Please check the examination details below before entering your candidate information

Candidate surname	Other names

Centre Number | Candidate Number

Pearson Edexcel Level 3 GCE

Monday 10 June 2024

Afternoon (Time: 2 hours 15 minutes)

Paper reference **9GE0/03**

Geography

Advanced

PAPER 3

You must have:
Resource Booklet (enclosed)
Calculator, Ruler

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- Any **calculations** must show all stages of **working out** and a **clear answer**.

Information

- The total mark for this paper is 70.
- The marks for **each** question are shown in brackets – *use this as a guide as to how much time to spend on each question.*
- Calculators may be used.

Advice

- You are **advised** to spend the first **15 minutes** reading the Resource Booklet.
- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over

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Pearson

Answer ALL questions.

You must use the Resource Booklet provided and your own knowledge and understanding from across your course of study to answer the questions in this paper.

1 Explain why transnational corporations (TNCs) benefit from globalisation.

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(Total for Question 1 = 4 marks)

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2 (a) Table 1 below shows data from 2019 for the Gross Domestic Product (GDP) per capita and the Environmental Vulnerability Index (EVI)* for Haiti and 11 of its closest neighbouring countries.

A Spearman correlation test was used to establish whether there was a statistically significant relationship between GDP per capita and the EVI of these 12 countries.

*The null hypothesis: There is **no** significant relationship between the level of GDP per capita of a country and its EVI score.*

*The alternative hypothesis: There **is** a significant relationship between the level of GDP per capita of a country and its EVI score.*

*Environmental vulnerability uses 50 variables to measure the level of both natural and human threats, as well as the resilience of countries in coping with these threats.

The higher the EVI scores the more vulnerable is the country.

	GDP per capita in US$	Rank	Environmental Vulnerability Index (EVI)	Rank	d	d^2
Colombia	6,630	7	296	5	2	4
Costa Rica	13,373	3	354	11	–8	64
Cuba	9,540	5	329	9	–4	16
Dominican Republic	8,476	6	324	8	–2	4
Haiti	1,819	12	343	10	2	4
Honduras	3,040	10	273	3	7	49
Jamaica	5,185	8	381	12	–4	16
Mexico	11,091	4	306	7	–3	9
Nicaragua	2,255	11	272	2	9	81
Panama	17,358	2	247	1	1	1
United States	62,866	1	300			
Venezuela	3,460	9	291	4	5	25
					$\sum d^2 =$	

Table 1

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(i) Calculate the value of $\mathbf{d^2}$ for the United States.

Show your working.

(2)

$\mathbf{d^2}$ = ...

(ii) Then using the formula below calculate the value of r_s.

$$r_s = 1 - \frac{6\sum d^2}{n\left(n^2 - 1\right)}$$

Show your working.

Give your answer to one decimal place.

(2)

r_s .....

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(b) The result suggests that the **null** hypothesis should be accepted at the 99% confidence level.

Explain why this result may not be reliable.

(4)

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

Analyse the evidence that the people of Haiti face greater economic and social challenges than their neighbours.

(8)

(Total for Question 3 = 8 marks)

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4 Study Figure 4, Figure 5 and Figure 6 in Section A of the Resource Booklet.

Analyse the impact of tectonic and hydrometeorological hazards on the landscape and people of Haiti.

(8)

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(Total for Question 4 = 8 marks)

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5 Study the resources in Section B of the Resource Booklet.

Evaluate the view that Haiti's colonial past is the main reason for its current level of development.

(18)

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You should have read the whole of the Resource Booklet, including Section C, before attempting this question.

6 'If the Haitian population is to have a prosperous future it needs international action to build a sustainable economy'. Evaluate this view.

(24)

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(Total for Question 6 = 24 marks)

TOTAL FOR PAPER = 70 MARKS

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Geography

Advanced

PAPER 3

Resource Booklet

Do not return this Booklet with the question paper.

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SECTION A

Haiti, 'the poorest country in the Americas'

Haiti is a small country of 27,065 km^2. It is situated at the western end of the Caribbean island of Hispaniola. Most of this island is occupied by the Dominican Republic.

Much of Haiti is mountainous. Slopes are often steep, with nearly two thirds having gradients greater than 20%. Its climate is tropical.

It is located in a tectonically active region and is also subjected to frequent tropical storms and hurricanes. On the 2020 Climate Risk Index, Haiti is third among the countries most affected by severe weather events.

The population of 11.6 million mostly live on coastal lowlands. It has an average population density of 414 per km^2. Almost 3 million live in the capital city, Port-au-Prince. However, 40% of Haitians still live in rural areas.

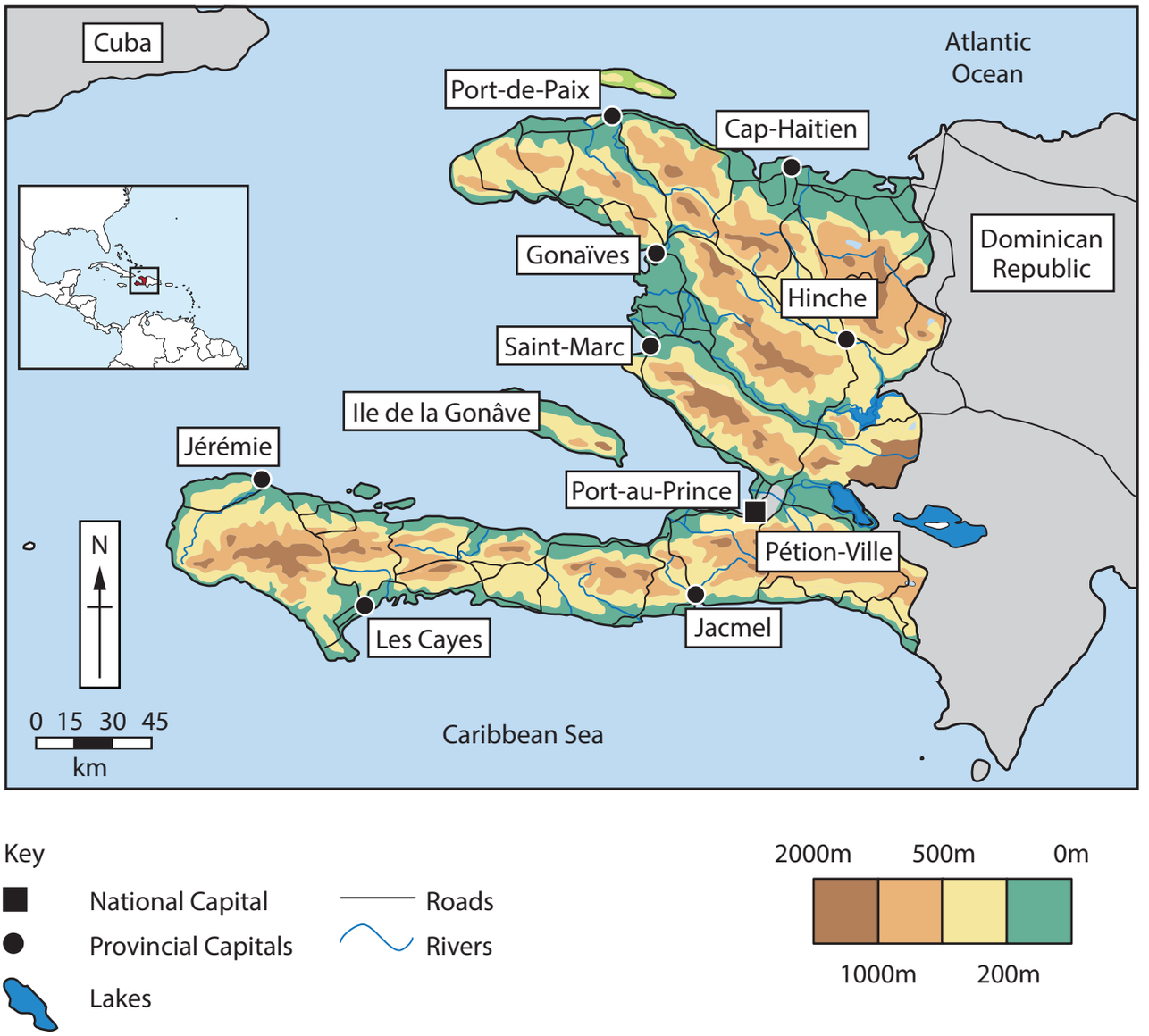


Figure 1

Haiti

- The country has one of the highest levels of food insecurity in the world, with more than half of its total population food insecure. 22% of children are chronically malnourished. The majority of the food insecure population live in rural areas.
- Two of the main reasons for food insecurity are extreme poverty and frequent natural disasters.
- A small economic and political elite of less than 1% of the Haitian population is extremely wealthy, including many multi-millionaires.

	GDP per capita in US$	% living on less than US$5.50 a day	Fertility rate (average number of children born per woman)	Annual net migration rate per 1000 (if negative, emigration is higher than immigration)	Human Development Index rank (1, most developed, 180, least developed)	Corruption Perception Index rank (1, least corrupt to 180, most corrupt)
Colombia	6,630	29	1.8	–0.8	83	92
Costa Rica	13,373	11	1.7	0.8	62	42
Cuba	9,540	n/a	1.6	–1.3	70	63
Dominican Republic	8,476	12	2.3	–2.8	88	137
Haiti	1,819	79	2.9	–3.2	170	170
Honduras	3,040	49	2.4	–0.7	132	157
Jamaica	5,185	30	2.0	–3.9	101	69
Mexico	11,091	23	2.1	–0.5	74	124
Nicaragua	2,255	35	2.4	–3.3	128	159
Panama	17,358	13	2.4	2.7	57	111
United States	62,866	11	1.7	2.9	17	25
Venezuela	3,460	33	2.3	–22.3	113	176

Figure 2

Selected data for Haiti and some of its neighbours, 2019

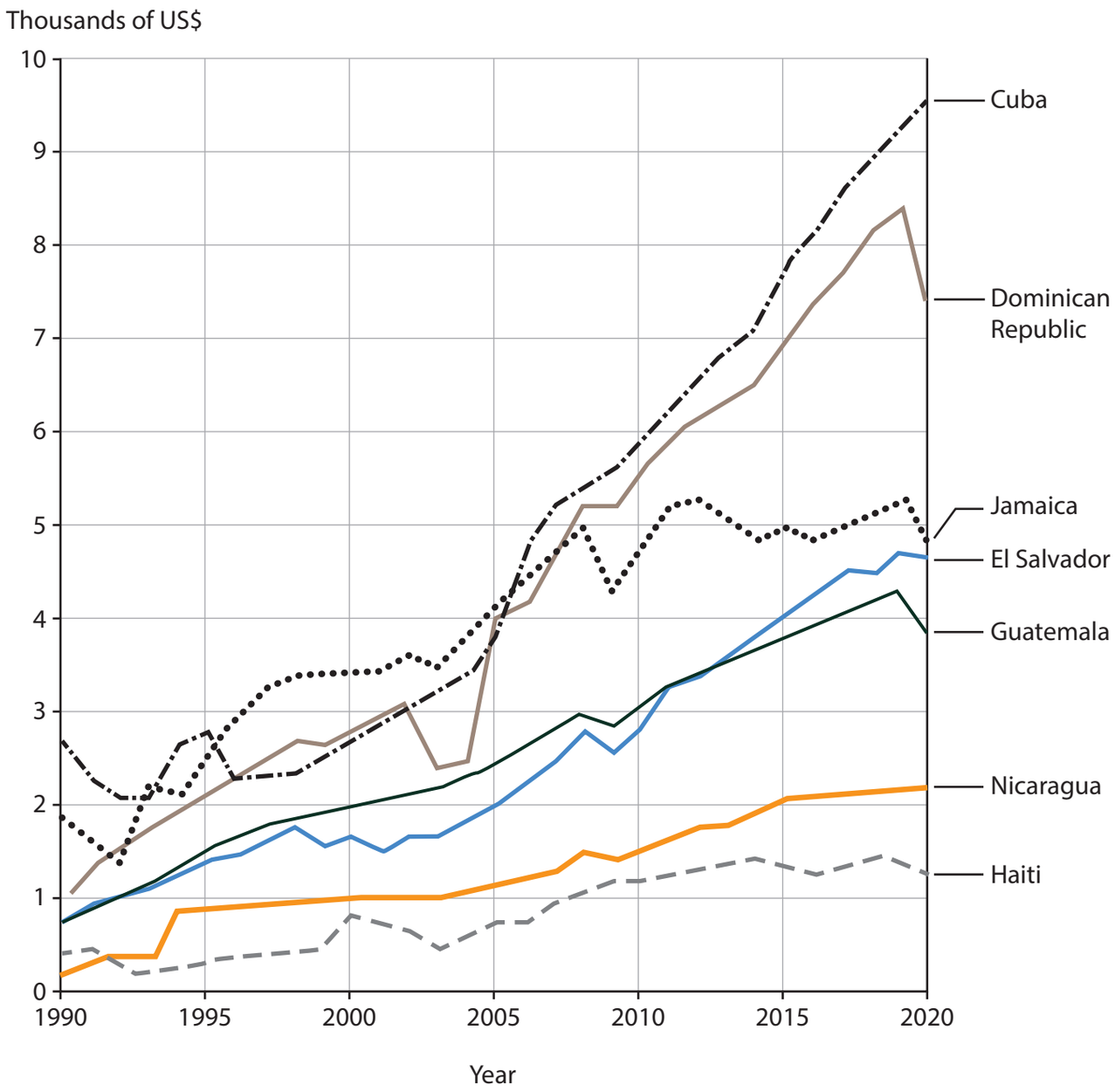


Figure 3

Haiti's GDP per capita growth (thousands of US$) compared with some of its neighbours, 1990–2020

Haiti lies in the path of hurricanes and is more mountainous than most Caribbean islands which increases rainfall and surface runoff.

Haiti is tectonically active, criss-crossed with several transform faults. Earthquakes in this region often have relatively shallow foci. In the case of the devastating 2010 earthquake the rupture started about 10 km below the surface, with the epicentre only 25 km from the capital city of over 2 million people.

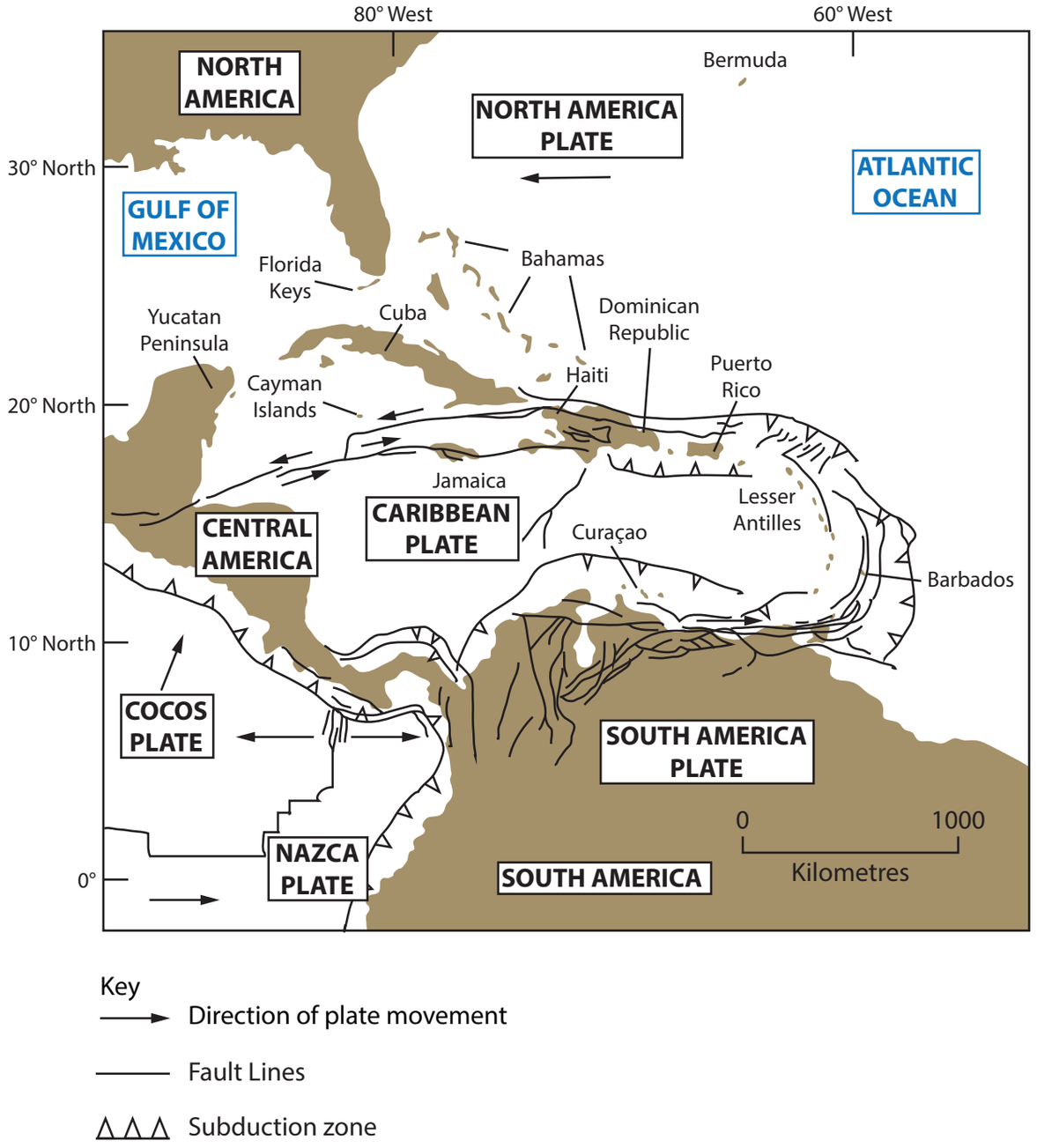


Figure 4

Haiti's tectonic location

Year	Event	Impact on Haitian people
2021	**14 August** A magnitude 7.2 earthquake. The epicentre was about 150 km west of Port-au-Prince.	An estimated 2,400 deaths.
2020	**23 August** Hurricane Laura was a Category 4 hurricane.	31 deaths.
2018	**6 October** A 5.9 magnitude earthquake with a depth of 11.7 km.	12 deaths, 188 injured.
2016	**3–4 October** Hurricane Matthew resulted in flooding of up to 1.5 metres and a storm surge of up to 3 metres.	At least 580 deaths, 35,000 left homeless.
2012	**24 October** Hurricane Sandy passed just west of Haiti, with heavy rainfall and catastrophic flooding.	100 deaths, around 200,000 left homeless.
2010	**12 January** A magnitude 7.0 earthquake. A dozen secondary shocks of magnitudes ranging from 5.0 to 5.9 during the following hours.	Estimates range between 100,000 and 316,000 deaths. At least 500,000 were left homeless.
	20 January A second earthquake of magnitude 6.1.	Exact data is unobtainable.
	20 October onwards A cholera epidemic occurred in Port-au-Prince.	3,600 deaths, 340,000 became ill.

Figure 5

A timeline of Haiti's recent natural disasters

The impact of natural hazards has been made worse by human actions. With imported oil too expensive for most people, charcoal from burnt trees has provided 85% or more of the energy in Haiti for decades. As a result, Haiti's rural poor have cut down very large numbers of trees both for their own needs and for the urban population. This results in deforested mountain slopes that rainwater washes down, eroding the soil.

Climate change poses significant risks to the country.

- Temperatures are expected to increase by 0.5 – 2.3 °C by 2060.
- The number of hot days and nights is projected to increase.
- Rainfall projections forecast decreases in rainfall during June–August.
- The Caribbean region is vulnerable to sea-level rise, projected to be between 0.13 – 0.56 metres by 2090.
- Increases in hurricane rainfall and wind speeds are likely. Simulations suggest for each 1°C increase in sea surface temperatures, rainfall from hurricanes may increase by 6–17%. Surface wind speeds of the strongest hurricanes will increase up to 8%, with associated increases in storm surge levels.

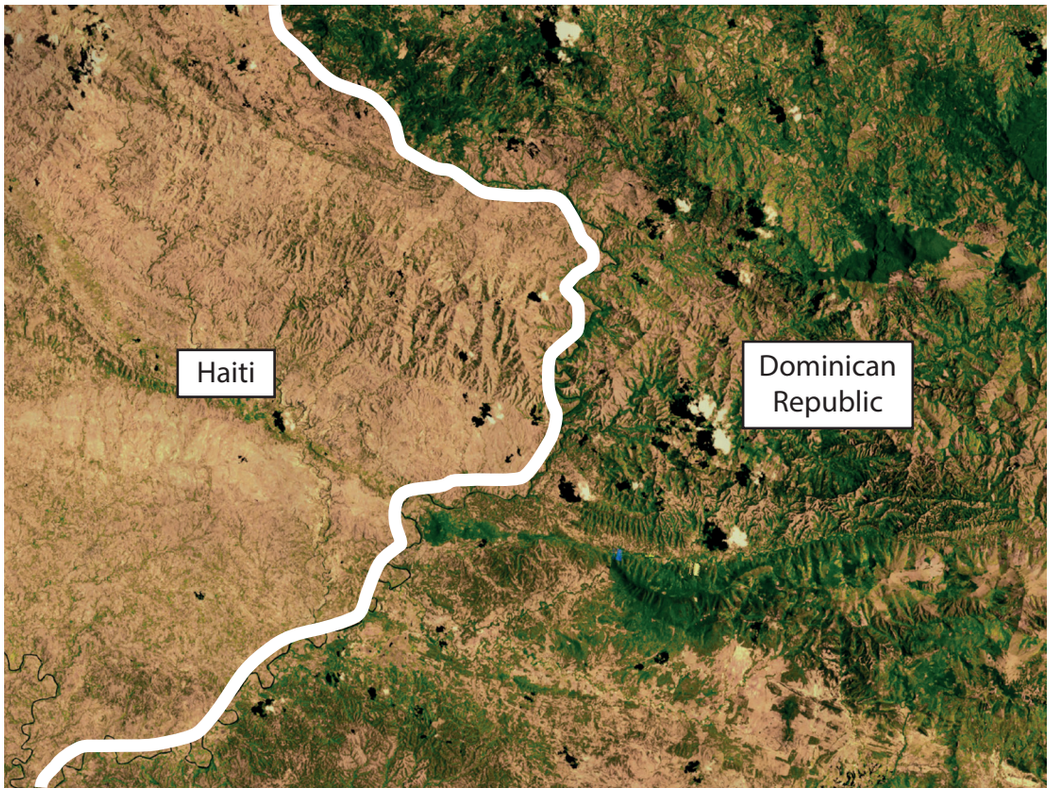


Figure 6

Contrasting forest cover in Haiti and the Dominican Republic

SECTION B

Haiti's history of development

The Caribbean islands' history is complex and brutal. The transatlantic slave trade between the 1500s and 1800s was dominated by France and Great Britain, who profited most from it. Jamaica (a British colony) and Haiti (a French colony) were the richest colonies of all at this time.

By the 1790s, Haiti was the world's top producer of sugar and coffee as well as indigo, cacao and cotton. At its peak, goods and profits worth €2.5 billion per year in today's money were exported to France every year. One in eight people in France gained their living from the wealth extracted from Haiti.

The Haitian revolution, led by slaves, against French rule ended slavery (the first country to do this) and achieved independence from France after a long war. This led to Haiti emerging as the first black republic in the world.

The French refused to recognise the new republic until it paid the French government reparations for the 'lost' value of the slaves and the land. Haiti had to take loans from French banks to pay this bill. This 'double-debt' amounts to a loss of US$21 billion for the Haitian economy over the past 125 years.

For many years the European powers and the USA blocked all trade with Haiti. Between 1857 and 1934 the US government intervened in Haiti's governance on many occasions. From 1915 until 1934 the US military occupied Haiti which effectively became a colony once again. Since then, the neo-colonial relationship between the two countries has been complex, both in terms of trade and sovereignty.

After the 2010 earthquake, former President Bill Clinton publicly apologised for having previously forced Haiti to remove tariffs on imported subsidised U.S. rice. This policy wiped out rice farming in Haiti, seriously damaging Haiti's ability to be self-sufficient in food and forcing farmers to abandon their land and move to Port-au-Prince.

This earthquake also demonstrates a failure of international aid to reach those that need it most. Some economists suggest that Haiti is in a poorer situation than it was in 2010 despite US$13 billion of aid.

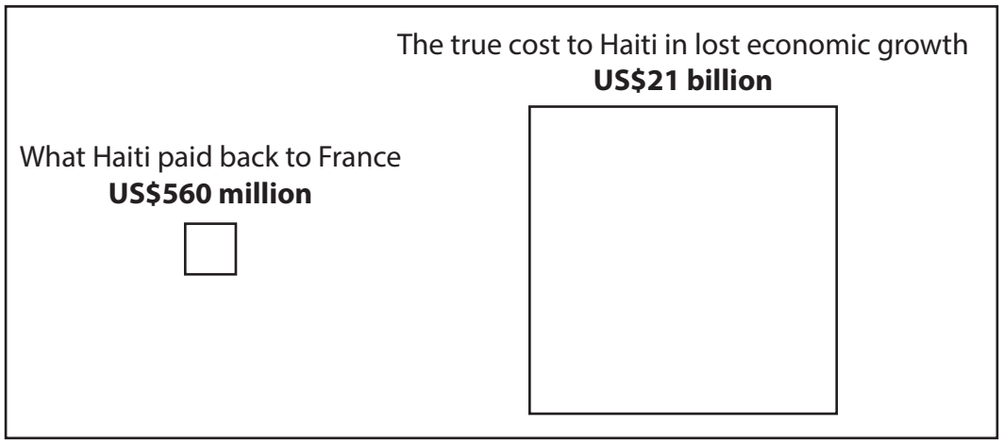


Figure 7

The impact of Haiti's debt

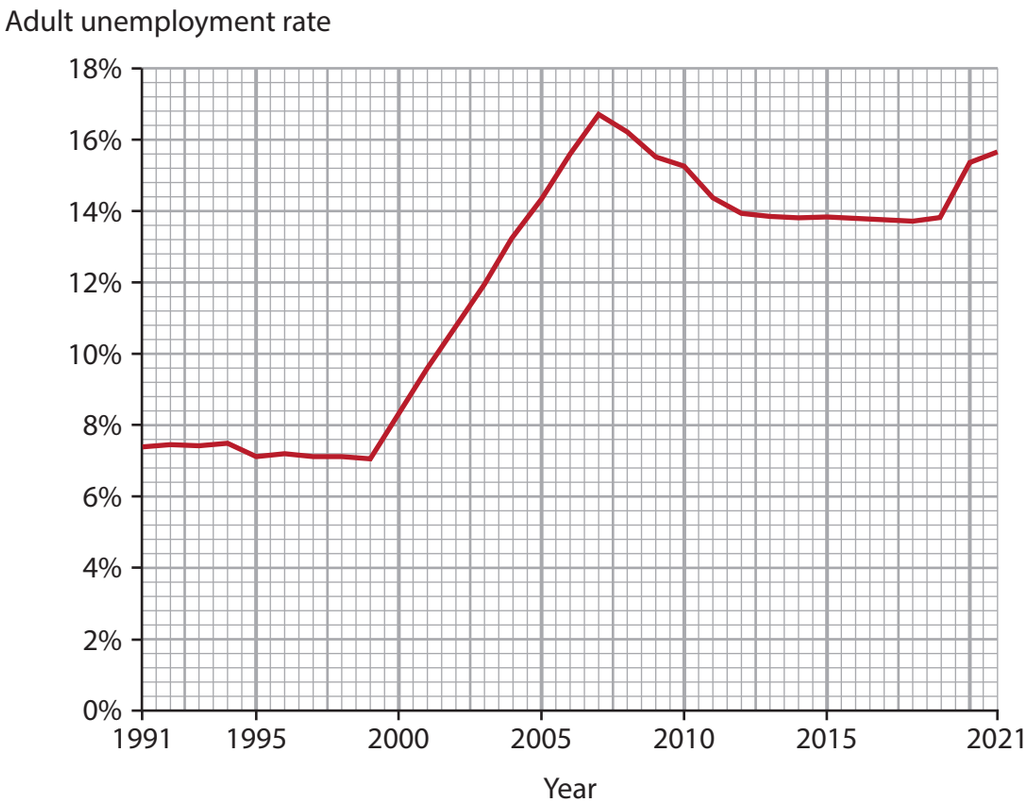


Figure 8

Unemployment in Haiti, 1991–2021

Haiti's largest area of informal housing

Jalousie is home to over 80,000 of the poorest inhabitants of Port-au-Prince. The houses were painted using government money which locals mock as 'le Botox'. Critics suggest that the repainting of Jalousie was because it is visible from the wealthy district of Pétion-Ville.

Water supply

14 years after the 2010 earthquake, water supply remains an issue. Less than half of households have access to fresh water. Only 24% of households have access to a toilet. Cholera and other water borne diseases are common. Infant mortality rates are 48 per 1000, 10-times that of the UK.

Agriculture and land ownership

Most Haitian farmers own some of their land, unlike in most other neighbouring countries. In 1988 66% of Haitians were farmers. Since then many farms have been abandoned as a result of policies imposed on them by the USA, ongoing deforestation and climate change. Mechanisation is rare with 1 tractor per 1,700 hectares.

Tourism in Haiti

Compared to its neighbours Haiti has a poorly developed tourist industry, largely due to its history of political instability. The flight time from Port-au-Prince to Miami (Florida) is less than two hours. Many beaches are empty, and many are heavily polluted, as shown. The US TNC, Royal Caribbean, rents Labadee on the north coast. In common with other enclave resorts, it is fenced off from the surrounding area and tourists do not visit other parts of the country.

Figure 9

Scenes from Haitian life today

SECTION C

The future of Haiti in a globalised world

Free trade policies, privatisation and the encouragement of foreign investment have been at the centre of the policies promoted by international political and economic organisations. In Haiti the role of the United States has been central.

Most measurements show that Haiti is one of the least globalised countries in the world.

The data measures globalisation in three areas; economic, social and political and then combines those three scores in an overall ranking with 1 being the most globalised country. The rankings are shown below for Haiti and its neighbours and includes the GDP per capita data for reference from Table 1.

Country	Economic Globalisation	Social Globalisation	Political Globalisation	Overall Globalisation ranking	GDP per capita US$
Colombia	138	119	56	86	6,630
Costa Rica	64	58	71	52	13,373
Cuba	n/a	157	61	92	9,540
Dominican Republic	52	81	88	80	8,476
Haiti	187	185	161	195	1,819
Honduras	123	134	104	104	3,040
Jamaica	98	93	145	102	5,185
Mexico	93	103	33	54	11,091
Nicaragua	80	136	135	105	2,255
Panama	43	69	105	56	17,358
United States	66	17	14	24	62,866
Venezuela	192	149	84	138	3,460

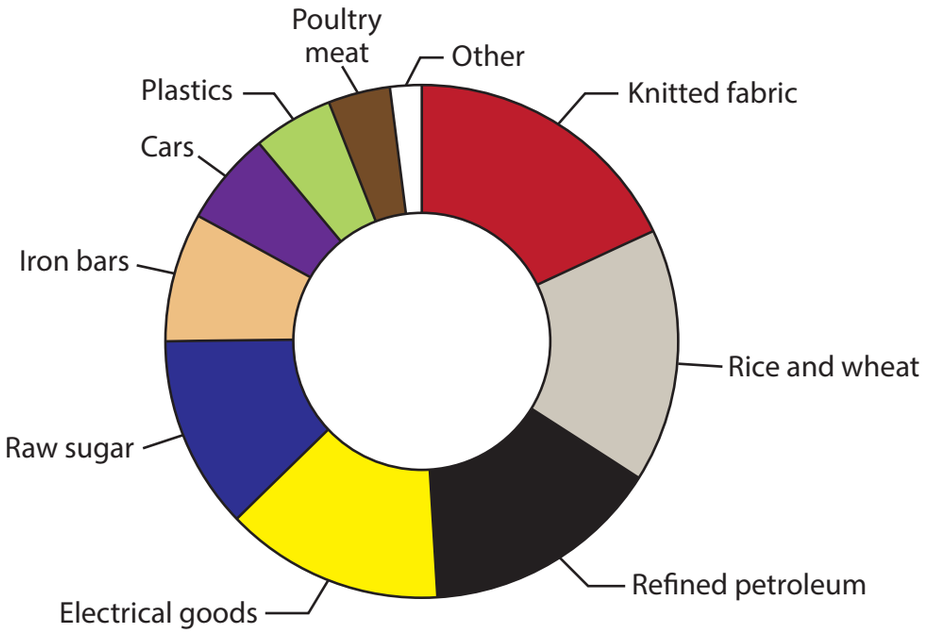
Figure 10

Globalisation and GDP per capita for Haiti and its neighbours

Critics of the policies pursued by the International Monetary Fund (IMF), World Bank (WB) and the World Trade Organisation (WTO) argue that the main beneficiaries of these policies have been wealthy superpowers, TNCs and the local elites of low-income countries.

Many low-income countries, such as Haiti, export raw materials and low value manufactured goods, such as clothing, but have to import almost everything else.

Haiti's imports 2019 – Total value = US$4.2bn



Haiti's exports 2019 – Total value = US$1.2bn

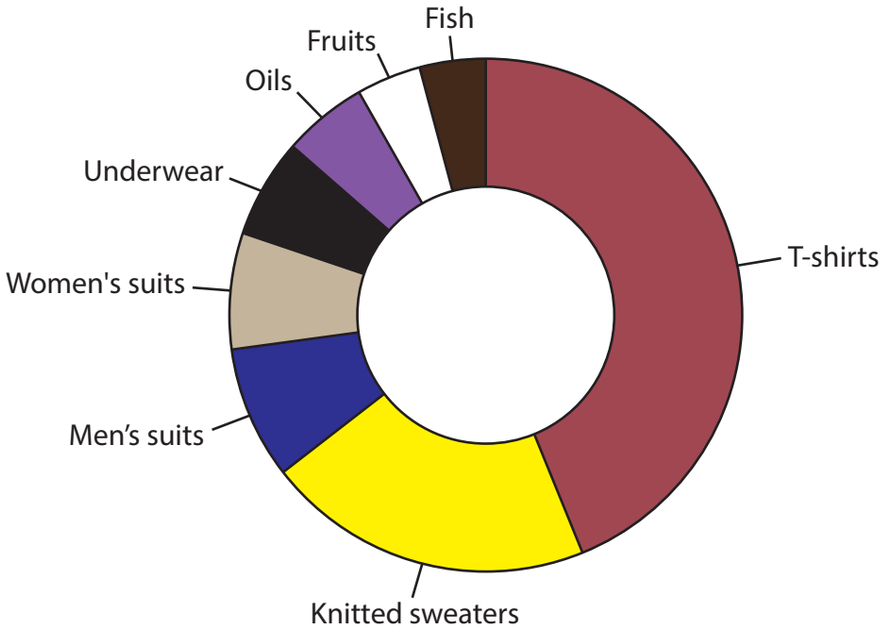


Figure 11

Haiti's imports and exports, 2019

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