Vol. 4, No. 12; 2020

ISSN: 2456-7760

NEED TO TRADE OFF EQUALITY FOR GROWTH?

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Abstract

The development orientation of Vietnam since the 10th Congress of the Party has pointed out "economic growth must be associated with social progress and justice in every step of development". Do we have any practical basis to believe that this goal is achievable? The answer is yes, and not just one. The policy is clear that we have not chosen to trade off equality for growth, but how is this in actual life? The analysis of the article shows that we have strictly followed the policy set out by the 10th Party Congress, on the right track on the way to achieving the dual goal of growth and social equity. By learning from the experiences of countries that have achieved outstanding achievements, combined with existing policy directions, it will enhance our ability to achieve this goal.

Keywords: economic growth, income inequality

1. Introduction

Inequality is not a new issue, however, it plays a very important role in maintaining the stability, solidarity and long-term development of a country. For a long time, inequality has been overlooked in both academia and politics, little attention has paid to it. Only then, when the crisis broke out, many people have realized how serious inequality is something they had never noticed before and could not see because of the hidden ingenuity of the elites. The US real estate bubble has left many people homeless. They worked for a long time with nothing left, while one small group accounting for only 1% is very successful compared to others, becoming very rich even when the economy is stagnated. Things like the "Panama Papers" or "Paradise Papers", which helped the elites concealed the skyrocketing rise in incomes in the name of credit loans, have been exposed. And now, inequality becomes an important issue. The American people have lost faith in the government, in the politicians' promises, they need something new. Donald Trump's promise of a great America, a miraculously developed America, a more equal America for all of the people of Donald Trump became more attractive and it was also one of the steps that brought Mr. Trump forward the victory in the 2016 US presidential election. And in 2020, inequality in the US is also one of the reasons why Trump is at risk of disgrace in the race to the White House. Some politicians said that without COVID 19, perhaps Mr. Trump would continue to receive the support of the people. But there is an undeniable fact that, under President Trump time, contrary to the promise of bringing a more equal country to its people, for the first time in hundreds of years, American businesses enjoy the record low corporate income tax rates, lower personal income taxes, the United States has a higher level of income inequality than ever before, the racism is stiffer, and the United States is increasingly polarized more deeply. COVID-19 has made these dark areas more visible to the public.

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The world has recognized the economic growth of the countries, and also recorded the trend of increasing inequality around the world in recent times. Even Scandinavian countries where have been seen as the models of the welfare state, inequality has increased dramatically. The only exception is Latin America, where inequality was once very high relative to other countries, but has shown signs of diminishing over the past 15 years, although it is still high.

It can be seen that inequality is being recognized more properly, gradually returning to its inherent important nature. Inequality is not all bad. High level of inequality causes political instability, limits investment, and inhibits growth. Inequality at too low levels, such as the income-leveling regime, reduces the motivation to work harder, the motivation to focus on study or research, obviously this is also not good for growth. "How we can have a high growth?" This is a constant question of all policymakers in all countries of the world. Meanwhile, "How can we find and obtain an optimal level of inequality?" is not necessarily the concern of all of them. The view and correlation of the importance of these two issues will lead countries to very different futures. Some argue that they can accept to have the growth at all costs, accepting to trade off inequality for growth. Some others have a different view and they think that it is necessary to handle these two problems simultaneously, not separately. There is another viewpoint that it is necessary to deal with inequality first and growth later.

Early realizing the importance of the issue of inequality, the development orientation of Vietnam since the 10th Congress of the Party pointed out that "economic growth must be associated with social progress and equity in each development step". We have not chosen to trade off equality for growth – this is what we commit in the policy. But do we have any basis to believe that this goal can be achieved? Or do we necessarily sacrifice inequality to achieve growth? The policy is clear, can we achieve this in actual situation? This question will be answered in the next article.

2. Theoretical basis and methodology

2.1. Theoretical basis on economic development models in relation to income inequality

This section will answer the question on how to handle with inequality and growth in practice and in theory. There are 3 basic models: (i) the growth first – inequality later of Kuznets and A. Lewis's; (ii) redistribution first, growth later; (iii) Redistribution with growth of H. Oshima and World Bank.

(i) The model of Growth first – Inequality later by Kuznets and A. Lewis

In 1955, Simon Kuznets (American economist) introduced a development model based on observed experimental data, known as Kuznets' Inverted U-hypothesis. He hypothesized that inequality increases early and declines at a later stage, when the benefits of development are more widespread. If the relationship is displayed on the graph, it will have an inverted U. In general terms, A. Lewis also agreed with Kuznets on the observation that inequality increases initially and then diminishes once a certain level of development is reached. But going a step further, he explained the cause of this trend.

(ii) The model of Redistribution first, Growth later

This model is drawn from the development experience of countries with socialist economies, such as the Soviet Union. The State proceeds to publicize the major resources of economic development. Production resources are redistributed to the state units and small producers in

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ISSN: 2456-7760

industry and agriculture in the form of state ownership and collective ownership. The immediate consequence is that inequality in income distribution is no longer significant. If new owners (including state-owned and collectively owned businesses) manage assets and production resources better than the old owners, then economic growth and economic development is gained. Thus, at the same time, it is possible to realize the equality in income distribution and promote economic growth. However, if new owners cannot effectively manage assets and resources, growth and development cannot be guaranteed, this is a practice that often occurs. (iii) The model of Redistribution with growth by H.Oshima and World Bank

H.Oshima argues that both growth and equity can be achieved simultaneously if development is concentrated in the agricultural sector. Relying on the State's assistance in breeds and techniques, at the same time, the expansion and development of the profession will make rural incomes increase gradually, narrowing the income gap between rural and urban areas. It is followed by a gradual improvement of the income gap between large and small firms in urban areas, as well as between large and small farms in rural areas. In the first phase, the income gap widens as large manufacturers take advantage of the economies of scale and have the conditions to apply new technologies. Then as the benefits of infrastructure and the applicability of new technology increase in small establishments, the income gap gradually decreases.

The same goal is to achieve both growth and equality, but the World Bank's approach is based on a redistribution model. It includes the policy of the redistribution of assets and the redistribution policy from growth. Policies for the redistribution of wealth are required because the underlying cause of inequality in the distribution of income of most individuals in developing countries is due to inequality in property ownership. The policy that has been widely applied in developing countries to redistribute wealth is to reform land and increase educational opportunities for many people. However, in reality, policies such as land reform are only really an impact tool for income redistribution when combined with rural agricultural credit policies, policies on consumption of agricultural products, technology policy.

2.2. Research method and Evaluations on the effectiveness of development models that countries are pursuing

The idea of identifying and evaluating the development models of countries is implemented as follows:

First, countries are grouped based on two criteria: (i) level of economic development (real GDP per capita, in dollars in 2010, provided by the World Bank) and (ii) degree of income inequality (based on SWIID database developed by Solt (2009)) of countries. In each year, the real GDP per capita is averaged for all countries, and the average level of inequality is set for all countries. Countries are then classified into four groups:

Group 1: A group of countries with a low level of development (below the average) and low levels of inequality (below the average).

Group 2: A group of countries with a low level of development (lower than the world average) and a high level of inequality (higher than the world average).

Group 3: A group of countries with a high level of development (above the average) and a high level of inequality (above the average)

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Group 4: A group of countries with a high level of development (above the average) and with a low level of inequality (higher than the average) (advanced countries).

By tracking the change in the group of countries, we can identify shifts (policy changes in the relationship between growth and inequality) that exist in practice, time to track the change in groups that belong to a country by each year over a long period of time, we can evaluate whether that country's development model is effective or ineffective compared to the general level in the research phase. Of these 4 groups, group 1 is said to be in better condition than group 2; group 4 is in better condition than group 3.

3. Results and discussions

The grouping results for each year and the grouping results for the entire period 1986 - 2018 are shown in appendix 1. Looking at this result table, we notice a few shifting trends including:

- From group 1 to group 2 (worsening trend, for example China, some countries in Southeast Europe such as Bulgaria, Albani, Bosnia & Herzegorina, ...) and vice versa (the trend is getting better, e.g. Algerie, Jordan, Nepal, Niger) or go both ways and are not stable, such as Armenia, Iran, Uruguay, etc. In general, the shifting between the two groups 1 and 2 is common.

- From group 4 to group 3 (worsening trend, for example USA) or both directions (4 to 3 and 3 to 4) and unstable, like Singapore.

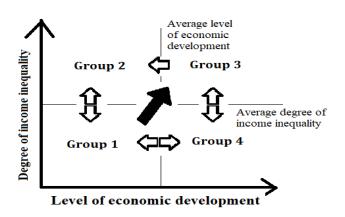
- From group 1 to group 3 (good economically but not socially good) like Lithuania.

- From group 3 to group 2 (worsening trend) like Venezula. However, the country has had more positive changes when shifting from group 2 to group 1 in recent years.

- From group 1 to group 4 (the most positive trend) with typical examples like Korea, Slovak or both (4 to 1 and 1 to 4) and unstable, like Estonia.

The group shifting of countries reflects the (relatively) efforts to improve (relatively) in terms of economy, inequality between countries. It is possible that a country has improved economic condition, inequality compared with the previous time, but in terms of general level with other countries, that improvement is small and evaluated as worse, showing by the shifting from the good state to worse state. Therefore, this shift (although in a worse direction) does not mean there is no improvement over time.

Figure 1: Shifting between groups of countries



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ISSN: 2456-7760

The results of China's transition are clearly demonstrating the ineffectiveness of the China's strategy to trade off equality for growth and this is also a lesson for other countries in groups 1 and 2 to consider carefully before following this path. It took more than 17 years for China, in which its growth performance is completely disproportionate to the inequality consequences they have to suffer, and the income per capita is still ranked low compared to many countries in the world while inequality is escalating. In order to have a successful transition, at least to group 3, it will take China more time if there are no appropriate policy changes. Notably, the proportion of countries maintained in group 2 (maintained during 1986 - 2018) and countries moving from group 1 to group 2 accounts for the majority, nearly 50% of countries which shows that adopting a growth strategy at all costs is ineffective in many countries. If this is the result of a country it could be considered random, but when it is the result of the majority of the countries, then it means that it is the nature of the issue and that following the growth at all costs would not lead to a positive result and it is of high probability. The only country is noted to have successfully applied the strategy of trading off equality for growth is Lithuania (Lithuania, shifting from group 1 to group 3). The country's level of inequality is now higher than average, but in return, they have a higher level of economic development than the average.

However, it has been shown that trading off inequality for growth is not the only option. Experience from Korea, Slovak, Estonia and recently some countries such as Hungary, Latvia, Poland which have made significant economic developments while not accompanied by a high increase in inequality compared to other countries (moving straight from group 1 to group 4) is a clear proof for that. Success is not only found in 1 country but many countries, therefore, Vietnam can completely apply this development model based on learning from the experiences of the above countries. Some other countries in Asia, during the period 1986 - 2018 are always in group 4, for example Japan, Israel, can also be useful reference objects for Vietnam.

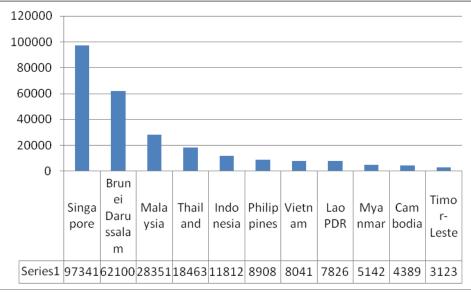


Figure 2: Real GDP per capita (USD2010) of Southeast Asian countries in 2019

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Source: World Bank

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ISSN: 2456-7760

In Southeast Asia, although Singapore is one of the most economically developed countries in the region, the level of inequality of the island nation is also higher than the average level, therefore learning from development experiences (if any) requires careful and selective consideration. Other countries with more developed economies than Vietnam including Malaysia, Thailand, Indonesia, and the Philippines are all in group 2, which also shows that this is not an effective development path that Vietnam can learn from. Brunei does not have data on inequality so it is not covered by this article's comments. The rest of Southeast Asian countries are in group 1, in which Vietnam is the country with the highest level of development, so we have an advantage over those countries in realizing the goal of ensuring growth accompanied equality and efficiency.

Figure 3: Real GDP per capita (USD2010) and Vietnam's level of inequality between 1986 and 2019



During the period 1986 - 2019, Vietnam was maintained in group 1, meaning that the inequality and development levels of our country are lower than the average levels of the world. We have not yet achieved tremendous growth to move into group 3 or group 4 but at least the slow growth without trading off much the equality for growth as other countries, even, we did not have to trade off (as in the period 2012 - 2019, a period where inequality was recorded to decrease year by year). This shows that we have strictly followed the policy set out by the 10th Party Congress, on the right track on the way to achieving the dual goal of growth and social justice. By learning from the experiences of the countries mentioned above such as Korea, Slovak, Estonia, Japan, Israel and perhaps refer to Hungary, Latvia, Poland in combination with existing policy directions, it is more possible for us to achieve dual goals.

4. Conclusions

The article has used the grouping method and observed the transition between groups to identify the growth models that countries have implemented in the period 1986 - 2019. The result includes that we are not forced to trade off equality for growth which is the path already proved

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to be ineffective in many countries. There are lessons from countries that have achieved remarkable achievements in achieving the dual goal of growth and equity such as Korea, Slovak, Estonia, Japan, Israel, etc. that Vietnam can learn from. We have been on the right path to choose "economic growth must be associated with social progress and justice in every step of development", the goal that we have set a good example of achieving, so we absolutely have confidence and have conditions to accomplish this goal throughout the development of the country. The in-depth analysis of the policies that these countries have implemented will be guidelines and suggestions to help us get closer to the above goal. These policy analyses will be discussed in another article.

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APPENDIX

Table 1: Results of country grouping

	1986	19	19	19	19	19	19	19	19	19	19	19	19	19	19	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Afghanistan	2018	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18
Afghanistan Albania	2											1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	
Algeria	1	1		2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		-					
Andorra	4																4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4		
Angola	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Argentina Armenia	1	2	2	2	2	1	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2
Australia	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Austria	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
Azerbaijan Bahamas,	1					1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1										
The	3																3	3	3	3	3	3	3	3	3	3	3	3	3					
Bangladesh Barbados	1	1	1	1	1	1	1 3	1 3	1 3	1	1	1	1	1 3	1	1	1	1	1	1	1	1	1	1 3	1	1	1	1 3	1	1	1	1	3	
Belarus	1	5	5	5	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Belgium	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
Belize	2								2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2									
Benin Bhutan	2																	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Bolivia	2							2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Bosnia and Herzegovina	2																1	1	1	1	1	1	1	1	1	2	2	2	2	2	2			
Botswana	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2			
Brazil	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Bulgaria Burking Fase	1				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2
Burkina Faso Burundi	2							2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2				
Cabo Verde	2										_				2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2			
Cambodia	1												1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1						
Cameroon	2		4	4	4	4	4	4	4	4	4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		4	4	4
Canada Central	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
African Republic	2							2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2										
Chad	2																		2	2	2	2	2	2	2	2	2							
Chile	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
China Colombia	2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Comoros	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	Z	2	Z	2	2	2	2	2	2	2	2	2	2	2	2	2	2	Z
Congo, Dem. Rep.	2																			2	2	2	2	2	2	2	2	2						
Congo, Rep.	2																			2	2	2	2	2	2	2	2	2						
Costa Rica	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Croatia	1										1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Cyprus Czech	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
Republic	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Denmark Dominica	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Dominican	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Republic Ecuador	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Egypt, Arab Rep.	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
El Salvador	2	2		2		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Estonia	4								1	1	1	1	1	1	1	1	1	1	1	1	4	4	4	4	1	1	4	4	4	4	4	4	4	
Ethiopia	1	-		-	-	-	-		-		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Fiji Finland	2	2	2	2	2	2	2 4	2	2	2	2	2	2	2 4	2	2	2	2	2	2	2	2	2	2 4	2	2	2	2	2	4	4	4	4	4
France	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	-7
Gabon	2																				2	2	2	2	2	2	2	2	2	2	2	2	2	
Gambia, The	2				-	-	-	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2			
Georgia Germany	2	4	4	1 4	1 4	1 4	1 4	1 4	1 4	1	1	1	1 4	1 4	1	1	1 4	1	1 4	1	1	1	2	2 4	2	2	2	2	2	2	2	2	2	2
Ghana	4		2	2	4	2	2	2	2	2	2	4	4	2	2	4	4	4	4	4	2	4	2	4	4	2	2	2	4	4	4	2	-+	
Greece	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
																		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Greenland	4		i i					2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		2		-		
Grenada	2	n	n	n	n	2		- 2	2	- 2	2				2	2	2	2	2	2	2	2		2	2	- 2	- 2							
		2	2	2	2	2	2	2	2	2	2	2	2	2	2								2	2	2	2	2	2	2	2				
Grenada Guatemala Guinea Guinea-	2 2 2	2	2	2	2	2										2	2	2	2	2	2								2					
Grenada Guatemala Guinea	2	2	2	2	2	2			2 2 2	2 2 2	2 2 2	2 2 2	2 2 2	2 2 2 2	2 2 2	2	2	2	2	2	2	2 2 2	2 2 2	2	2	2			2					
Grenada Guatemala Guinea Guinea- Bissau	2 2 2 2 2	2	2	2	2	2		2	2	2	2	2	2	2	2							2	2						2					
Grenada Guatemala Guinea Bissau Guyana Haiti Honduras	2 2 2 2 2 2	2	2	2	2	2		2	2	2	2	2	2	2	2		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Grenada Guatemala Guinea Guinea- Bissau Guyana Haiti	2 2 2 2 2 2 2 2	2	2				2	2	2 2	2	2	2	2 2	2	2	2 2 3	2	2	2	2 2	2	2 2 2	2 2 2	2	2	2	2	2			2	23	2	2
Grenada Guatemala Guinea Bissau Guyana Haiti Honduras Hong Kong SAR, China Hungary	2 2 2 2 2 2 2 2 2 3 1			2	2	2	2	2 2 2 3 1	2 2 2 3 1	2 2 2 3 1	2 2 2 3 1	2 2 2 3 1	2 2 2 3 1	2 2 2 3 1	2 2 2 3 1	2 2 3 1	$\begin{array}{c} 2 \\ 2 \\ 2 \\ 3 \\ 1 \end{array}$	2 2 2 3 1	$\begin{array}{c} 2 \\ 2 \\ 2 \\ 3 \\ 1 \end{array}$	2 2 2 3 1	$\begin{array}{c} 2\\ 2\\ 2\\ 3\\ 1 \end{array}$	2 2 2 2 3 1	2 2 2 2 3 1	2 2 2 3 1	2 2 2 3 1	2 2 2 3 1	2 2 2 3 1	2 2 2 3 1	2 3 1	2 3 1	3		2	2
Grenada Guatemala Guinea- Bissau Guyana Haiti Honduras Hong Kong SAR, China Hungary Iceland	2 2 2 2 2 2 2 2 2 2 2 3 1 4	3	3	2 3	2 3	2 3	2 2 3 1	2 2 2 3 1 4	2 2 2 3 1 4	2 2 2 3 1 4	2 2 2 3 1 4	2 2 2 3 1 4	2 2 2 3 1 4	2 2 2 3 1 4	2 2 2 3 1 4	2 2 3 1 4	2 2 2 3 1 4	2 2 2 3 1 4	2 2 2 3 1 4	2 2 2 3 1 4	$\begin{array}{r} 2\\ 2\\ 2\\ 3\\ 1\\ 4 \end{array}$	2 2 2 2 3 1 4	2 2 2 2 3 1 4	2 2 2 3 1 4	2 2 2 3 1 4	2 2 2 3 1 4	2 2 2 3 1 4	2 2 2 3 1 4	2	2		3	2	
Grenada Guatemala Guinea Bissau Guyana Haiti Honduras Hong Kong SAR, China Hungary	2 2 2 2 2 2 2 2 2 3 1			2	2	2	2	2 2 2 3 1	2 2 2 3 1	2 2 2 3 1	2 2 2 3 1	2 2 2 3 1	2 2 2 3 1	2 2 2 3 1	2 2 2 3 1	2 2 3 1	$\begin{array}{c} 2\\ 2\\ 2\\ 3\\ 1 \end{array}$	2 2 2 3 1	$\begin{array}{c} 2 \\ 2 \\ 2 \\ 3 \\ 1 \end{array}$	2 2 2 3 1	$\begin{array}{c} 2\\ 2\\ 2\\ 3\\ 1 \end{array}$	2 2 2 2 3 1	2 2 2 2 3 1	2 2 2 3 1	2 2 2 3 1	2 2 2 3 1	2 2 2 3 1	2 2 2 3 1	2 3 1	2 3 1	3	3	2	
Grenada Guatemala Guinea- Bissau Guyana Haiti Honduras Hong Kong SAR, China Hungary Iceland India Indonesia Iran, Islamic	2 2 2 2 2 2 2 2 2 3 1 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	3	3 2 2	2 3 2 2 2	2 3 2 2 2	2 3 2 2 2	2 2 3 1 2 2 2	2 2 2 3 1 4 2 2	2 2 2 3 1 4 2 2	2 2 3 1 4 2 2	2 2 3 1 4 2 2	2 2 3 1 4 2 2	2 2 2 3 1 4 2 2	2 2 3 1 4 2 2	2 2 3 1 4 2 2	2 2 3 1 4 2 2	$\begin{array}{c} 2\\ 2\\ 2\\ 3\\ 1\\ 4\\ 2\\ 2\\ 2 \end{array}$	$\begin{array}{c} 2\\ 2\\ 2\\ 3\\ 1\\ 4\\ 2\\ 2\\ 2 \end{array}$	$\begin{array}{c} 2\\ 2\\ 2\\ 3\\ 1\\ 4\\ 2\\ 2\\ 2 \end{array}$	$\begin{array}{c} 2\\ 2\\ 2\\ 3\\ 1\\ 4\\ 2\\ 2\\ \end{array}$	$\begin{array}{c} 2\\ 2\\ 2\\ 3\\ 1\\ 4\\ 2\\ 2\\ \end{array}$	2 2 2 2 3 1 4 2 2 2	2 2 2 3 1 4 2 2	2 2 2 3 1 4 2 2	2 2 2 3 1 4 2 2 2	$\begin{array}{c} 2\\ 2\\ 2\\ 3\\ 1\\ 4\\ 2\\ 2\\ \end{array}$	2 2 2 3 1 4 2 2	2 2 2 3 1 4 2 2	2 3 1 4 2	2 3 1 4 2	3 1 4 2	3 1 2	1	4
Grenada Guatemala Guinea- Bissau Guyana Haiti Honduras Hong Kong SAR, China Hungary Iceland India Indonesia	2 2 2 2 2 2 2 2 2 2 3 1 4 4 2	3	3	2 3	2 3 2 2	2 3 2 2	2 2 3 1 2	2 2 2 3 1 4 2	2 2 2 3 1 4 2	2 2 3 1 4 2	2 2 3 1 4 2	2 2 2 3 1 4 2	2 2 2 3 1 4 2	2 2 2 3 1 4 2	2 2 2 3 1 4 2	2 2 3 1 4 2	$\begin{array}{c} 2\\ 2\\ 2\\ 3\\ 1\\ 4\\ 2 \end{array}$	2 2 2 3 1 4 2	$\begin{array}{c} 2\\ 2\\ 2\\ 3\\ 1\\ 4\\ 2 \end{array}$	2 2 2 3 1 4 2	$\begin{array}{c} 2\\ 2\\ 2\\ 3\\ 1\\ 4\\ 2 \end{array}$	2 2 2 2 3 1 4 2	2 2 2 2 3 1 4 2	2 2 2 3 1 4 2	2 2 2 3 1 4 2	2 2 2 3 1 4 2	2 2 2 3 1 4 2	2 2 2 3 1 4 2	2 3 1 4	2 3 1 4	3 1 4	3	1	4
Grenada Guatemala Guinea- Bissau Guyana Haiti Honduras Hong Kong SAR, China Hungary Iceland India Indonesia Iran, Islamic Rep.	2 2 2 2 2 2 2 2 2 2 3 1 4 4 2 2 1	3	3 2 2	2 3 2 2 2	2 3 2 2 2	2 3 2 2 2	2 2 3 1 2 2 2	2 2 2 3 1 4 2 2	2 2 2 3 1 4 2 2	2 2 3 1 4 2 2	2 2 3 1 4 2 2	2 2 3 1 4 2 2	2 2 2 3 1 4 2 2	2 2 3 1 4 2 2	2 2 3 1 4 2 2	2 2 3 1 4 2 2	$\begin{array}{c} 2\\ 2\\ 2\\ 3\\ 1\\ 4\\ 2\\ 2\\ 2 \end{array}$	$\begin{array}{c} 2\\ 2\\ 2\\ 3\\ 1\\ 4\\ 2\\ 2\\ 2 \end{array}$	$\begin{array}{c} 2\\ 2\\ 2\\ 3\\ 1\\ 4\\ 2\\ 2\\ 2 \end{array}$	$\begin{array}{c} 2\\ 2\\ 2\\ 3\\ 1\\ 4\\ 2\\ 2\\ \end{array}$	$\begin{array}{c} 2\\ 2\\ 2\\ 3\\ 1\\ 4\\ 2\\ 2\\ \end{array}$	2 2 2 2 3 1 4 2 2 2 2 2	2 2 2 3 1 4 2 2 2 2 2	2 2 2 3 1 4 2 2 2 2	2 2 2 3 1 4 2 2 2 1	$\begin{array}{c} 2\\ \hline \\ 2\\ \hline \\ 3\\ \hline \\ 1\\ \hline \\ 4\\ \hline \\ 2\\ \hline \\ 1\\ \end{array}$	2 2 2 3 1 4 2 2 1	2 2 2 3 1 4 2 2 1	2 3 1 4 2 1	2 3 1 4 2 1	3 1 4 2	3 1 2	1	4
Grenada Guatemala Guinea- Bissau Guyana Haiti Honduras Hong Kong SAR, China Hungary Iceland India Indonesia Iran, Islamic Rep. Iraq	2 2 2 2 2 2 2 2 2 3 1 4 4 2 2 1 1	3 2 2 2 2	3 2 2 2	2 3 2 2 2 2	2 3 2 2 2 2	2 3 2 2 2 2	2 2 3 1 2 2 2 2	2 2 2 3 1 4 2 2 2 2	2 2 3 1 4 2 2 2 2	2 2 3 1 4 2 2 2	$\begin{array}{c} 2\\ 2\\ 2\\ 3\\ 1\\ 4\\ 2\\ 2\\ 2\\ 2\\ 2 \end{array}$	$\begin{array}{c} 2\\ 2\\ 2\\ 3\\ 1\\ 4\\ 2\\ 2\\ 2\\ 2\\ 2 \end{array}$	$\begin{array}{c} 2\\ 2\\ 2\\ 3\\ 1\\ 4\\ 2\\ 2\\ 2\\ 2\\ 2 \end{array}$	$ \begin{array}{c} 2 \\ 2 \\ 2 \\ 3 \\ 1 \\ 4 \\ 2 \\ 2 \\ 2 \\ 2 \end{array} $	$ \begin{array}{c} 2 \\ 2 \\ 2 \\ 3 \\ 1 \\ 4 \\ 2 \\ 2 \\ 2 \\ 2 \end{array} $	2 2 2 3 1 4 2 2 2 2 2 1	2 2 2 2 3 1 4 2 2 2 2 2 1	2 2 2 3 1 4 2 2 2 2 1	2 2 2 3 1 4 2 2 2 1 1 1	$ \begin{array}{c} 2 \\ 2 \\ 3 \\ 1 \\ 4 \\ 2 \\ 2 \\ 1 \\ 1 \end{array} $	2 2 2 3 1 4 2 2 2 1 1	2 2 2 3 1 4 2 2 1 1 1	2 3 1 4 2 1 1	2 3 1 4 2 1 1	3 1 4 2 1	3 1 2 2 2	1 2 2	4						

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Jamaica	2018 2	86	87	88	89 2	90 2	91 2	92 2	93 2	94 2	95 2	96 2	97 2	98 2	99 2	00	01	02	03	04 2	05 2	06 2	07 2	08 2	09 2	10 2	11 2	12 2	13 2	14 2	15 2	16 2	17	18
Japan	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4			
Jordan Kazalihatan	1	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Kazakhstan Kenya	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1
Korea, Rep.	4	1	1	1	1	1	1	1	1	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
Kosovo Kyrgyz				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		-	-						1	1	1	-			1	1
Republic Lao PDR	1		-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Latvia	1										1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4
Lebanon	1										1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1						
Lesotho Liberia	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Libya	1																		1	1	1	1	1	1					-					
Lithuania	1										1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	
Luxembourg Madagascar	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
Malawi	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
Malaysia	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
Maldives	2									2	2	2	2	2	2	2	2	1	2	1	1	1	1	1	2	2	2	2	2	2	2	2		
Mali Malta	2									2	2	2	2	2	4	4	4	2	2	2	2 4	2	2	2	2	4	4	4	4	4	4	4	4	
Mauritania	1		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1				
Mauritius	1		1	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	
Mexico Micronesia,	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Fed. Sts. Moldova	2										1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1
Mongolia	1										1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Montenegro	1																				1	1	1	1	1	1	1	1	2	2	2	2		
Morocco Mozambique	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2			
Mozambique Myanmar	1											2		2	2	<u> </u>	<u>ک</u>	2	2	<u> </u>	2	2	2		<u> </u>	1	1	1	1	1	1	1	1	
Namibia	2								2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
Nepal Netherlands	1	1	2	2	2	2	2	2	1	1	1	1	1	1	1	1 4	1 4	1	1	1	1	1 4	1	1 4	1	1	4	4	4	4	4	4	4	
New Zealand	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Nicaragua	2								2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2				
Niger Nigeria	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1 2	1	1	1	1	1	1				
Norway	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Pakistan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Palau Panama	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Papua New Guinea	2											2	2	2	2	2	2	2	2	2	2	2	2	2	2									
Paraguay	2					2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Peru	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Philippines Poland	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	4
Portugal	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
Puerto Rico	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3		
Qatar Romania	3					1	1	1	1	1	1	1	1	1	1	3	3	3	3	3	3	3	3	3	3	3	3	3	3	1	1	1	1	
Russian Federation	1				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Rwanda	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
Samoa San Marino	2																┝─┤	2	2	2	2	2	2	2	2	2	2	2	2	4	4	4	4	4
Sao Tome																	,				,													4
and Principe Saudi Arabia	1																1	1	1	1	1	1	1	1 3	1	1	1 3	1	1	1	1	2	2	
Senegal	2						2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2							
Serbia Seveballas	1												1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Seychelles Sierra Leone	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Singapore	3	4	4	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	3	3	3	3	3	3	3	3	3	3	3	
Slovak Republic	4							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	4	4	4	4	4	4	4	4	4	4	
Slovenia Solomon	4					4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	$\left - \right $
Islands	2															⊢					2	2	2	2	2	2	2	2	2					
South Africa	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2			
Spain Sri Lanka	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
St. Kitts and Nevis	3															3	3	3	3	3	3	3	3	3	3									
St. Lucia	2										2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
St. Vincent and the				_												l I	Í]
Grenadines	2	2	2	2	2	2	2	2	,	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1				
Sudan Suriname	1	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1 2	1 2	1	1	1	1 2	1 2	1 2	1 2	1 2	1	1 2	1 2	1 2	1	2	2		
Sweden	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
Switzerland	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
Tajikistan Tanzania	2			2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Thailand				_	I 7			1	I Ī							i I	1	1	1	1	1	1	1	1	1	1	1	1	1			1		
Timor-Leste Togo	1															└──┤	1	1	1		2	2	2	2	2	2	2	2	2	1 2	2			

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Tonga	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Trinidad and Tobago	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2													
Tunisia	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2			
Turkey	2		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
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Tuvalu	2									2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2								
Uganda	2				2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
Ukraine	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
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United States	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	3	3	
Uruguay	1	2	2	2	2	2	2	2	2	2	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	2	1
Uzbekistan	1			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1															
Vanuatu	2																					2	2	2	2	2								
Venezuela, RB	1	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1				
Vietnam	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Yemen, Rep.	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1				
Zambia	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2			
Zimbabwe	2										2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	

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