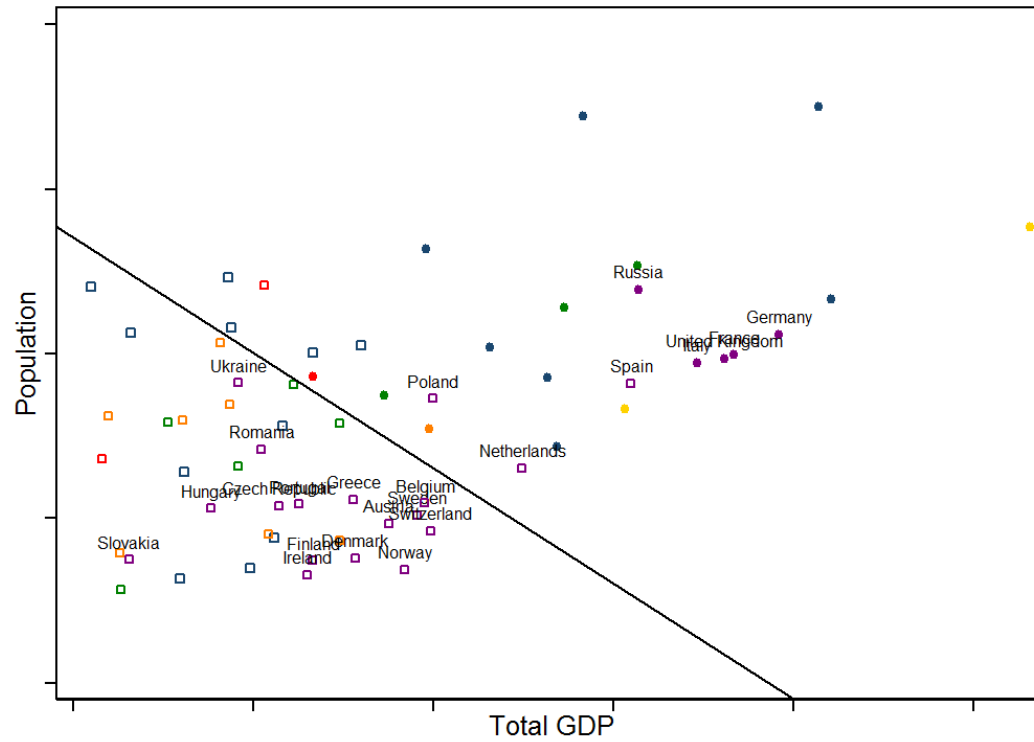


Graph 4.4D – Middle East and North Africa



Graph 4.4E – Sub-Saharan Africa





Graph 4.4F – Europe



A look at the scatterplot for Asia-Pacific (Graph 4.4B) allows me to draw similar conclusions as those from the Europe graph: the 7 Asian countries with the highest economic power were admitted. Countries around the cut-off, such as Iran and Thailand were excluded. This graph also reveals the proximity of Singapore, a case study which I will look into in the next section, to the cut-off region and the rest of the Asian countries in terms of its economic power. The G20's emphasis on Asia-Pacific also reveals a belief towards the importance of Asia in terms of economic power.

Finally, Graph 4.4E shows a similar trend in terms of G20 membership in the Latin American region. Countries that are included –Argentina, Brazil and Mexico – are ranked the top 3 in population and total GDP. They are also positioned well above the cut-off in the scatterplot.

My analysis henceforth illustrates the notion of conditional representation. As the G20 was created to serve economic interests, the need to include countries with significant economic power was therefore vital in meeting its objectives. Graphs 4.4B to 4.4F thus reveal that, condition on the countries' economic power, only countries that meet a minimum cut-off are able to join the G20. In fact, I will point out that the G20 has attempted to improve representation, by imposing different GDP cut-offs for different regions. Table 4.4 shows the lowest GDP of the countries in each region represented by the G20. Once again, North America is omitted as both represented countries are in the G20.

Region	Lowest GDP requirement or total GDP cut-off (by 10 <sup>11</sup> )
Asia-Pacific	2.7258
Latin America and Caribbean	3.156
Middle East and North Africa	3.5475
Sub-Saharan Africa	2.08065
Europe	15.9342

Table 4.4 – Values of total GDP cut-off for each region. Based on data from World Bank (2008).

Evidently, Table 4.4 highlights that regions of higher development, in particular Europe, will have higher cut-offs for joining the G20. The seemingly lower GDP cut-offs for Asia-Pacific cannot be interpreted in a single dimension, largely because economic power is perceived as an aggregate between total GDP and population, as my regression results have alluded to earlier.

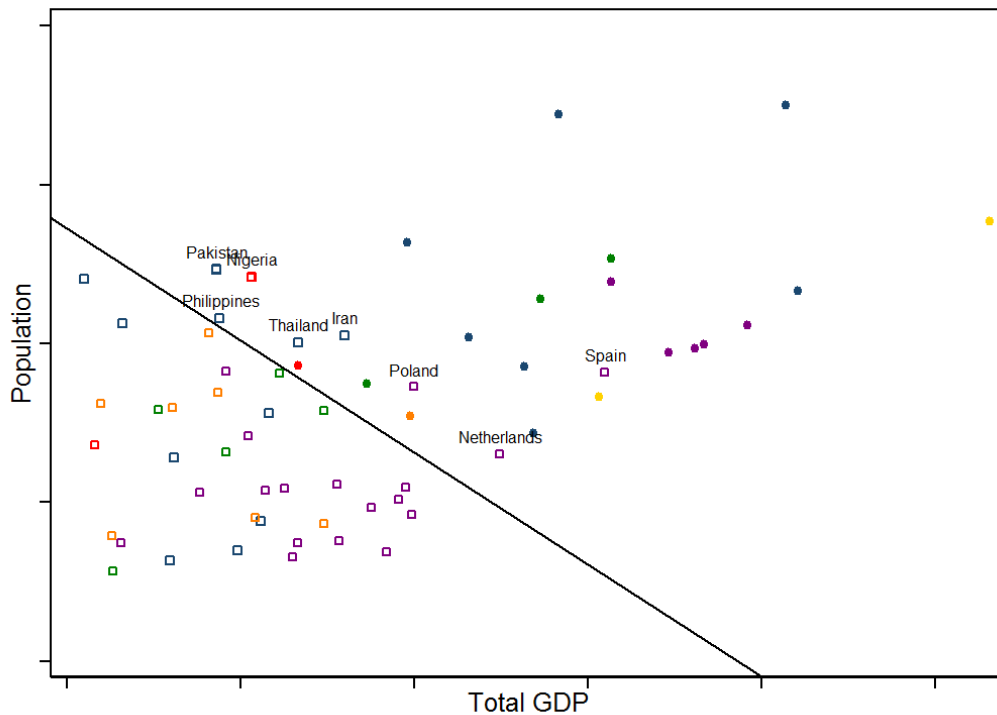
Looking at the G20 through the paradigm of “conditional representation”, I observe that only countries that have sufficient economic power in their respective regions will be included. This is important in serving the economic interests of the G20. The different cut-offs illustrate differences in regional development, as alluded to in Graphs 4.4B to D and the lowest GDP of G20 members in each region, in Table 4.4. The heavy emphasis on Europe and Asia-Pacific highlights the importance of the two regions in influencing the global economy. This therefore addresses the contention that G20 has caused underrepresentation or overrepresentation in different regions. In fact, the underlying and broader contention is in the differences in regional development around the world. Having understood that the G20 is meant to address economic objectives, the existing composition only reflects a practical approach in including countries with sufficient economic influence in the global economy, not so much to address regional differences in development.



### Data Anomalies in this Model

My attempts to find a clear criterion for G20 membership had been a tricky one, largely because while economic power is the main determinant, there are several data points which do not agree with the arbitrary cut-off that was transposed on my scatterplots. In this section, I will identify the anomalies present in my data, and attempt to explain the reasons for their existence.

To do this, I return to Graph 4.4A, in which countries are put in a scatterplot with their population against total GDP. I zoomed in on the top-left quadrant of the graph, focusing only on countries with high total GDP and population for this analysis. Graph 4.5, a variant of the earlier graph, has been produced below.



Graph 4.5 – Scatterplots of population against total GDP with data anomalies  
G20 members are marked with bold symbols. Countries that are above the cut-off but are non-members are labelled. Source: World Bank (2008)

Once again, Graph 4.5 reveals that, barring any regional differences, only countries that meet the cut-off will be admitted into the G20. However, there are several anomalies; if we use the cut-off as a definite determinant of economic power and thus G20 membership, then there exist countries which lie above the cut-off but are not G20 members. These countries are therefore labelled in Graph 4.5. The countries are further grouped by their region to understand if different qualifying factors are present in creating these anomalies.

*Group 1: Europe – Spain, Netherlands and Poland*

Anomalies in this group can be easily explained by the need to provide representation in other less developed regions. As I pointed out earlier, Europe's high level of development has led to a high regional GDP cut-off into the G20. In fact, 4 of the 5 European countries that are currently in the G20 are also members of the G7. Russia was a member of the G8 before its membership was "suspended" in March 2014 as a result of the Crimean Crisis (Smale and Shear, 2014).

With 8 countries above the cut-off, it is not surprising that the G20 did not see a need to expand membership to other European countries and retained the 5 previous members of the G8. Spain's "permanent invitee" status in the G20, can therefore be explained by its economic power, having ranked 6<sup>th</sup> on aggregate between population and total GDP in Europe. The exclusion of Poland and Netherlands illustrates a conscious need for the G20 to include countries from other regions, and prevent a domination of highly developed European countries. This further strengthens the notion of conditional representation, illustrating an adherence to a criterion that is expressed by a country's economic influence and importance, and that an upper limit had existed in representing European countries

*Group 2 – Asia-Pacific – Philippines, Thailand, Iran and Pakistan*

Given that Asia and Europe constitute a majority of the G20, a similar case can be made for the Asian countries that are currently excluded – only the top 6 countries in terms of population and total GDP are granted membership. Returning to my regression results earlier, I noted that alignment could be a secondary variable in determining G20 membership. This directed me to investigate the

political characteristics of these countries that were excluded from the organization. I found that, although there is a distinct divide between G20 members and non-members in terms of population and total GDP, the 4 excluded countries have considerably lower alignment and Polity IV scores than their counterparts in the Asia-Pacific region.

In my sample of 47 Asian countries (N=47) with reported alignment scores, I ranked their scores in descending order to understand if G20 members have the greater alignment with the US. Unsurprisingly, China was ranked 43 out of 47, but is granted G20 membership as a result of its economic power. This also goes in line with my earlier results that alignment in the US does have as much significant, on aggregate, in determining G20 membership.

The 4 excluded Asian countries were ranked 28 (Thailand), 29 (Pakistan), 39 (Philippines) and 41 (Iran). I was unable to conduct regression on this sample given its small size, but by observation, the rankings seem to imply that the countries' alignment did not work in their favor when G20 membership was given out.

A similar observation was made for Polity IV scores of the Asian countries. In my sample of 37 countries (N=37) with measured Polity scores, all G20 members were ranked in the top 10, with Turkey ranked 11 and China ranked 32. This ranking reveals a strong connection between a country's political openness and its degree of democratization to G20 membership. China, once again a clear anomaly in this instance, was included as a result of its economic power in the Asian region. In this set of rankings, Thailand was in 19, Pakistan in 16 and Iran was ranked 28. Philippines was ranked 10, just one rank above Turkey.

Without complete regression results, I am unable to determine the significance of the political characteristics in explaining membership of Asian countries in the G20. Observation by ranking has hinted at a more dynamic assessment of the Asian countries' political inclinations as well as their economic power in granting G20 membership.

*Group 3 – Sub-Saharan Africa – Nigeria*

The choice of South Africa over Nigeria for G20 membership can also be traced back to their level of democratization. In terms of Polity scores, South Africa was given a 9, while a 4 was associated with Nigeria. Similarly, the small sample size (N=48) meant that I was unable to collect complete regression results to understand the significance of political variables for G20 membership. Through the disparity in Polity scores, I can observe that the countries' political inclinations were also similarly assessed when the G20 was formed.

In this section, I identified the countries that have sufficiently high GDP and population (above the cut-off) but were not included in the G20. European countries that were excluded were not previous G8 members, and there was therefore no incentive for the G20 to include more European countries without over-representing the region. For Asian and African countries that were previously not part of the G8, however, their political inclinations, measured by either their level of democratization or alignment with the US, were also a contributing factor for their membership in the G20.

### **Understanding G20's Nature of Representation**

Using a series of data analytics, I distilled G20 membership as an outcome determined by economic power, which could be defined as an interaction between population and total GDP. This allowed me to build a graphical model using the two variables in a two-way scatter plot, revealing that an estimated cut-off exists that separate G20 members from non-members. Anomalies in this model can be accounted for with their political characteristics in line with a US-centric perspective of international politics.

Representation in the G20, however, does not present a problem for an organization that was designed to meet economic objectives in both 1999 – the year the organization was formed – and 2008, when the G20 Leaders Summits were formalized. In both of these instances, the countries that were chosen were picked based on their economic power, as my model shows, and the G20's nature of representation is therefore conditional on the country's influence in the global economy.

While existing literature may point that the G20 should expand its representation to be more equitable to regions such as Africa and the Middle East, my model has revealed that, in effect, the seemingly biased allocation of G20 membership is a result of the two regions' slower economic development. In other words, whichever country that meets this criterion of economic influence, is already in the G20.

If the G20 continues to focus on its economic objectives, the current representation should pose no problem for the near future. However, it is important to realize as the organization expands its agenda to non-economic aims, it may not be as effective in achieving the consensus and aspirations that the G20 was set out to provide. New organizations with specific objectives should be created with compositions that can best meet its interests. It might be timely for the G20 to review the goals that its members do not have the comparative advantage for.

## **SECTION 5**

### **REPRESENTATION IN THE G20 INVITATION SYSTEM**

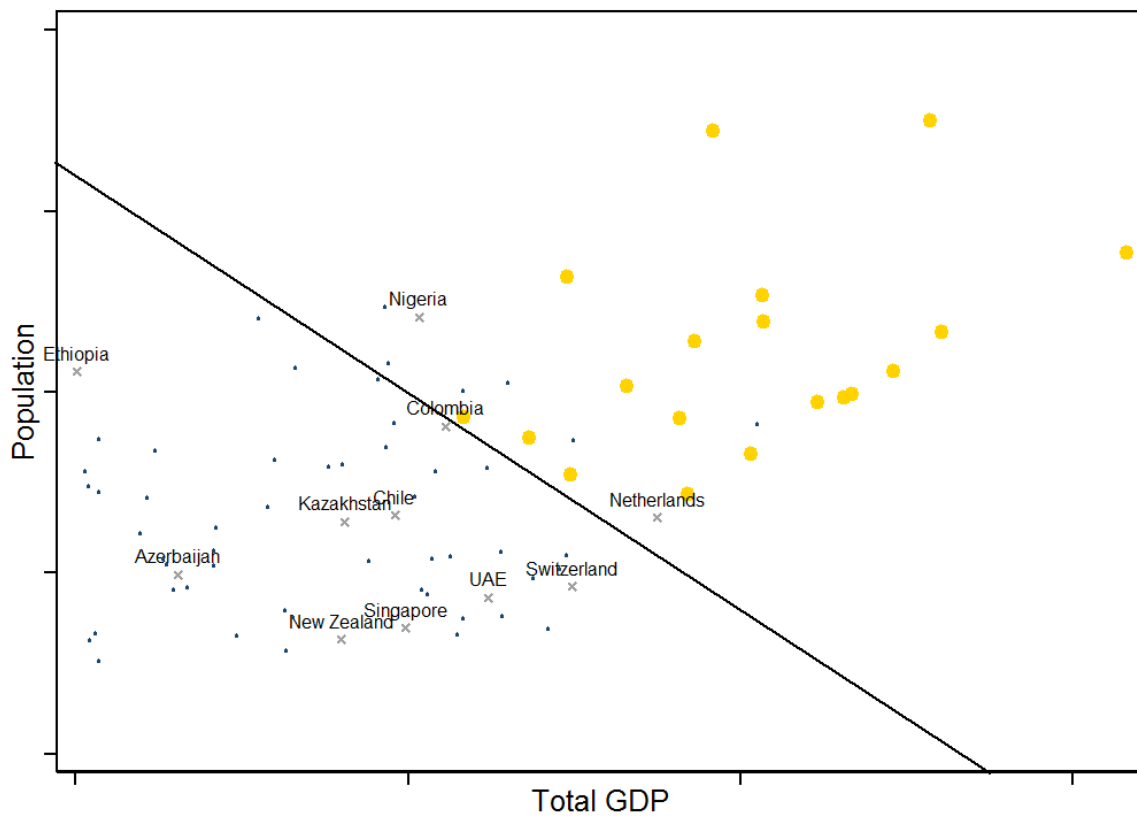
Having established that economic power and in certain occasions, political inclinations can affect a country's admission into the G20, I will take the analysis in a different direction by looking at countries that were invited to the G20 Summits. Invitation to the G20 comes in two different forms: a) the chairing country of each of 3 regional organizations (the Association of South-east Asian Nations, African Union and the New Partnership for Africa's Development), or b) as an invitee from the year's G20 host country (G20, 2014). In this case, by "invited countries", I necessarily refer to countries that were given an invitation from the host country, as the chairs of the 3 organizations are invited through an institutional mechanism that is beyond the scope of this thesis.

Because the countries that were invited change annually, it may be difficult to identify one or a set of determining characteristics that differentiate countries for them to be invited. To complicate the issue, the country which hosts the Summit has the authority to pick which countries to be invited, and hosts may invite countries to serve their self-interests. I will therefore observe if invited countries will be in line with the predictions made by my Total GDP-Population model. In addition, I will also use the model to illustrate if the invited countries lie close to the estimated cut off, and determine if they have the sufficient "systemic importance" to justify their invitation to the G20.

Finally, I will close the analysis by drawing focus on Singapore – an interesting case study for G20 invitations. In particular, Singapore, a city state with not more than 5.5 million people, has been invited to the G20 Summit for 5 times in the past 7 years. The final part of this chapter will therefore look at how Singapore fits or does not fit in with the criterion that was identified in the previous chapter. I will also illustrate using qualitative and quantitative evidence, characteristics that differentiate Singapore from other countries, and allow it to be consistently invited to the G20 Summits.

### Invited Countries in the Total GDP-Population Model

To understand if invited countries have comparable economic power to be relevant for the G20, I will apply the Total GDP-Population derived in Chapter 4 (Graph 4.2B). In a modified version, Graph 4.6 shows the distribution of invited and G20 countries. Table 4.6A shows the list of invited countries for each G20 Summit since 2008.



Graph 4.6 – Scatterplot of population against total GDP with invited countries. Countries invited since 2008 are denoted with a cross and labelled. The scale is slightly modified to include all the invited countries.

Sources: World Bank (2008), G20 Press Releases (2008-2015)

Year and Location of Summit	Invited Countries
2008 Washington DC	<i>None</i>
2009 London	Netherlands
2009 Pittsburgh	Netherlands
2010 Toronto	Netherlands, Nigeria
2010 Seoul	Singapore
2011 Cannes	Singapore, Ethiopia, United Arab Emirates
2012 Los Cabos	Chile, Colombia
2013 St Petersburg	Singapore, Kazakhstan, Switzerland
2014 Brisbane	Singapore, New Zealand
2015 Antalya	Singapore, Azerbaijan

Table 4.6 – List of countries invited to the G20 Summits. Only countries not invited as the chair of an international or regional organization are listed.

Source: G20 Press Releases (2008 – 2015)

The scale for Graph 4.6 is slightly larger to include Azerbaijan and Ethiopia, which lay outside the original plot area. Apart from Netherlands, none of the invited countries actually lie above the cut-off line. Netherlands' position in the population-total GDP graph implies that its economic power was deemed sufficiently influential in the early years of the G20. Between the Washington DC and Toronto Summits, the global economy was undergoing a financial crisis that required the involvement of major European countries. For an organization that focused on economic recovery and stabilization after the 2008 financial crisis, Netherlands' invitation to the first 3 Summits may not seem particularly surprising.

Graph 4.6 also shows that invited countries do not necessary lie close to the estimated cut-off. In particular, Ethiopia and Azerbaijan were furthest to the left of the cut-off. While countries such as UAE, Switzerland, Colombia and Nigeria seem to be closest to the cut-off in terms of their population and total GDP, Singapore – a 5-time invited country – does not lie as close to the cut-off as was expected. In fact, Graph 4.6 even shows that there are at least 10 other countries which are closer to the cut-off, have greater projected economic power, and may theoretically be more relevant for the G20.



As the trend in Table 4.6 shows, Singapore was consistently invited by the G20 hosts after the 2010 G20 Summit in Seoul, where the Seoul Action Plan was envisioned. As this was around the same time as the onset of the Eurozone crisis, it may be possible that the G20's focus was redirected to the Asian region as the new economic standard. Singapore's repeated invitation hence may illustrate some unaccounted and potentially measurable characteristic that granted it relevance and importance to the G20 Summits. More importantly, the inclusion of Singapore with one another country in the same region as the host (Russia inviting Kazakhstan; Australia inviting New Zealand and Turkey inviting Azerbaijan) appears to be a new norm in the G20 invitation system. A deeper analysis of the structural and institutional characteristics that differentiated Singapore from other non-members will therefore be necessary to establish the city state's importance to G20 process.

### **Singapore's Advantage for the G20**

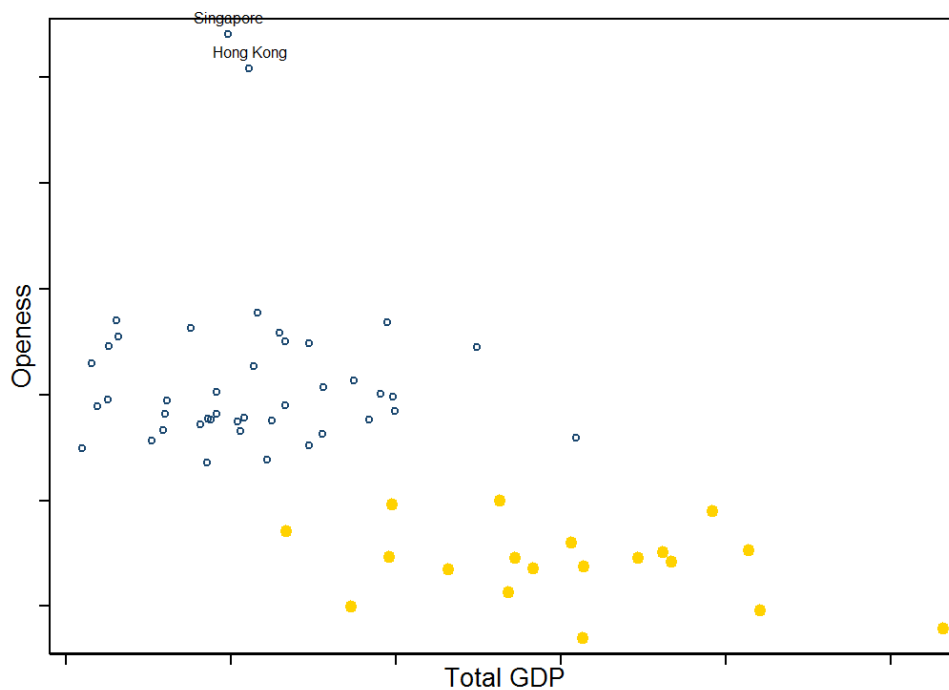
In the previous few sections, I have established that an estimated criterion exists for G20 membership. This is projected by a proxy of economic power, which I used population and total GDP to approximate. Invited countries are shown to have economic power that is close to that of G20 members. Although some invited countries appear to have much less economic influence than what my data predicts, their invitations appear to be a one-off gesture by the G20 host countries. Future work can look into the strategic importance of the respective invited countries to each year's G20 host, but that is beyond the scope of this thesis.

Singapore has been positioned as an interesting data point to consider. The country has been constantly invited by different G20 host countries, but is shown to lie some distance away from a projected cut-off for G20 membership. In this section, I will finally consider qualitative and quantitative evidence that illustrate to Singapore as a unique case for academic analysis of the G20. I will then draw some conclusions for other non-G20 members and small states in the following section.

### (A) Trade Openness

One of the variables that I used in my regressions was that of trade openness. In this measure, I divided total trade by total GDP to obtain an indication of a country's dependence on trade for economic growth, and hence its openness to trade.

In my sample of 195 samples (N=195), Singapore's GDP per capita was ranked 28 in 2008. As a small country with about 5 million people, Singapore's GDP can be said to be one of the highest in the world. With limited physical resources, the country's economy has always been reliant on trade to attain such high levels of GDP. It therefore likely that Singapore has a significantly high openness to trade when compared to other countries in the region. Graph 4.7A shows the distribution of openness and total GDP in 2008.



Graph 4.7A – Scatterplot of openness against total GDP.

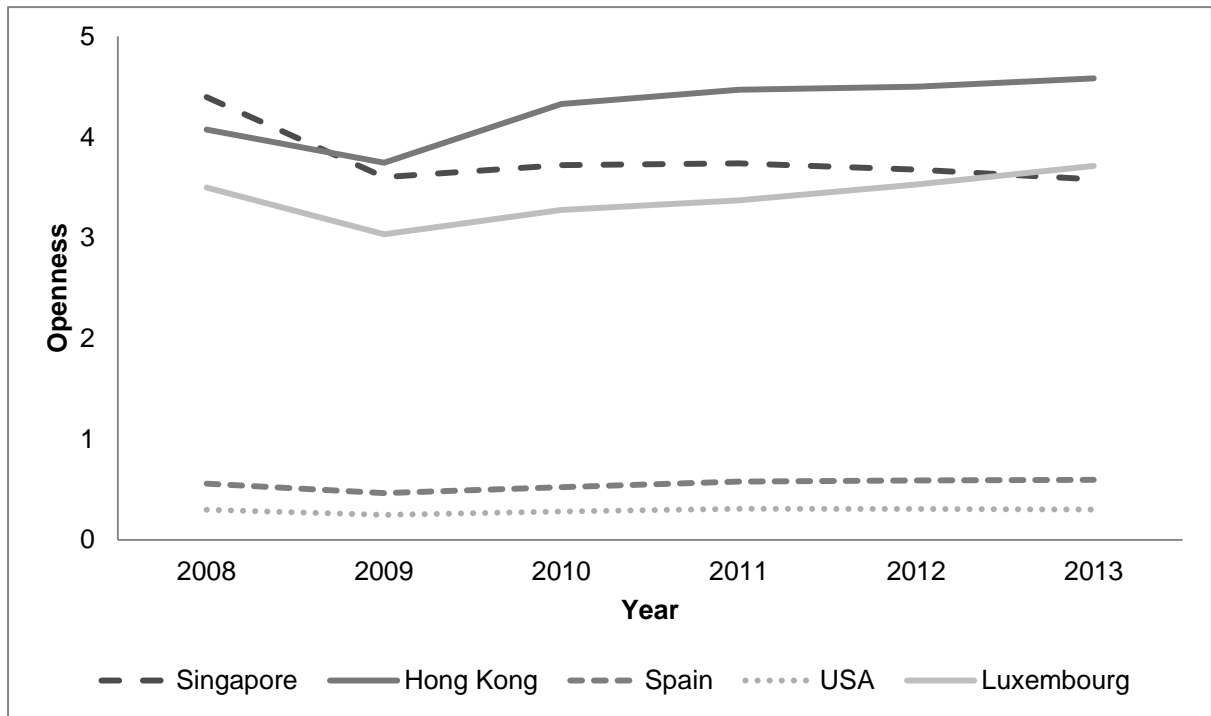
G20 members are marked in **bold** symbols. Countries that lie outside the general scatter are labelled.

Source: World Bank (2008)

Through Graph 4.7A, I observed that both Hong Kong and Singapore have significantly higher openness than all other countries in 2008. In fact, both countries have openness ratios greater than 4, which indicate that their trade volumes are at least 4 times their total GDP. For a country with a small domestic economy, Singapore's dramatically high trade volume does not come as a surprise.

Using this model of analysis, there is also a very clear distinction between G20 and non-G20 members in terms of their trade openness and total GDP. In fact, the graph seems to imply that there is a clear relationship between openness and total GDP that can determine a country's involvement in the G20. This appears to be in line with my regression results in the earlier sections, reflecting the significance of openness and total GDP in determining G20 membership.

However, Table 4.6 also showed that Singapore's invitation to the G20 Summits only began in 2010, after the 2008 financial crisis had subsided in both the United States and Europe. To support the global economy, the G20 agenda expanded to include trade facilitation, financial regulation and even developmental financing (Cooper and Thakur, 2012). These new objectives meant that new countries that were influential in the global economy can now be deemed relevant to the G20. Singapore's constant invitation to the G20 Summit illustrates the G20's interest in supporting open trade and further validates Singapore's position as an important trading partner. Graph 4.7B further illustrates Singapore's involvement in global trade between 2008 and 2013.



Graph 4.7B – Openness of 5 countries between 2008 and 2013.

Adapted from World Bank (2008-2013).

I have included top 3 localities in terms of trade openness – Singapore, Hong Kong, Luxembourg, the United States and Spain as a comparison. The graph clearly shows that Singapore is ranked consistently in the top 3 in terms of trade openness, illustrating its consistent role as a major global trading partner.

However, it was not just higher openness that was key to Singapore’s continued invitation to the G20. Although Hong Kong is shown to have consistently higher openness after the onset of the 2008 financial crisis, its lack of political autonomy as a Special Administrative Region of China, minimizes any possibility of getting involved in the G20. Besides, as the Chinese central government represents all of its regions and localities, inviting Hong Kong to the G20 Summit will be inappropriate in political terms.

Luxembourg’s high trade openness was also shown to surpass Singapore’s in 2013, but with 6 European countries and the European Union already in the G20, inviting Luxembourg to the Summits

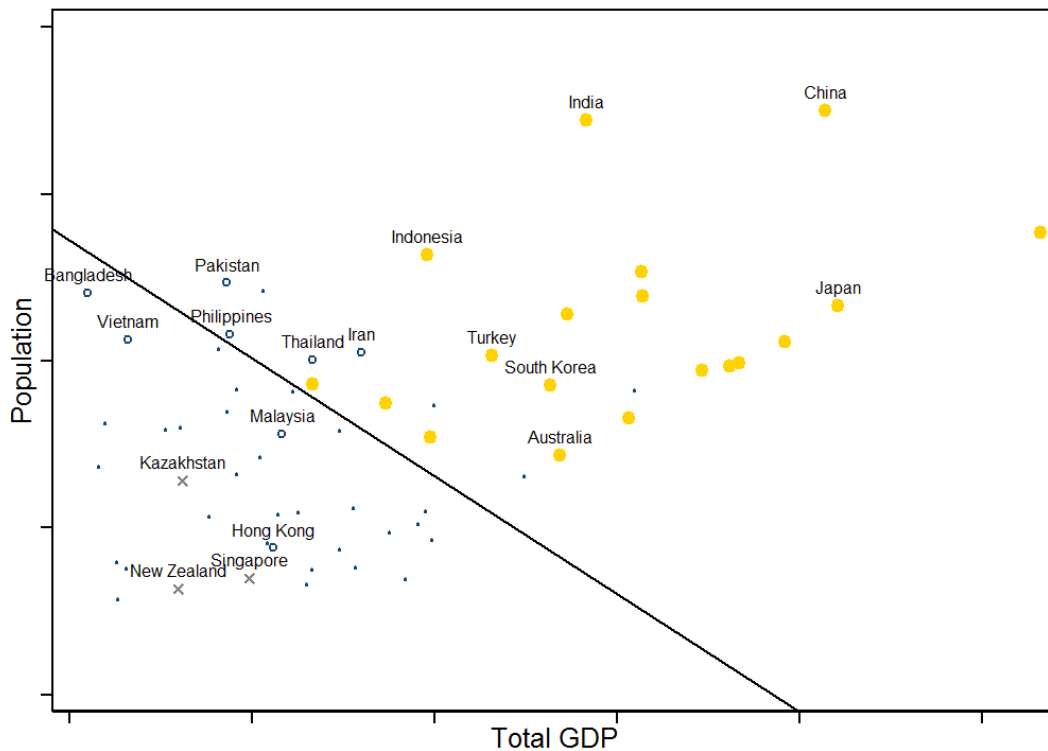
will draw opposition from non-members and academics, who continually still accuse the G20 of a lack of representation.

Singapore's openness to trade allowed the city state to differentiate itself from other countries and get involved in the G20. Its geographical location and political autonomy helped to increase its profile and relevance to the annual G20 Summit as a trading powerhouse.

#### (B) Regional Economic Power

Apart from differentiating itself on an international level, Singapore also has to maintain its importance on a regional level. To show how Singapore matches up with other Asian countries in terms of economic power, I reproduced Graph 4.6 and labelled all the countries in the Asia-Pacific region. Graph 4.7C shows the modified scatterplot of population against total GDP.

Evidently, as Graph 4.7C shows, Singapore's economic power may not appear as high as other Asian countries. In fact, as illustrated earlier, there are Asian countries that may be above the estimate cut-off but are neither members nor G20 invitees. This further highlights that other economic or non-economic characteristics have allowed Singapore to propel itself above other Asian countries and get involved in the G20.



Graph 4.7C – Scatterplot of Population against Total GDP, with Asia-Pacific countries labelled. G20 members are marked with a **bold** symbol. G20 invited countries are marked with a cross.

Sources: World Bank (2008), G20 Press Releases (2008 – 2013)

Further, Graph 4.7C shows that countries that are potential invitees and lie around the cut-off, are largely countries from Southeast Asia. In the following analysis, I will therefore focus on Southeast Asia as Singapore’s “region”. As Southeast Asia remains one of the fastest growing areas, the G20 may find greater reasons to engage countries in the region to further its newly expanded objectives. Singapore, by differentiating itself in the region, can seek to become a bigger player in the G20 Summits.

Singapore’s rapid economic development has been consistently cited as a model for other countries to emulate. In particular, for a region that still maintains a relatively low level of development, Singapore’s advanced and modern economy allows it to stand out within Southeast Asia. Table 4.7A shows the level of human development in Southeast Asia, and in particular the countries that have the potential to be invited to the G20, as shown in Graph 4.7C.

Rank	Country	HDI Score (2013)
9	Singapore	0.901
62	Malaysia	0.773
89	Thailand	0.722
108	<i>Indonesia</i>	0.684
117	Philippines	0.660
121	Vietnam	0.638

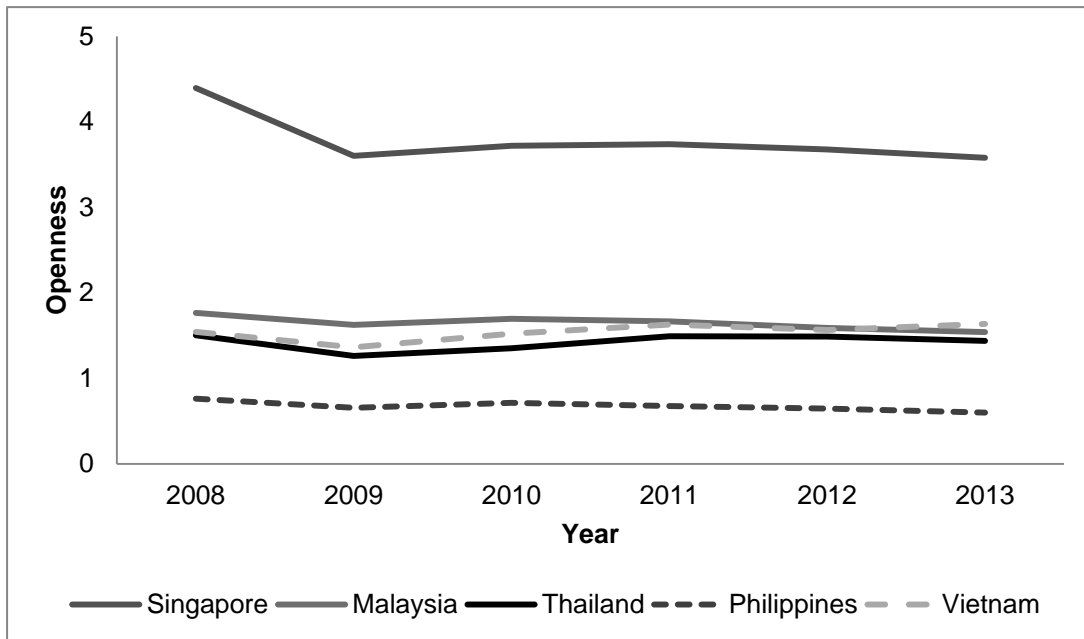
Table 4.7A – Level of human development in Southeast Asia, shown by the country’s score in the Human Development Index (HDI). The higher the score, the higher the level of human development.

Indonesia is a G20 member and is highlighted in *italics* for emphasis.

Source: United National Development Program (2014)

Data from Table 4.7A highlights Singapore’s high level of human development, as indicated by the country’s high ranking and score in the HDI report released by the United Nations. In the index, human development is an aggregate measure of a country’s quality of life, and is further broken down to indicators such as standard of healthcare, education, social welfare and environment. Singapore’s high score reveals a high standard of living that is achieved by advanced supporting infrastructure and policies that promote social mobility. Singapore’s position as an advanced country in a relatively low development shows its importance in promoting greater development in Southeast Asia. In the 2010 Seoul G20 Summit, the Seoul Development Consensus for Shared Growth further places developmental assistance and financing as one of the G20’s major goals (G20, 2010). Singapore’s developmental story can therefore be seen as important experience for other Southeast Asian countries to follow. G20’s constant invitation to Singapore is an indication of the country’s relevance to its developmental goals.

Apart from development, Singapore’s regional competitiveness can also be shown by her trade openness vis-à-vis other Southeast Asian countries. Graph 4.7D shows the different level of openness between countries in Southeast Asia.



Graph 4.7D – Openness of different Southeast Asian countries between 2008 and 2013.  
Adapted from World Bank (2008-2013).

Located in the crossroads between the Malacca Strait and South China Sea, Singapore's economic importance in Southeast Asia is further compounded by its high openness to trade. As I pointed out earlier, the G20 has taken on a new focus in trade facilitation, and Singapore's role as a trading hub in Southeast Asia further places the country on greater relevance for the G20.

While Singapore may appear to not have as strong an economic power projected by its total GDP and population, it makes up by having an advanced system for promoting strong human development, and positions itself strongly as Southeast Asia's trading hub. These economic factors gave Singapore the room to ensure its relevance and importance for the G20 to achieve the organization's goals.

(C) Good Governance

From the earlier section, I observed that Asian countries that lie above the cut-off were possibly excluded from the G20 as a result of their political inclinations or political openness. For



Singapore, a similar case can be made for its political characteristics as an explanatory factor for its continued involvement in the G20.

In terms of alignment with the US, Singapore ranks 36 in my sample of 47 Asian countries (N=47), above Philippines and Iran in my previous section, but below Thailand and Pakistan. Singapore's Polity score was also negative, given a -2 for a weakly autocratic regime. Singapore is ranked lower than Malaysia and Thailand, two main contenders of G20 invitations in the Southeast Asian region.

The distinction of Singapore from other Southeast Asian countries, however, lies with the country's clean, corruption-free government and stable political regime. Table 4.7B shows an aggregate of different indicators used for measuring the quality of governance in Southeast Asian countries. This measure is computed by the World Bank Group, and published as the Worldwide Governance Indicator for 6 different dimensions, as listed below.

Country	Voice and Accountability	Political Stability	Government Effectiveness	Regulatory Quality	Rule of Law	Control of Corruption
<i>Indonesia</i>	0.0	-0.5	-0.2	-0.2	-0.6	-0.6
Malaysia	-0.3	0.1	1.1	0.6	0.5	0.4
Philippines	0.0	-1.1	0.1	-0.1	0.4	-0.4
<b>Singapore</b>	<b>0.1</b>	<b>1.3</b>	<b>2.1</b>	<b>2.0</b>	<b>1.7</b>	<b>2.1</b>
Thailand	-0.4	-1.3	0.2	0.2	-0.1	-0.3
Vietnam	-1.3	0.2	-0.3	-0.7	-0.5	-0.5

Table 4.7B – Quality of Governance Indicators for Southeast Asian countries in 2013.

Values range from -2.5 (lowest quality) to +2.5 (highest quality), and are an aggregate of other published indicators from academic and professional sources. Singapore is **bolded** for emphasis.

Indonesia is a G20 member and is shown in *italics*.

Source: Worldwide Governance Indicator Project (2014)

Data from the World Bank's Governance Indicator shows that Singapore is ranked significantly higher than all other Southeast Asian countries in all the categories of governance. As

the country takes pride in its clean, efficient and productive government, Singapore positions itself as an effective partner for achieving G20's objectives. With new developmental and trade-oriented objectives, the G20 finds Singapore an important partner in extending the organization's interests and focus areas in not only Southeast Asia, but also in other parts of the developing world. Singapore's effective governance therefore validates the country as a logical and appropriate choice in helping the G20 better achieve its objectives.

#### (D) Strategic Partnership with the US

Earlier this chapter, I showed in my regression results that alignment with the US, as measured with an aggregate score computed by Voeten et al (2013), does not have a significant effect on G20 membership. I have also illustrated that Singapore's alignment score is ranked in the lowest quartile amongst the Asian countries.

Interestingly, Singapore's partnership with the US has not been translated to a stronger alignment between the two countries. In an earlier study (Tang, 2015), I observed that Singapore and the US had signed an agreement for the Freedom-class US littoral combat ship (LCS) to be positioned in Singapore's deep water naval base on a rotational basis. As one of the few deep water facilities that can dock US aircraft carriers and large naval vessels, I attributed the agreement to an implicit partnership between the two countries towards a growing US presence in East Asia. In Hillary Clinton's speech, "America's Pacific Century", the Obama administration has initiated a pivot towards Asia. This partnership with Singapore, to base US naval vessels in a Southeast Asian facility for extended periods, is an illustration of Singapore's strategic importance to the US Pivot to Asia.

This partnership, while not an actual alliance, does not necessarily translate to greater political alignment between the two countries. In effect, I observed that given the geopolitics of the region, Singapore was the best choice for a new regional partner in extending US presence in Asia.

Herein illustrates that Singapore, as new regional US partner, consolidated its position in Southeast Asia. More importantly, this partnership illustrates US confidence towards Singapore's

infrastructural, political and financial stability. Although the G20 is a group of countries with equal influence and no distinct leader, US leadership has always been an implicit part of international politics – an arena that remains dominated by a single superpower. Singapore’s role in the US Pivot to Asia provides a symbol of approval for greater involvement in the international community, most prominently in the G20.

#### (E) Good Bilateral Ties

Countries that are invited to the G20 Summits receive invitations from the host country directly, providing the host the authority and autonomy to decide which country to invite on its personal capacity. Hosts have sometimes invited countries in their own regions, such as in the 2012 Los Cabos Summit, when Mexico invited Peru and Colombia. Since G20 hosts are also allowed to decide on the Summit agenda, hosts have an interest to invite countries that can further their own and the region’s interests – as Mexico had done in 2012.

Singapore’s continual invitation to the G20 can therefore be deemed as an anomaly from this perspective. While the country may be relevant the G20’s long term goals in trade facilitation and developmental assistance, it is less likely that in pursuit of self-interests or the region’s interests, countries would be willing to forgo valuable invitations to countries that can better serve their interests. In other words, Singapore must have either positioned itself as relevant and influential even in the host region, or have sufficiently good relations with all the hosts to gain an invitation in the country’s favor.

In analyzing Singapore’s relationship with the different G20 hosts, I will do an overview of the bilateral relations between the hosts which had invited Singapore to the various Summits. I will then establish if indeed, Singapore’s positive bilateral relations have earned the country an invitation to multiple G20 Summits in the past 5 years.

With South Korea: Singapore's foreign relation with South Korea has always been positive. Korea is 1 of 7 countries which Singapore has a Free Trade Agreement with, and has been in effect since 2005. Total trade between the two countries has amounted to 32.6 billion USD by 2013. The two Asian countries are also involved in multiple international organizations and forums, including the Asia-Pacific Economic Cooperation (APEC), an upcoming trade agreement called the Trans-Pacific Partnership (TPP) and the ASEAN+3 Annual Forum, which includes Singapore as a member of the Association of Southeast Asian Nations (ASEAN). In 2010, Singapore and Korea also signed the "Singapore-Korea Comprehensive Joint Development Cooperation Partnership" which expanded training and assistance programs to officials from developing countries (Singapore Cooperation Programme, 2009). The two countries have also participated in multiple regional military exercises, and every year, the Singaporean Prime Minister or the Senior Minister will make a high-level visit to South Korea. To this extent, it can be said that the Singapore and Korea share an intimate socio-cultural and economic relationship which makes Singapore an effective regional partner in the Southeast Asian region.

With France: France was one of the first countries to establish formal relations with Singapore when the country gained independence in 1965. The two countries have since established friendly relations with the signing of the "Joint Declaration on Enhanced Partnership" in March 1999 (Ministry of Foreign Affairs, 2012). This was built on a previous military partnership, the "Singapore-France Defence Cooperation and Status of Forces Agreement" in 1998, which saw the Singapore Navy procuring their first Formidable-class stealth frigate based on the French Navy's La Fayette-class frigate (Ministry of Defence, 2005). This partnership was expanded in 2012, when then French Prime Minister Jean-Marc Ayrault picked Singapore as the "first country (to visit) outside Europe as (Prime Minister)" (Ministry of Foreign Affairs, 2012). This led to the consolidation of a Singapore-France Third Country Training Programme, in which both countries provide joint developmental training programs for officials in ASEAN countries (Singapore Cooperation Programme, 2012). In terms of arts and culture, the two countries also established an enhanced "cultural cooperation" agreement in 2009, allowing artworks and artists to be exchanged between the two countries (Ministry

of Information, Communication and the Arts, 2009). In sum, it is evident that both countries cooperate in multiple areas, including the military, arts and economics, underpinning a strong bilateral connection between Singapore and France.

With Russia: Singapore first established bilateral relations with the Soviet Union in 1968, the predecessor of Russia. The two countries are very highly involved in economic cooperation, not only as members of APEC, but also bilateral forums and events between the Singapore and Russia. In 2005, both countries inaugurated the Russia-Singapore Business Forum, which allowed for businesses between the two countries to network and create new cooperation opportunities. Relations between the two countries were intensified in 2009 – 4 years before the 2013 St Petersburg Summit – when the Russian-Singapore political dialogue was conducted between the Prime Ministers and high-profile ministers from both countries. Prime Minister Putin also made an inaugural visit to Singapore in the same year, establishing a High Level Russia-Singapore Intergovernmental Commission, which organizes annual meetings between ministers of the two countries (Embassy of Russian Federation, 2008). Both countries also work together in the ASEAN-Russia annual Summit. Clearly, the relationship between Russia and Singapore had been well established in the political and economic areas.

With Australia: Singapore and Australia have very extensive agreements in defense, trade and developmental assistance. Australia is the 2<sup>nd</sup> of 7 countries which Singapore has a Free Trade Agreement with, and has been in effect since 2003. The two countries also signed a Memorandum of Understanding in 2005, allowing Singaporean military units to train on Shoalwater Bay. This memorandum was later expanded in 2008 (Garrun, 2008). The two countries frequently collaborated on foreign exercises, including military support to Australian Defense Forces in their deployment to Afghanistan in 2009 (Joint Ministerial Committee, 2009). The two countries are also in a defense cooperation agreement, the “Five Power Defense Arrangements”<sup>4</sup> since 1971. In terms of developmental assistance, the two countries have concluded the Singapore-Australia Trilateral

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<sup>4</sup> This is a series of bilateral defense agreements between United Kingdom, Australia, New Zealand, Singapore and Malaysia. Signed after the withdrawal of UK’s military presence in Malaysia in Singapore, the agreement allows countries to consult each other on a course of action without committing military intervention.

Cooperation Program, which has been in operation since 1996. As one of Singapore's key trading and defense partner, Australia and Singapore have set up strong relations between the two Asia-Pacific countries.

With Turkey: Singapore's relation with Turkey is slightly weaker than with all the other G20 hosts listed earlier. In terms of economics, the two countries have established a Turkey-Singapore Business Council in 2009, which allowed for greater business and trade cooperation between the two countries. Surprisingly, Singapore does not have an embassy in Turkey, and is represented by an "accredited Ambassador" (Minister of Foreign Affairs, 2014).

Singapore appears to have strong bilateral relations with all the previous G20 hosts, with the exception of Turkey, where the upcoming G20 Summit will be held. Singapore's involvement in military, cultural and most importantly, economic cooperation with different major countries in the G20 can enhance its relevance and importance to the agenda proposed by different hosts. This can therefore help to establish a need to achieve interests that are shared by both Singapore and the G20 host countries.

Singapore's relationship with Turkey may not be as deeply institutionalized as with other countries, but this can be an indication of Singapore's stronger economic influence in trade and developmental assistance – two areas which G20 have begun to support. Turkey's extension of G20 invitation to Singapore can be said to be a step ahead for the city state to gain greater involvement in the G20 in the future.

#### (F) Leader of Global Governance Group (3G)

Having assessed Singapore's importance to the G20 from the economic, political and institutional levels, I will now observe the official statements that are made by Singapore in justifying their involvement in the G20. Singapore's Ministry of Foreign Affairs website clearly states that Singapore was invited as a "representative of the Global Governance Group (3G)". This "informal grouping of 30 small and medium-sized countries" was formed in 2010 to promote "greater

transparency and inclusivity in the G20 process” (Ministry of Foreign Affairs, 2014). While the 3G does not have a distinct leader, the group was first proposed by Singapore’s Foreign Minister George Yeo (Chowhudry, 2010). In June 2010, the 3G made their first official statement to the United Nations, with Singapore as its representative (Menon, 2010). Since then, the 3G has successfully formalized the involvement of international organization in the G20 Summits, including the World Bank, International Monetary Fund and the Association of Southeast Asian Nations (Deen, 2010).

It is of Singapore’s strategic interest to initiate the 3G, because right after Ambassador Menon gave his speech at the UN in 2010, Singapore was invited for almost all the subsequent Summits. There appears to be an acknowledgement by G20 members that, the 3G can be a useful channel for the G20 to gain legitimacy and representative by engaging with other stakeholders. Since 2010, Singapore has become the “de facto” leader the 3G, speaking in almost all the Summits under the capacity of a 3G representative (Kirton, 2013).

Interestingly, unlike other international organizations which involvement in the G20 has been formalized, the 3G’s involvement is still on an informal status. This is also in line with the group’s informal nature: members meet on the sidelines of each G20 Summit, there is no definitive membership, and the group does not even have a website that illustrates its objectives. Furthermore, all 3G press releases are cited under the website for Singapore’s Permanent Mission in the United Nations, implying Singapore’s leadership in organizing and directing the 3G’s goals. This unstructured, unofficial nature of 3G’s engagement with the G20, does limit the effectiveness and credibility of the organization in enhancing the G20’s representativeness.

While Singapore’s invitation to the G20 cannot be fully assured by or attributed to its leadership in the 3G, the city state has sufficiently differentiated itself from her regional counterparts to ensure that it remains relevant and suitable for achieving the G20’s new objectives. The strong bilateral relations that Singapore has with G20 hosts, coupled with an effective government, huge involvement in the global trading network and a compelling developmental story have all positioned

Singapore as an appropriate partner for the G20's future goals. Already a strategic partner of the US Pivot to Asia, Singapore's role in the G20 will only be enhanced as the country gets increasingly involved in global politics with increasing focus in the Asian and Southeast Asian region.

Ultimately, the G20's economic objectives stand out in its trend of choosing Singapore over other non-members to the annual Summits. With a combination of excellent geopolitical, socioeconomic and bilateral advantages, Singapore managed to stand out amongst other countries to best fulfill the G20's economic agenda. While the city state began its involvement only in 2010 – after it was first invited by South Korea – Singapore has been consistently invited to the Summits as a result of its importance and significance to the global economy. Perhaps this shows that statistical indicators – total GDP and population alone – are not the most definitive ways to showcase a country's economic power today.

### **G20's Representation through the Invitation System**

Using the Total GDP-Population model derived in Chapter 4, it shown that while invited countries do not generally meet the criterion for membership, they remain largely in the vicinity of the cut-off, and thus express some nature of “systemic importance” to the G20. However, there appears to be no definitive explanation to the selection of a country in the same geographical region over another; countries that are estimated most likely for an invitation may not necessarily be invited.

This observation is to be expected, given the authority that host countries have in deciding which countries they want to include in that year's process. This is especially when hosts have an incentive to include non-members that share common interests and strong bilateral relations. As the agenda of the host change with every Summit, the invitation system should actually allow for greater involvement from non-members that can best align themselves with each year's host. While the G20's nature of representation is expanded with the inclusion of non-members through the invitation system, the lack of a definitive criterion for invitation can be counterproductive to the organization's



engagement process. In this case, a clearer illustration of the commonalities between invited countries can be shown to better understand the institutional practices behind G20 invitations.

Singapore, however, stands out as a stark anomaly, given that it has been invited multiple times by different hosts. As a small country sited in a strategic geopolitical location, Singapore manages to leverage on its comparative advantage to remain relevant and important to the G20 process. While not a full member, the city state's strategies and involvement in the global economy can be useful lessons for other non-members and countries. For an organization that which primary focus remains economic in nature, any further expansion of the G20's representation will most likely involve countries that can best position itself in the realm of international politics. The G20 invitation system therefore reveals an opportunity for smaller states and non-members to gain greater presence on international platforms, and leveraging on this strategically, as Singapore has done, will be the next step for any country to gain foothold in future intergovernmental organizations.

## **SECTION 6**

### **LESSONS FOR NON-MEMBERS IN THE FUTURE**

In this section, I will finally consolidate the findings from Singapore's case study and attempt to draw key strategies that can enable other non-members and small states to increase their voice on an international arena. Since these lessons are highly contextualized and specific to the geopolitical and socioeconomic conditions of Singapore, it might be useful for other governments to understand the conditions which they are in, and adapt them accordingly. These guidelines should only serve as basic frameworks and directions, but they do not guarantee any definitive outcome in an ever changing and highly dynamic field of international politics. Ultimately, I hope that my analysis of the G20's membership criteria, and Singapore's unique case study, will provide the groundwork for future scholarship and research in the interaction between small states and large international organizations like the G20.

It is important to note that any applications that I point out in this section are only useful for countries that currently lie in close distance to the estimated cut-off that I have been using for all my scatterplots between population and total GDP. Effectively, as my data has illustrated thus far, only countries with considerable economic power will be included or invited to the G20. Therefore, any future expansion of the G-membership, or any new invitations in the subsequent Summits are very likely from the countries around the cut-off. As the objectives of the G20 remains to be economic in nature, it will be unlikely that membership or invitations will be granted to countries without sufficient economic influence, even in their respective regions. In sum, the applications listed in this section should be adapted by different countries around the cut-off to increase their relevance and suitability for an organization like the G20, especially because it will be difficult for countries to dramatically increase their total GDP or population to meet the criteria differentiating G20 members and non-members.

#### 1. Increase trade openness

One of the key characteristics that differentiated Singapore from other countries of similar size or geopolitical contexts is its openness towards trade. Clearly, the G20, with its emphasis on

economic objectives, emphasizes trade promotion and facilitation between countries. For countries close to the cut-off, in particular Thailand and Philippines, greater involvement in trade with other regional and international partners can be instrumental to increasing their involvement in international organizations.

## 2. Improve bilateral process with existing G20 hosts

Because invitations for the G20 Summits are initiated by the host country, it is evident that good relations with the host countries will be instrumental to getting invited. While Singapore's involvement with the G20 was not based solely on good bilateral relations with the host, countries that are able to best communicate and align their interests with Summit hosts can better improve their chances of getting an invited to the G20 Summits.

In the case of the 2015 G20 Summit, the host country, Turkey, invited Azerbaijan, a country which was described as part of "one nation, two states" (Azerbaijan, 2010). This drew academics to highlight that Switzerland might be a better choice based on the strategic relationship between the two countries, most particularly after the Swiss was instrumental in the reconciliation between Turkey and Armenia in 2011 (Yinanc, 2015). In either case, it remains clear that Turkey would only a country that "it sees as a very close friend", and both Singapore and Azerbaijan appears to serve that role.

Developing close relationship with countries around the world, G20 hosts or otherwise, can remain a good diplomatic exercise for countries with limited economic power. Singapore's involvement in the G20 is an illustration of the benefits of a good relationship with different countries, and countries should seek to do the same to increase their involvement in other international organizations.

## 3. Provide supporting infrastructure to improve existing government institutions

The need for sustainable infrastructure is underscored by the strong public institutions that gave Singapore a competitive edge over other Asian countries. As my earlier analysis shows,

Singapore is rated highly in terms of governance and this provided some differentiation over other regional countries in ensuring its relevance to the G20 process.

Singapore's success can be attributed to a strong public sector that is efficient, corruption-free and highly integrated. This therefore requires supporting infrastructure, such as transportation, information-technology and welfare services that boosts productivity and standard of living. International organizations such as the newly established Asian Infrastructure Investment Bank (AIIB), provide a step forward in allowing developing countries, especially the ones near the cut-off to receive financial assistance in enhancing their support infrastructure. For Asian countries such as Thailand and Philippines, this will help to improve the quality of existing government processes, and establish greater access to influential international organizations such as the G20 in the future.

#### 4. Increase visibility on intergovernmental platforms

The new Global Governance Group (3G) provided an alternative to the G20 process by consolidating the views of non-members and in particular, small states that are otherwise unable to get their interests across to the G20. As the initiator and de-facto leader of the 3G, Singapore was able to solidify its relevance and importance to the G20 process by perceptually increasing the Summit's representation of other minority or less-regarded interests. Herein is a probable strategy for other non-members to consider: participate more actively on international platforms to showcase an interest for intergovernmental affairs and increase its visibility. Singapore's strategy of engaging the G20 through a multinational platform is a useful move that increased the relevance of the city state to a process that is otherwise dominated by large, economically powerful countries. Suffice to say, non-members that wish to be involved in the G20, or other international organizations, should strive to increase their international presence through different collaborative platforms – 3G is a good example of one such platform.

The lessons that can be drawn from my analysis are definitely not limited to the areas above, but they can largely be grouped in 4 distinct categories: *economics, diplomacy, domestic investment*

*and international presence.* These categories reflect the approaches that Singapore undertook in maximizing its relevance to the G20 process, and help to consolidate a possible application for other non-member countries in the future.

However, it is still important to acknowledge that not every country, in the cut-off region or otherwise, will perceive its participation in global governance as a priority for its country's development. While there is a potential for greater representation from the Middle East and African regions, the disparity in economic development, as reflected earlier, can be a huge deterrent in stopping governments from investing in the G20 process. More importantly, countries that do not have the political will and influence may find themselves more focused on fulfilling demands from domestic and local communities.

The strategies depicted in this section may be useful for countries that perceive themselves a necessary participant of the global governance process, which currently includes the G20. The lessons that can be drawn from Singapore's success should be molded by every nation's unique geopolitical context, and do not necessarily apply in its entirety. Understanding and learning from Singapore will still be an important first step towards greater involvement in the G20 in the future.

## **SECTION 7 CONCLUSION**

In the past few sections, I have fully illustrated how G20 membership can be measured by a country's economic power, which is in turn projected by an interaction of total GDP and population. This forms a cut-off with which countries that lie right of will, in theory, gain admission. Representation across regions is also a reflection of regional differences in economic development, and while anomalies exist (countries that lie right of the cut off are not admitted), they can be accounted for by their political inclinations or historical relations with the G7, the precursor of the G20.

Invited countries also exhibit a similar set of criteria in determining which country to be invited. However, this cut off is used more loosely for host countries to determine countries suitable for attending the G20 on an invitational status. Hosts usually assess candidate countries based on their relevance to achieving both the G20's and their regional or personal interests. Singapore is identified as a case study, for the city state has been constantly invited for past 4 Summits, and will be attending the upcoming Summit in Turkey with an invitation from the host country.

Singapore's special relationship with the G20 has been deemed as a result of the country's special attention to promoting trade and developmental assistance to developing countries, most particularly in Southeast Asia. These objectives are also in line with the G20's new agenda after the 2010 Seoul Summit. Singapore's relevance to the G20 is further strengthened as a center of good governance, a leader of an informal coalition of non-members, and a strategic partner of the US. The city state's involvement in multilateral and bilateral relations consolidates its position in global politics, and supports greater engagement with G20 member countries.

In all, the thesis attempted to dissect and explore the nature of representation of the G20, understanding if as existing literature portrays, under or over-representation exists. Given the economic objectives of the organization, I have argued that representation is on a conditional basis, and therefore it might not be appropriate to ask for an unconditional approach in determining the composition of the G20. The arbitrary criteria that I have empirically measured shed some light on the

importance of economic power as a determinant of G20 membership. Anomalies to these criteria can be explained by their political characteristics, or in Singapore's case, its ability to differentiate and position itself as a relevant participant in the G20 process.

As academics continue to explore the legacy of the G20, which at this point remains a novel collaborative process between non-aligned countries in tackling global issues, the composition and representation of the G20 should also be a key part of this process. In the future, as issues span across national borders, more regional and international organizations will be needed to provide collaborative solutions to common problems. This means that the G20 will be the first of many new organizations to serve varying objectives and on different scales. I therefore hope that my research will initiate new discourse on understanding how the composition of the G20 and future organizations can be determined.

This is especially pertinent in a new and exciting era of international politics, in which new intergovernmental organizations are increasingly important in achieving economic security, solving global environmental issues and providing solutions to developmental regions. The upcoming Asian Infrastructural Investment Bank (AIIB) and proposed European Banking Union (EBU) are prime examples of a greater community effort in collaborating between countries across geographical regions. I hope that through my analysis, greater interest in the criterion of international organization membership can be encouraged, and provide clarity in the composition and choice of countries in these organizations.

The call for greater representation by Vestergaard et al (2013) is a top-down process that involves international organizations opening up their circles for greater participation from current non-members. Unfortunately, this perception of global governance can potentially crowd out the existing collaborative process with other diverging opinions and slow down the consensus reaching timeline (Bradford and Linn, 2011). What is more important is for the G20, and any future intergovernmental organization, to be clear about its purpose and membership criteria, so that its composition can be better justified. My thesis therefore attempts to fill in that existing gap in

communicating a clear criterion to the international community. Understanding this will help to drive the G20 to achieve greater legitimacy and recognition from other non-members and organizations.

Limitations in time meant that my thesis was unable to empirically determine the cut-off between total GDP and population – proxies which I have identified as determinants of economic power, and hence G20 membership. Future work can therefore delve deeper into the mathematical derivations of these criteria, including the use of more deterministic regression models in providing an exact effect of each constituent of membership criteria.

In the future, more research can also be done on understanding the trend of invited members for G20 Summits, in particular the relationship between host countries and invited countries in determining the countries that get invited. Empirical analysis can therefore be conducted to provide mathematical proof on the correlation between the countries' bilateral relationship and G20 invitations. As Singapore remains a consistent outlier in terms of G20 invitation, a quantitative understanding of Singapore's economic power, projected in different proxies, can also be explored to explain its relevance to the G20 process. Further, a comparative study can be conducted between invited countries across the Summits. By identifying the commonalities between these countries, future research can better predict the potential of countries to be invited to future G20 Summits.

While it may be unlikely that the G20 will expand its membership in the near future, non-members can strive to adapt Singapore's strategies to their advantage and capitalize on the resources that they are equipped with. While it is necessary to realize that the geopolitical contexts which Singapore operates in, the success of a small, non-member state to gain prominence in the G20 should be an aspiration for other countries to understand and emulate. The art of political visibility cannot be easily quantified with statistics, but herein lies a useful case study which other countries can learn to further their prospects for greater involvement in international organizations such as the G20.

As the G20 is a relatively new organization, it should continue to work with different governments and existing organizations to improve its ability to identify and address issues from a variety of angles and perspectives. The communication of its objectives and membership criteria can



be a good first step. Although the organization is currently led by countries that have sufficient economic influence to direct global policies, the success of the G20 still hinges on the support of the other countries that are non-members in this process. Through this thesis, I have provided a good basis for understanding the nature of representation in the G20, and highlight its importance to the future of global governance. With greater research in this area, perhaps the G20 can find itself in a better position to provide collaborative solutions to existing problems that transcend nations and continents today.

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