

Examiners' Report
June 2019

GCE Geography 9GE0 03

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Introduction

This paper produced a very similar range of responses to that of 2018 although with a few new, or at least more noticeable, characteristics in candidate responses that centres may find useful to address. Most of these are question specific but a few are more general and thus addressed here.

Self-evidently, this paper tests a rather different suite of geographical skills than either of the other two written papers, as evidenced by its unique combination of Assessment Objectives (AOs). In one sense the formula is predictable but given that the Resource Booklet is not at all predictable candidates are tested on the portability of their skill set and their underlying geographical understanding of relationships across a wide spectrum of topics. In this paper they were tested on development theory, international trade, plate tectonics, seismic risk and superpowers with a 'side-order' of demographics, cultural identity, recurrence intervals and import substitution industrialisation.

Centres have obviously worked hard to improve candidates' skills in developing arguments in essays and we are making very significant progress in that area. The vast majority of answers to Q05 and Q06 had an introduction, a coherent paragraph structure and a conclusion. Of course, the range of ideas varied very significantly as did the sophistication of the arguments deployed but a few, short years ago essay writing was a much more uncertain skill. There are, nonetheless, a number of habits that need attention. The first is the sprinkling of connective words that are not used correctly. 'However', 'therefore', 'nonetheless' and 'others' feature commonly and suggest that the candidate is about to qualify a previous assertion or statement. That, sadly, is often not the case across with for example 'however' been followed by a wholly new statement or idea. Thus 'Japan is a major trading nation. However, it is also very prone to earthquakes'. In this case the important qualifying element is missing altogether as in ...'which makes it vulnerable to breaks in the supply chain thus challenging its international trading status'. A second and also increasingly familiar device is to employ a type of 'Yes, No, Maybe' style of argument but turn it into a 'Yes, No, Yes, No, Yes, No' series of assertions without the qualifying 'Maybe's' and to do this without offering much evidence for the view taken; a typical example is, 'Japan is a very important trading nation, but this hasn't always been the case and might not be in the future which will make it unstable'. Once again, the point is not developed, and the examiner remains unclear what point is being made. Some candidates have developed the habit of using words that are unhelpful without some accompanying development or exemplification; the last example includes the phrase 'makes it unstable'. It is neither clear what 'it' is nor how this instability might be manifested. A final comment, which will be amplified in the feedback offered for the two long essays (Q05 and Q06) is a lament about the rather limited amount of AO2 towards the lower end of the ability range but, more surprisingly, not exclusively limited to these candidates. This may, of course, reflect limited recall and reasonably enough that will offer a clear discrimination between candidates but it might also be a lack of understanding that such AO2 is vital in order to access the higher levels. The examining team expected rather more along the lines of: 'In Japan...whilst in China/India/Brazil quite different policies have been pursued such as...'. Teachers need to make sure that their candidates appreciate the implications of the AOs for each question.

Question 1

Candidates need to know theories of development from the specification (7.3.c – page 51). Three are identified by name although some centres obviously extend this to both variants of these and by adding others; in this latter group Mackinder's 'Heartland' theory appeared in a significant number of answers. However, many did not know the theories at all, which prevented them from engaging with the question. Others could describe a theory adequately but ignored the focus of the question which was, of course, to explain how the theory helps understand global patterns of power. Many students described theories of development rather than linked the theory to this focus. However, those students that could give a reason for how the theory helped understand patterns of power often found it straightforward to develop their reason and access full marks.

It is worth adding that neither modernisation theory nor dependency theory were fully understood by a substantial number of candidates. The central idea of Rostow's version of modernisation theory is that states need to reform their institutions in order to achieve economic growth – that is the 'theory' which claims that once the legal, financial and administrative institutions are in place industrialisation will follow. Gunder Frank's work on development in Latin America suggested that however much institutional reform took place industrialisation would **not** follow other than in periods when trading relationships between core countries and the periphery were interrupted by war or economic depression. Dependency theory is occasionally presented in a completely different way when candidates suggest that dependency on aid leads to limited economic development in low-income countries. In the context of this specification this is not the 'usual' meaning of dependency but it is a well-known theory and has been articulated widely in recent years. This, and other variations, were perfectly acceptable and indeed rather better than a simple description of the 'stages of economic development' without any obvious explanation about why countries transformed in this manner.

1 Explain how **one** theory of development can help an understanding of global patterns of power.

(4)

Rostow's theory of development stated that each country goes through 5 stages including pre-industrial + post-industrial. Countries that haven't been able to industrialise are stuck at the pre-industrial stage and these are the low economically developed countries and the countries that advance the post-industrial stage are the developed, richer economies known as the super powers.

(Total for Question 1 = 4 marks)



This answer is typical of the 'partial' Rostow version of modernisation theory which is descriptive but not explanatory. There is some credit here for that and the attempt to link back to the question but the processes are not explored. This response was awarded 2 marks.



Theories have two dominant characteristics – they should be predictive and testable. Models just describe.

1 Explain how **one** theory of development can help an understanding of global patterns of power.

World System theory

(4)

One development theory is the world system theory which describes the relationship between core, semi-periphery and periphery. This ~~can~~ can help in understanding global patterns of power as it indicates that HICs which fall into the core region, maintain power of the semi-periphery and periphery regions through making them dependant through things like trade and aid; which essentially increases the disparity between the ~~the~~ varying region and maintains similar patterns (Total for Question 1 = 4 marks)



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Examiner Comments

This answer meets the needs of the question by suggesting that trade and aid play a large part in maintaining power in the core and dependency in the periphery. Obviously, there is more to be said about the details of that relationship but this is a 4-mark question so the depth of the answers will be modest but the points do need to be explanatory and the link back to the question explicit, as they are here with references to 'global patterns of power'. This response was awarded 4 marks.



ResultsPlus
Examiner Tip

Don't rewrite questions in your answers. There is no credit for that.

1 Explain how **one** theory of development can help an understanding of global patterns of power.

Kuznetz

(4)

Theorys of development can help understand global patterns of power as in most cases a country has to be highly developed to become a power. The kuznet curve shows the stages of development that countries go through and this can then influence the ammount of power that they currently have or will have in the future.



ResultsPlus
Examiner Comments

Unlike the previous example this response doesn't describe the processes but just identifies it as 'stages of development' and then suggests that this will have an 'influence' on their power. But we are not told what that influence would be. This response was awarded 0 marks.



ResultsPlus
Examiner Tip

If it on the specification you need to know it - have a check list of key terms and key ideas.

Question 2 (a)

Candidates need to be taught to evidence every stage of their working. They must also be very careful not to make negative numbers positive for no reason. As centres look to the future it is important that they have a check-list of statistical methods and techniques that can be legitimately examined. These include some quite straightforward elements which are easy to overlook in the collective eagerness to cover the more complex methodologies. They also need to be aware of the limitations of these techniques because these will often be part of their answer to Q02(b).

Question 2 (b)

For many candidates there is a certain aura of solidity about 'numbers' which makes them uncomfortable when asked to critique them. This weakness is also evident in the Independent Investigations where too many find the evaluation of their results hard to address. In this case candidates need to focus on why the sample might be unreliable. Although many centres teach this well helping candidates think of four good reasons, a minority are not prepared for the way this question focuses on the reliability of the data provided. They tried, instead, to focus on the rest of the question: GDP per capita and military spending as a percentage of GDP. This is not a fruitful approach and led to many misconceptions. Not least the common misconception that GDP per capita does not take into account differences in population size between countries.

In this question it should have been fairly obvious that if one was seeking a general relationship between GDP per capita and military spending taking the richest 12 countries made very little sense. Questioning the reliability or, indeed, the accuracy of GDP per capita figures was also a fruitful approach. In general terms understanding how to sample data is not a strength of candidates; this is also illustrated well by the patchiness of its treatment in Independent Investigations.

(b) Explain why this sample of 12 countries may be an unreliable measure of the relationship between GDP per capita and military spending as a percentage of GDP.

(4)

This sample contains the 12 wealthiest/richest countries, this makes it an unreliable measure of the relationship because it is, ~~firstly~~, not representative of less wealthy countries who's military spending may vary significantly because of ~~less~~ varying economic development. Because it is not ^a representative sample any conclusions drawn cannot be generalisable to countries not sharing similar GDP per capita. Overall the table lacks external validity making it an unreliable measure of the relationship. (Total for Question 2 = 8 marks)



This response does address the key weakness of the choice of countries and offers enough support for that point. The final comment concerning 'external validity' is unclear but there is enough before that for it not to matter. This response was awarded 4 marks.



Be sceptical about data - some is dodgier than others.

(b) Explain why this sample of 12 countries may be an unreliable measure of the relationship between GDP per capita and military spending as a percentage of GDP.

(4)

Many of the nations on this data set have particularly unreliable GDP per capita due to vast inequalities in these countries, Qatar, United Arab Emirates and Saudi Arabia, meaning the data for GDP per capita, is not representative of the countries real individual income, therefore is hard to draw conclusions on its relationship as it's often unreliable with unequal countries.



ResultsPlus
Examiner Comments

This is a sound criticism which is well developed but, in itself, is not comprehensive enough to get beyond 2 marks. There is no need to limit explanation to one thread unless instructed to do so and some points cannot be developed sufficiently, as is the case here.



ResultsPlus
Examiner Tip

It is useful to distinguish between reliability and accuracy when criticising data.

Question 3

This was designed to be the easier of the two 'Analyse' questions and so it turned out. As centres are aware this command word is only used on this paper and only on these two questions, Q03 and Q04. Although not always the case, one or other question may very well draw on two or more resources; this year both did this and, in both cases, used maps; hardly unconventional on a geography paper. However, maps and, more particularly, the interpretation of patterns and distributions are not necessarily strengths for all candidates. In reality there has been a reduction in that skill since the advent of satellite navigation systems. On this question the candidates would have profited if they had been trained to use both sources to identify a pattern. In this case the pattern of earthquake concentration in figure 2 can be connected to landforms such as trenches and arcs in figure 1. They must not over evidence this pattern as this is a reasonably short answer question and there are only 4 marks available for that element of their answer. Rather, once they have found a pattern they need to bring in AO1 partially from the booklet, but also from the work they had done in preparing for paper 1, to explain it. There were some useful hints in the text under figure 2. However, high scoring candidates were also able to show off confident and varied knowledge to illustrate the patterns they had described and thus reach Level 3.

A common misconception was that height above sea level had a major impact on the intensity of an earthquake. The depth of an earthquake below the surface as measured in km may well influence the intensity of the waves that reach the surface. A few hundreds of metres variation in surface altitude much less so. A good reminder to teach students to look at the key very closely.

- player
- attitudes + actions

- lack of imports maybe? - future + uncertainty

3 Study Figure 1 and Figure 2 in Section A of the Resource Booklet.

- tectonic plates

Analyse the pattern of earthquakes in Japan and its surrounding region.

(8)

From analysing both figure 1 and 2, it is evident from the images that earthquakes with a depth of 0-29 km are more frequent in deeper ocean waters, such as the Japan Trench, in the northeastern ^{northern} part of region of Japan. This is ^{due} to the Okhotsk and Pacific plates meeting at a perpendicular angle. This conservative plate boundary ^{run} together at different speeds and directions, inevitably resulting in a release of pressure and seismic ^{and} waves. This has been a ^{re occurring} event between 1960-2015 in Japan as figure 2 displays more than 200 patterns of earthquakes.

Earthquakes ^{occur} are closer to where the tectonic plates are as these areas are essentially where the most pressure is built up from ^{the subduction of} plates and the build up of pressure. Examples being near The Eurasian and ^{Philippine} Philippine Sea plate boundary, which all meet at a perpendicular angle - resulting in ^{the} appearance of plate earthquakes.

These constant patterns can conveniently take a toll of Japan's level of economy as some TNCs are wary of locating their headquarters in a country well known to multiple earthquakes annually. The Tohoku earthquake in 2011 is a good example as Japan lost over \$360 billion from damages - all of which TNCs want to avoid. Many people are left displaced with not ~~governmental~~ ^{governmental} help as they are focussing on rebuilding the economy first. (Total for Question 3 = 8 marks)



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Examiner Comments

This answer illustrates a key element in the assessment process: the philosophy of positive marking. Most of the material on page 6 is irrelevant to this question although it would have worked quite well as a summary to an answer to Q04! However what comes before is a real attempt to engage with the resources and make comments about the relationship between plate boundaries and the distribution of earthquakes. Not all of this is correct, but the inferences are plausible and thus rewardable and the candidate brings their own understanding of tectonics to their answer; for example, the reference to different earthquake waves. This response was awarded 7 marks.



ResultsPlus
Examiner Tip

You cannot lose marks so, if in doubt, always include a point that you are unsure of.

3 Study Figure 1 and Figure 2 in Section A of the Resource Booklet.

Analyse the pattern of earthquakes in Japan and its surrounding region.

(8)

Figure 2 reveals that Japan is situated at the junction of four tectonic plates (Pacific, Philippine Sea, Okhotsk and Eurasian plates) and thus is subjected to 20% of all magnitude 7 quakes or above. These are situated mainly along the East coast of Hokkaido, Honshu, Shikoku and Kyushu at shallow depths of 0-29 km and follow the lines of the Japan branch and Ryukyu branch. Thus the collision of the continental Eurasian plate with the Philippine Sea plate and Okhotsk plate creates a complex network of subduction zones which produce many shallow and medium focus earthquakes along the lines of the branches and the continental plate of Japan, where mantles are forged due to tectonic subductions. On the Eastern edge of the island ~~area~~ archipelago and onto mainland China there is a greater concentration of deep quakes of 300-700 km deep but these are on balance of smaller lesser magnitude than the ones along the subduction zones. To the South of Japan ~~the~~ Figure 2 also shows ~~under island arcs~~ a chain of deep quakes following the lines of the Izu-Bonin and Ryukyu arcs island arcs. This suggests that tectonic uplift of new island arcs results in a significant ^{number of} deep quakes both on the Philippine Sea plate and on the South of the Eurasian plate. The worst impacted area with the highest intensity quakes is shown in

Figure 2 to be the Okhotsk plate as it is not only subducting under the Eurasian plate but is simultaneously colliding with the Pacific^{plate} and Philippine plates, creating a significant build up of tectonic strain in the region which manifests itself as a vast number of high intensity shallow earthquakes.



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Examiner Comments

This is a very well-focused answer that sticks tightly to the requirement to analyse the resources by bringing good AO1 knowledge and understanding from their study of tectonics for paper 1 to achieve that. The answer is unusual in that it explores the relationships between earthquake depth, strength and location in much more detail than most, and, for the most part, does it well. It is worth remembering that although these questions have 4 marks allocated for AO1 and 4 for AO3 that does not turn them into point-marked questions. Candidates do not need to make 4 AO3 observations – it is the descriptors that matter, not so much the indicative content, which is, after all, just indicative. This answer satisfies both Level 3 descriptors. This response was awarded 8 marks.



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Examiner Tip

Always quote data from the resources in these 'Analyse' questions.

Question 4

For many candidates, this was the question that they found hardest. This was often because they did not read the titles of the resource very closely nor reflected deeply enough on the meaning of 'risk'. Figure 3 shows the probability of an earthquake of MMS 6 or greater in the next 30 years as well as offering shorthand information about recent earthquakes, including their location. Figure 4 shows population density in Japan. There is obviously not a causal relationship between these variables although a large minority of students tried to establish one both 'explaining' why people are in certain areas but also, even more problematically how earthquakes would impact on those population density figures. Once candidates thought they established a relationship the AO1 that followed was necessarily mistaken, too.

The highest probability of a large earthquake is concentrated on the southern coast of Honshu. The population density is also highest in clusters on the southern coast of Honshu. What candidates should have realised is that this is because of the proximity of fault planes and that the risk may be higher as there have not been any recent large earthquakes in this precise location to release any pressure. They could then have made connections to figure 4 to show how this could lead to high casualties/costs. They could have extended this with AO1 about possible adaptation strategies. Some good answers described how recent earthquakes have mostly occurred in areas with lower population density, so risk and reality may differ. They also pointed out that risk is immediately reduced. Good AO1 was to mention that tsunamis have a high areal extent and that their hazard intensity is greatest along the coast, where population density is also highest.

4 Study Figure 3 and Figure 4 in Section A of the Resource Booklet.

Analyse the relationship between earthquake risk and population density in the Japanese archipelago.

(8)

The areas that are at most risk from an earthquake of MMS 6 is the south coast of the Honshu ~~mainland~~ island and the Shikoku island. These are also some of the most densely populated areas in Japan especially on the Honshu island. The Shikoku island is less densely populated from around 30-599 population density per km² on its south coast which is at most risk, 26%-100% chance of an earthquake MMS 6 or greater in the next 30 years. However on the Honshu island some areas that are greater than 1000 people per km² there is a risk between 26%-100% probability of an MMS 6 or greater earthquake. This is obviously very dangerous as the dog model shows that the more that a ~~disaster~~ ^{Hazard} and vulnerable population overlap the greater the disaster. It is predicting a large hazard, so although the population is less vulnerable in Japan there is still a large amount of people living in that area that would be affected. Therefore this would increase the chances of a disaster. Another ~~the~~ densely populated area in Japan is Tokyo with 26% of Japan's population living in the greater Tokyo region. This area

it is at a risk of 6% - 26% probability of an MMS 6 in the next 30 years. If there was a large earthquake in this region it could have a great impact not just in Japan but globally. The global economy could be affected as it would have an impact on global supply chains. This happened after Japan's last large earthquake in 2011 in Tohoku as the supply chains of Apple, Boeing and Nissan were disrupted.



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Examiner Comments

This candidate gives a strong account of the risk map by reading the basic data correctly. It is only a partial reading because the information about past earthquake events is not mentioned. This illustrates a key point that Level 3 answers, such as this one, do not have to be comprehensive. Both resources are 'rich' in detail and the expectation is that candidates will extract some, but certainly not all of the information. What this answer does very well, especially as it draws to a conclusion on page 8, is to concentrate on the impact of a major earthquake on Japan and the global economy which cross-references to the Tohoku event. This response was awarded 7 marks.

4 Study Figure 3 and Figure 4 in Section A of the Resource Booklet.

Analyse the relationship between earthquake risk and population density in the Japanese archipelago.

(8)

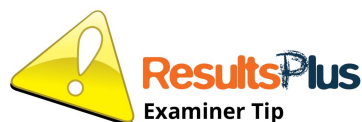
Japan is a highly developed country, with a good GDP. However, its level of wealth doesn't make it immune to the effects of earthquakes and their risks. The population of Japan is at high risk, as it has a population density of 340 per km², making it one of the most densely populated countries in the world. The area most at risk is the Tokyo region of Honshu, as over 1000 people live ~~in~~ in each km². This ironically is the area ~~most~~ most likely to receive an earthquake of MMS 6 in the next 30 years. Tokyo is ideal for a large population, due to the fact it's flat, has some of the wealthiest TNC's in the world based there, global connections, & trade making it a global hub. However the earthquake risk is great. ~~There~~ There have been no earthquakes directly in the city of Tokyo since 1923, increasing the prospect that pressure ~~could~~ 'gradually be building up & could release this energy as an earthquake in the near future as predicted. In 2011, an earthquake of 9.1 off the east coast of Honshu, just north of Tokyo, killed more than 27,000 people. This was due to large population density and failed mitigation attempts. In comparison, an 8.2 magnitude earthquake in 1994 off the east coast of Hokkaido killed only 11 people. Although it had a lower magnitude, it killed drastically less people,

due to the fact that there are only 1 to 15 people per km², compared with Tokyo.

There is a clear relationship between population density and earthquake risk, as unfortunately for Japan, the most densely populated areas are those with the greatest predicted risk of an earthquake occurring in the next 20 years. The number of deaths could be reduced due to mitigation strategies, but the population density is so large it would almost be ineffective. (Total for Question 4 = 8 marks)



This is a thoughtful answer that takes a different perspective in its analysis. As with the other exemplar used in this report the candidate understands the basic relationship between earthquake risk and population density, describing it as 'ironic'. They also reference recent earthquake events drawing down data from Figure 4 to explore the implications for Japan, especially for Tokyo. In the summative paragraph on page 8 they end with a pessimistic reading of Japan's vulnerability, despite its mitigation strategies. This response was awarded 7 marks.



Even in these shorter 8-mark answers try to draw them together with a final overview.

Question 5

Obviously, it is important for students to review all the material in the booklet but for the final two essay questions it is especially important. It is worthwhile for centres to remind their candidates that all resources have a purpose and they are not chosen lightly. An example of that is the information offered regarding Japan's energy mix (figure 7). No question directly focused on the country's energy mix but using this information alongside the trade data (figures 6a and 6b) would have been very useful for this question, and indeed for Q06. One perspective would have been to discuss the role of nuclear power in reducing Japan's fossil fuel consumption which of course, would reduce its imports. To develop this some candidates pointed out that the impact of Fukushima was to increase imports and thus increase international trade. In other words an increase in the volume of international trade is not necessarily positive. Similarly, those candidates that recognised that Japan had moved from import substitution to free trade had a much better understanding of the debate in the question given that import substitution reduces trade. The best answers understood the importance of Japan's positive terms of trade and its trade surplus as opposed to trade in general. They also recognised that exposure to global competition was a factor driving Japan's R&D and innovation - which is very important to understand their economic success (and ongoing positive terms of trade). There were many opportunities to illustrate these points with evidence from the booklet. It was less good to quote evidence of Japan's economic success but not link it to the role of free trade. On that same topic the best responses made an effort to establish what might be the appropriate measures of 'success'. As referenced in the opening preamble it was surprising that relatively few candidates used AO2 case study information here. Given that the outsourcing/reshoring debate is both highly topical and on the specification it was significant for its absence.

A final issue to address was the lack of reflection on what exactly constitutes 'Japan'. Given that the synoptic links specifically identify 'players' as well as actions, futures and uncertainties, it was surprising that so few identified any variations across Japanese society. From this perspective it seems reasonable to expect candidates to suggest that some parts of the Japanese economy have done better than others and thus some people have had more success than others.

Many candidates evaluated other factors that might explain Japan's economic success such as working culture, investments in nuclear and renewable energy and demographic change. This was best done when clearly making judgements about their importance relative to trade. A common weakness was to evaluate these other factors, but not link them back to the question.

A summary conclusion that captured their evaluative judgements on the importance of these factors was a characteristic of the highest marks. Candidates needed to come to a view and justify their view.

5 Study Section B in the Resource Booklet.

Evaluate the view that international trade is the main factor in the success of the Japanese economy.

(18)

International trade refers to trade on a global scale between multiple countries. Japan is very valuable within international trade, as it ranks 4th globally for the value of its exports and 5th for imports. It's top export is Motor cars, valued at US\$92 billion in 2016, with all of its other exports being in the manufacturing sector. Whilst this is extremely good for the Japanese economy, Japan also imports much of its fuel and mining products at 29.4%, 25.8% of which is being imported from China. Here it is clear that Japan relies on primary products from a developing economy such as China to fuel its own economy, as it does not have its own mineral resources.

However it wasn't always this way, in the 1950's, Japan developed its large manufacturing base with a policy of import substitution industrialisation (ISI). ISI meant that high tariffs (or taxes) were used on imported goods such as cars, allowing them to be replaced by Japan's own products often with government subsidies. This would make the good very sought after by other countries, as they began to be exclusive to Japan, and people often want what they can't have. Therefore at this point it was not trade that contributed to the success of the Japanese economy, but rather Japan's own domestic products.

Additionally, Japan's economic system may be a huge contributor to its success. 90% of the employees of TNC's such as Sony and Toyota are lifetime employees. This would mean that they have held the same job since they were young, and so would be very skilled within their areas. Additionally, the companies offer incentives such as their own schools, hospitals and retirement homes. This would likely keep people in their jobs, reducing unemployment rates and boosting the economy. Yet this is not necessarily sustainable, as, being so focused on work, many may not have the time to raise children, as they work very long hours (sometimes 80 hours weeks) leading to a declining population, which is the current trend today.

Once home markets were secured, Japan began to promote free-trade policies so that it could sell its goods overseas, with manufacturing goods being up 87.2% of the main commodity groups in 2016. Yet ~~more~~ Japan trades with many countries, the largest revenues being the USA, China and other countries outside of these and the EU. However the World Bank has stated in a recent report that this has led to a fall in domestic demand for consumer products, as 57.1% of imports are manufactured products. This is most likely due to a post restriction, leading Japanese consumers to want things from other countries. It may also be due to increased and more advanced technologies such as social media, as

someone in Japan may see something that they want that someone has in the UK for example, and due to relaxed / free trade policies they can import it in by buying on the internet. This would not benefit the Japanese economy.

Japan's huge nuclear power programme stemmed from imported US technology. After planning to supply at least 50% of the country's energy needs by 2030 through nuclear power in 1954, Japan began by importing US technology. Through this importation they were able to develop their own expertise, yet nuclear did not reach its 50%

benchmark. After the Fukushima disaster in 2011 they were left to shut down most of their plants and disrupt not only their own economy, but the global economy, as the production of vital parts in Japan disrupted the global supply chain even for huge companies such as Apple. Free international trade was used to boost the economy by providing an alternate energy source, yet led to a huge disruption in the economy and a significant decrease in nuclear power production.

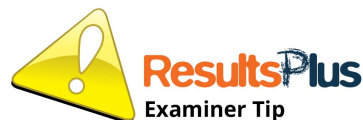
In conclusion international trade is the main factor in the success of the Japanese economy. Without trading, Japan would not receive the natural resources it needs to produce the products that it can then export internationally. Additionally by importing US technology it was able to develop its own

means of producing energy through nuclear power, whilst this
did have a disastrous effect after the 2011 tsunami, the
^{positives}
~~negatives~~ outweigh the negatives

(Total for Question 5 = 18 marks)



What is especially interesting about this essay is the candidate's persistent attempts to make connections and links both between different resource booklet material and that material and their own AO2 understanding. Sometimes that does not work in terms of objective reality (trade helping out after Fukushima) but the key point here is that it is plausibility rather than real histories that matter in this case. Obviously, there is no expectation that students know anything much at all about Japan but if their attempts to explain are coherent that is the sole criteria by which they are judged; that is the essence of the 'geographical skills' that this paper explores. This response was awarded 17 marks.



Try to make links between different resources in the booklet wherever you can.

• Exports large amount of manufactured goods globally - to USA

• Home to large TNCs e.g. Nissan, Apple

• Promote free trade - encourages international trade

x • ↑ tariffs on imports ∴ use own products = help boost own economy allowing Japanese business to diversify.
(18)

5 Study Section B in the Resource Booklet.

Evaluate the view that international trade is the main factor in the success of the Japanese economy.

International trade is the trade between different countries where exports are shipped out of a country and imports are coming into the country.

Japan is very dominant in global trade as it is home to important ^{dominant} TNCs such as Sony and Toyota where they produce global goods to be used around the world. ^{Manufacturing} Japan exports accounts for

87.2% of Japan's exports, this includes car parts, domestic technology and electronic circuits. ^{motor cars} Car part export alone ^{has a value} ~~make up~~ of \$92bn

with parts for cars adding \$32bn. This has strengthened Japan's economy as it has provided many highly skilled jobs to produce the cars giving the country funds to invest in infrastructure like schools and healthcare but also to help diversify the economy further by attracting other TNCs to invest in the area.

Japan was formed by erupting volcanoes forming an island arc, this has meant the country does not have any natural resources of its own meaning they have had to import all their energy. oil and petroleum alone cost \$5/bn to import into Japan. This could of impacted on Japan's economy as importing all these resources becomes very expensive and means you are reliant on other countries for fuel + energy. Not having an energy supply may have also put people off from investing into the country due to the lack of resources for industry. However Japan has developed other energy sources such as HEP and nuclear power now provide a sufficient

amount of Japanese energy. This was halted then after the 2011 earthquake in Tohoku when the nuclear power station Fukushima was destroyed in the tsunami. This caused a new catastrophic event so for the past few years almost all of the power plants were shut down. However the government in 2015 decided to restart the program as well as develop and research renewable energy resources to help reduce their energy reliance on other countries and so becoming more self-sustaining and secure. The ~~success~~^{development} of renewable energies can help strengthen Japan's economy as they are no longer having to import energy and may attract other companies due to ~~the~~ having a secure energy supply.

Another factor that has also helped with the success of Japan's economy is the ISI policy put in place in the 1950s. The government imposed high taxes and tariffs on imports and so people were deterred from buying them, creating a switch where more people bought 'home' manufactured products. An example of this is many cars which were imported but due to high tariffs many people now buy Japanese cars like Mitsubishi. Government also encouraged buying Japanese only products further by putting subsidies on products so making them more competitive. This led to the growth and development of the Japanese market as manufacturers used Japanese own products, securing a home market, allowing ~~to~~ other smaller businesses to benefit ~~from~~^{not just} the large TNCs, this means their economy is more sustainable and can be maintained.

Japan now ~~international~~ trade promotes free trade policies allowing many companies to sell their goods abroad and so increasing their market and boosting GDP. Japan is hegemon to some dominant trade countries such as China so by promoting free-trade it encourages the trade with China and so subsequently strengthens their economy as they have more trade partners.

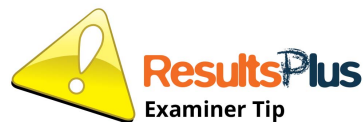
Japan Tokyo is Japan's capital city, many large international companies are located here in 2017 Tokyo was the 3rd ranked city ^{by} for business in the world. Tokyo has a similar economy to London (1st) and New York (2nd), showing a well established economy. But also scoring high in liveability, ^{and} accessibility being a popular city has got strengthened Tokyo's and Japan's economic success and it became more internationally linked. This is because it is viewed as a good city so many people ^{more} ~~locate~~ their to live and work but also tourism is high. This generates income for the city and local businesses which further strengthens the economy and brings investment as it is viewed as a place to be.

Having a unique economic system has also helped Japan become economically successful as 90% of the employees, such as Apple, Sony, Toyota, employee them for life. As they provide their own schools, hospitals and retirement homes for the workers. This gains employer loyalty and helps develop its workforce to ^{be} highly educated, healthy ~~and~~ loyal and so ^{workers} they will have a high motivation to work well.

Overall ~~there~~ ^{international} trade has helped Japan's economy grow and become successful, however other factors such as government policies and technology development (Total for Question 5 = 18 marks) have helped boost their economy too.



This is an essay that could be edited quite quickly to improve it. What it does well is the provision of an overview of the several aspects of Japanese society and its economic system but what it does not do quite so effectively is relate these observations to the question in a truly evaluative fashion. A good example can be found with the paragraph that ends at the top of page 10. Having discussed Japan's energy mix and made a point about the development of renewables reducing the need to import fossil fuels the relationship to trade is left unstated. The very brief conclusion does not add very much to the evaluation. This response was awarded 14 marks.



Don't lose sight of the question by keeping the focus clear.

Question 6

There were some very strong answers to this question and, pleasingly, very few signs of candidates running out of time. There was evidence of planning and an encouraging number used what might be called portable or flexible concepts and ideas to help unwrap the title more effectively. An example of this was the complex relationship between economic growth and the environment and their potential incompatibility. Some Level 4 answers also reflected on the great difficulty in any forecasting of the future; one candidate referenced the failure of economists to forecast the global crash of 2007.

AO1 is a small part of the mark scheme for this question and we focus more on the level descriptors when determining the mark. However, it is important to focus on the question. To do this effectively requires some structure from the course. Evaluating significant global power is much easier when you identify the pillars of global power. Needless to say the economy is the foundation that supports the projection of power through military, geographical and cultural means. Such a structure enables evaluation and comparison of Japan's strengths today and tomorrow for each of these pillars. Without this AO1 framework some candidates ended up evaluating the evidence in the booklet, but not really in terms of global power. The concept of sustainability in the context of this question brings in the temporal aspect. Is the global power that Japan has today likely to remain tomorrow? There is scope here for synoptic links to other global powers. However, rather narrow answers resulted when candidates evaluated whether Japan was sustainable economically, environmentally and socially. They were odd because these answers tended to drift from the idea of global power. As an illustration of impressive knowledge and a global reading of the question several referenced with waning power of the USA in economic terms as opposed to its super-dominance militarily. That was, after all, material that was offered to them in the booklet so it just required a cognitive leap to make the comment that the USA in 2019 is bellicose and aggressive leaving opportunities for other countries to expand their soft-power diplomatically.

The booklet was used very well to support these answers. The main discriminator between answers was less the use of the booklet, but more the application of the evidence to support the discussion of the debate in the question. However, a common misconception is that Japan is doomed because of a potential hazard in the future. This is simplistic because Japan has recovered from recent disasters. Moreover, the country adapts against hazard risk and other global powers such as the USA and China also suffer from hazard events. Candidates should be encouraged to evaluate these factors, rather than make exaggerated statements. As referenced in the preamble too many went down a Yes/No pathway with many unsupported statements. Similarly, better answers recognised that as the 8th largest military spender on the planet Japan gains significant influence – even if it exerts less influence than larger powers such as China and the USA. Weaker answers made an exaggerated point that Japan was 8th and therefore had no military influence. Answers that considered change over time did best. A deteriorating dependency ratio may weaken economic output in the future, unless improved productivity from robotics and AI outweigh any losses. Japan's soft power is improving from 8th to 6th etc...

A crucial characteristic of Level 4 work is a balanced argument that is drawn together coherently. This requires time to be spent on a proper conclusion. Some candidates simply restated earlier points but then rather threw up their metaphorical hands and stated that it was difficult to say how matters would turn out, which is fine just so long as evidence is offered. Others failed to offer any summative comments, perhaps contained by time but probably also because of lack of self-awareness, which held down their mark considerably. Thus, time on its own is not enough. Conclusions must take a view on the question and justify that view drawing on key ideas from the answer. Done well, this was a characteristic of the highest scoring answers.

A significant global power or a superpower is a country that has a lot of power and influence over more than one global region. The superpower status is dependant on 7 different factors which are; economic strength and influence, military strength, access to natural resources, physical size, demographics, cultural influence and political strength. At the present moment, Japan is a significant global power in the multi-polar world however this could be unsustainable due to so many other countries that are now emerging.

Japan is ranked very high in terms of economic power and influence which is making their significant global power sustainable. Figure 8 shows the globalisation rankings on the KOF index for six superpowers. Japan is ranked 78 for economic factors, this includes the international trade which makes up a significant amount of the economy. However, there are 4 other countries on figure 8 which did score significantly higher than Japan did which could make Japan's status as a significant global superpower unsustainable. Figure 6b shows the success of Japan's trading economy which

does make up the mass majority of its economy. Japan ranks 4th globally for the value of its exports with a value of US\$644 billion. The economy is a very significant factor in the sustainability of Japan's superpower status.

Another factor which is important in the sustaining of a superpower status is cultural influence. In the age of globalisation, mass media TNCs spread their influence across the world quite easily, Sony is a huge TNC which is Japanese and produces many video games, such as Pokemon, and films which are viewed globally. Figure 10 shows a soft power league table which shows changes in global influence measuring diplomacy, culture, education and other factors, 2015-2017; in 2015 Japan was ranked 8th but by 2017 it was ranked 6th. This shows that Japan is having more influence over the world and this is significant as it will allow Japan to be able to sustain its superpower status.

However, there are some factors in which could make Japan's superpower status become unsustainable and one of those things is natural hazards. Japan is located on the Pacific ring of fire and

as shown in figure 2, is subject to a lot of earthquakes and it also has 110 active volcanoes.

Figure 12 shows the predicted impacts for the world's 10 most hazardous cities and 3 cities located in Japan are on the list. Tokyo is the top of the list with the total population potentially affected at 57.1 million, in terms of economic losses these 3 Japanese cities - Tokyo, Osaka-Kobe and Nagoya - fill the first 3 places globally with potential GDP losses as high as 5% of the annual total. This is a very significant factor as to why Japan's global power status is unsustainable as the natural hazards are so frequent and have devastating effects on their economy and their trade etc.

Another factor which is significant in Japan's global power status being unsustainable is military spending. Figure 9 shows the defence expenditure for the world's top 15 military powers in 2016, Japan is 7th on the ranking with a military spend of US\$46.1 billion however they are not in the top 10 countries for military size and they are also much lower spending than the main powers of USA and China. This could make them vulnerable

And make their global power status unsustainable.

In conclusion, there are a number of factors that could lead to the global power status being unsustainable however economy and cultural influence outweigh this.



ResultsPlus
Examiner Comments

This essay has a very sound structure with thematic paragraphs and a reasonable introduction that helps develop the subsequent framework. The conclusion is weak: too brief and not evaluative but ongoing evaluation is quite strong. The AO3 is stronger than the AO2 – something of a general characteristic, even of Level 4 responses. However, in the paragraph on page 14 devoted to Japan's cultural reach the material on Sony and Pokemon is strong and linked well with resource booklet information. The ability to weave together given information with a candidate's own knowledge and understanding is a key element in 'making connections' – the final bullet point in the levels descriptors. This response was awarded 20 marks.



ResultsPlus
Examiner Tip

Always try to add your own knowledge where and when you can.

Sustainability is the ability to cater to the needs of the current generation without preventing other future generations from doing the same.

It could be argued Japan's ^{position as} status of a global power is unsustainable as ~~it~~ geographically it is situated on a hazard hotspot and is located at the junction of 2 plates, continental and oceanic. This means it is prone to multiple hazards including hydrological ones such as tsunamis. As an island it is also relatively at risk of floods in coastal ^{low-lying} areas. ~~These~~ ^{Some of these} hazards are set to increase with the rise of global temperatures hence ^{the increase of} ~~more~~ hazards ^{would} come the increase in hazard preparedness management and mitigation against it. This has a high economic cost and also has weaknesses. Education and skills also require money and cooperation. However due to an aging and declining population, economic growth is unsustainable as more elderly dependants with less working, economically active people mean there is not enough people paying tax and supporting the economy, especially as there is a fall in demand for consumer products domestically. This means a lack of the multiplier effect if ~~less~~ people are working and spending leading to a strain

on governments. ~~and~~ ~~lose~~ This could ^{cause trigger} lead to a spiral of decline and lead to a less profitable ^{thus} and powerful economy leading to a drop fall in global power with the lack of economic influence.

However, considering ^{global cities ranking} ~~soft powers such as~~ 'liveability' where ~~the~~ Tokyo scored within the top highest along with their 'economy' and research and development and its overall ranking of 3rd is the top 10 global cities in 2017. Japan is also the only country in the 'soft power league' to improve its diplomacy, culture, education and other factors consecutively over 2 years from 2015 to 2017 whereas all the other countries shown in figure 10 either stayed stable like Sweden or decreased in influence like Germany. This increase in global influence suggests Japan is sustainable as a global power as it is both a global hub and ~~is~~ increasingly influential.

Japan does not rely on farming or minerals and there is not much possibility for this in Japan so it is not dependant on primary jobs which became less popular as a country develops. By business development ~~and~~ instead Japan have a sustainable way to succeed as resources can run out however knowledge and scientific information and advancements remain relevant. †

But Japan using renewable energy is also sustainable as they they are infinite so it can be used and won't run out. Research and development may this could also be sold and exported as renewable source more important. However most of Japan's workers for TNCs are lifetime workers so may die.

Overall, the view that Japan's status as a significant global power is unsustainable is true to some extent, as ^{cultural} the attitudes and actions of ^{Japanese} residents is ^{reducing the ability of} preventing in-migration to compensate for low fertility rates. ^{attitude} so in the long-term, if this doesn't change or adapt and governments do not take action then Japan's ^{global power} status may not be long be viable however in the short term



ResultsPlus
Examiner Comments

This essay is a Level 3 response which could be easily improved by reorganising the material in a more coherent fashion, adding a conclusion and introducing more AO2 material at critical points. The AO2 here is a little marginal with the linkage between hazard frequency and climate change clearly irrelevant insofar as tectonic hazards are concerned. It is worth commenting that Japan's resilience in the post-Tohoku years should have given candidates pause before introducing the idea that their global power status was at risk because of hazards. There is no proper introduction to this essay nor a conclusion and the ongoing evaluation does not entirely compensate, despite some thoughtful material. This response was awarded 17 marks.



Each paragraph should have one theme or idea with some evidence to support it and a final sentence tying it back to the title. That will stop the essay drifting off topic.

Paper Summary

Based on their performance on this paper, candidates are offered the following advice:

- All the information in the resource booklet is there for a purpose.
- Candidates should scribble notes in the booklet making references to their own knowledge of places and processes.
- Although there is no presumption that candidates will know the location chosen as the focus of the paper, there is a presumption that some of the issues will be familiar to them.
- Many terms are contested and there is only very rarely a consensus – be especially careful not to assume that everyone agrees what, for example, sustainable development might look like.
- Remember that countries do not make decisions but governments do, and different players will have contrasting views about those decisions and contrasting roles in contributing to the decision-making process.
- Almost all decisions and the actions that follow, however well-meaning and well-intentioned, will have some negative consequences for someone, somewhere.
- Almost all actions will have different impacts in the short term, both negative and positive, than they will in the longer term – futures are uncertain.

Grade Boundaries

Grade boundaries for this, and all other papers, can be found on the website on this link:

<http://www.edexcel.com/iwantto/Pages/grade-boundaries.aspx>

