OXFORD IB DIPLOMA PROGRAMME



2020 EDITION

ECONOMICS

COURSE COMPANION





Exercise 1.2

The nine central concepts are scarcity, choice, efficiency, equity, economic well-being, sustainability, change, interdependence, and intervention.

Exercise 1.5

- **1. (a)** Student's own diagram.
 - (b) One example would be that in order to increase the output of consumer goods from 50 to 100 units, output of capital goods would fall by 30 units, from 180 to 150. Thus, the opportunity cost of 50 units of consumer goods is the 30 units of capital goods foregone. (The opportunity cost of one unit of consumer goods is therefore 0.6 units of capital goods.)
 - (C) Student's own diagram.
 - (d) Student's own diagram.
 - (e) There would have to be an improvement in the quality and/or quantity of factors of production.

Chapter 2

Student's own answers.

Chapter 3

Exercise 3.2

- If there were an increase in the tax on electric scooters, then it would make them more expensive and so there should be an increase in the demand for bicycles, since they are a substitute. The diagram should show a shift of the demand curve for bicycles to the right, with more being demanded at every price.
- 2. If there were an increase in income, there should be an increase in demand for foreign holidays, since foreign holidays may be considered to be a normal good,. The diagram should show a shift of the demand curve for foreign holidays to the right, with more being demanded at every price.
- 3. If there were a significant fall in the price of games consoles, then there should be an increase in the quantity demanded of games consoles, and so an increase in the demand for video games, which are complements. The diagram should show a shift of the demand curve for video games to the right, with more being demanded at every price.
- **4.** If there were a significant increase in income tax, then there would be a fall in disposable incomes. Since cars may be considered to be normal goods, there should be a decrease in demand for them. The diagram should show a shift of the demand curve for cars to the left, with fewer being demanded at every price.
- 5. If there were an increase in the price of ice creams, then there would be a fall in the quantity demanded of ice creams. The diagram should show a movement along the demand curve for ice creams, with fewer being demanded at a higher price.

- 6. An article condemning the purity of the water would lead to a change in tastes against the brand. There would be a fall in demand for the water. The diagram should show a shift of the demand curve for this brand of bottled water to the left, with less being demanded at every price.
- 7. An increase in the size of the population would lead to an increase in the demand for most goods. Thus, there would be an increase in the demand for carrots. The diagram should show a shift of the demand curve for carrots to the right, with more being demanded at every price.

Exercise 4.1

The 10% increase in the price of bottled water means an increase in expenditure of 20 cents, whereas the increase in the price of the car would require an increase in expenditure of \$1,000, a much higher proportion of disposable income. One would expect the demand for the water to be more inelastic than the demand for the car. Thus, the biggest impact on consumers' willingness and ability to buy would be for the car.

Exercise 4.2

1. The percentage change in price is $\frac{-40}{400}$ x 100 = -10%. The percentage change in quantity

demanded is $\frac{+30}{600}$ = +5%.

- **2.** The price elasticity of demand for the scented candles will be: $\frac{\%\Delta \ln QD}{\%\Delta \ln P} = +5/-10 = -0.5$.
- **3.** The original total revenue was 600 candles sold at \$4 each = 600 x \$4 = \$2,400. The new total revenue is 630 candles sold at \$3.60 each = \$2,268.
- **4.** Student's own diagram.
- **5.** If the aim of the firm were to maximise revenue, then the lowering of the price was not sensible, since total weekly revenue fell by \$132. The demand for candles was relatively inelastic.

Exercise 4.3

1. The percentage change in price is $\frac{-50}{500} \times 100 = -10\%$. The percentage change in quantity demanded is +12/60 = +20%.

2. The price elasticity of demand for the pizzas will be: $\frac{\%\Delta \text{ in QD}}{\%\Delta \text{ in P}} = +20/-10 = -2.$

- **3.** The original total revenue was 60 pizzas sold at \$5 each = 60 x \$5 = \$300. The new total revenue is 72 pizzas sold at \$4.50 each = \$324.
- **4.** Student's own diagram.
- **5.** If the aim of the firm was to maximise revenue, then the lowering of the price was sensible, since total weekly revenue rose by \$24. The demand for pizzas was relatively elastic.

Exercise 4.4

- **1.** When demand for a product is inelastic, the value of PED lies between 0 and 1. This means that if the price of a product increases, there will be proportionately smaller fall in quantity demanded. This would result in an increase in producer's revenue.
- 2. When demand for a product is inelastic, the value of PED lies between 0 and 1. This means that if the price of a product decreases, there will be proportionately smaller increase in quantity demanded. This would result in a decrease in producer's revenue.
- **3.** When demand for a product is elastic, the value of PED lies between 1 and infinity. This means that if the price of a product increases, there will be proportionately larger fall in quantity demanded. This would result in a decrease in producer's revenue.
- **4.** When demand for a product is elastic, the value of PED lies between 1 and infinity. This means that if the price of a product decreases, there will be proportionately larger increase in quantity demanded. This would result in an increase in producer's revenue.
- **5.** When demand for a product is unity elastic, the value of PED equals 1. This means that if the price of a product increases, there will be proportionately equal and opposite change in quantity demanded. This would result in no change in producer's revenue.
- **6.** When demand for a product is unity elastic, the value of PED equals 1. This means that if the price of a product decreases, there will be proportionately equal and opposite change in quantity demanded. This would result in no change in producer's revenue.

Exercise 4.6

1. The PED for adults is
$$\frac{\%\Delta \text{ in QD}}{\%\Delta \text{ in P}} = \frac{-3\%}{+10\%}$$
 to $\frac{-5\%}{10\%} = 0.3$ to 0.5.

The PED for youths is
$$\frac{\%\Delta \ln QD}{\%\Delta \ln P} = \frac{-13\%}{+10\%} = 1.3.$$

- 2. The main reason would probably be that the youths have a lower disposable income than adults and so the price increase takes a higher percentage of disposable income. Tastes could also be a factor, since adults may have been smoking longer, thus making them more addicted to cigarettes, and so leading to a more inelastic demand.
- 3. a) The government may be trying to reduce the consumption of a demerit good.

b) The government may be trying to gain tax revenue by taxing a product that has relatively inelastic demand.

Exercise 4.7

- **1.** The YED for holidays is $\frac{\%\Delta \text{ in QD}}{\%\Delta \text{ in Y}} = \frac{+25\%}{+25\%} = +1.$
- **2.** It means that holidays are bordering on being a luxury good. Any increase in income is matched by an equal percentage increase in expenditure.
- **3.** The YED for gym membership is $\frac{\% \Delta in QD}{\% \Delta in Y} = \frac{0}{+25\%} = 0.$
- **4.** It means that the gym membership is a necessity good and that any increase in income will not lead to an increase in expenditure.

- **5.** The YED for locally produced clothes is $\frac{\%\Delta inQD}{\%\Delta inY} = \frac{-25\%}{+25\%} = -1.$
- 6. This means that she sees locally produced clothes as being inferior goods and so any increase in income leads to a fall in expenditure for the locally produced clothes and, presumably, an increase in expenditure on foreign-produced clothes.

Exercise 4.8

1. The YED for the low-priced computer is $\frac{\%\Delta inQD}{\%\Delta inY} = \frac{-10\%}{+5\%} = -2.$

The YED for the sophisticated computer is $\frac{\%\Delta inQD}{\%\Delta inY} = \frac{+12.5\%}{+5\%} = +2.5.$

- **2.** The values suggest that the low-priced computer is seen as an inferior good and the sophisticated computer is seen as a luxury good.
- **3.** If there is a recession, and people suffer a fall in real incomes, then it is likely that range will see an increase in demand for the low-priced computer and a fall in demand for the sophisticated one. They will need to plan their production accordingly.

Chapter 5

Exercise 5.2

- **1.** The diagram should show a shift of the supply curve to the left (although it is actually an upward shift!).
- 2. The diagram should show a movement up the supply curve, with more holidays being supplied at a higher price.
- **3.** The diagram should show a shift of the supply curve to the right (although it is actually a downward shift!).
- **4.** The diagram should show a shift of the supply curve to the left, as the costs of production increase.
- **5.** The diagram should show a shift of the supply curve to the left, as production is shifted from white to brown bread.
- **6.** The diagram should show a shift of the supply curve to the right, as the improvement in technology should lower production costs.
- **7.** The diagram should show a shift of the supply curve to the left, as production costs increase and productivity falls.

Exercise 6.1

1. The percentage change in price is $\frac{+3}{15} \times 100 = +20\%$. The percentage change in quantity

supplied is $\frac{+500}{5,000} = +10\%$.

The price elasticity of supply for the cuddly dogs will be: $\frac{\%\Delta inQS}{\%\Delta inP} = \frac{+10}{+20} = +0.5$.

Chapter 7

Exercise 7.1

- 1. The answer is supplied in the book.
- **2.** a) The diagram should show a shift of the supply curve to the left and fewer olives being demanded and supplied at a higher price.
 - b) In the olive oil market, there should be a shift of the supply curve to the left, as costs of production increase, with the higher price of olives.
- **3.** The diagram should show a shift of the supply curve to the right, with more being demanded and supplied at a lower price.

Exercise 7.3

- **1.** a) The equilibrium price is \$3.50.
 - b) The equilibrium quantity demanded and supplied is 300.
- **2.** The amount of consumer surplus is $(\frac{1}{2} \times 300) \times $4.50 = 675 .
- 3. This represents the amount that consumers were willing to pay and did not have to.
- 4. The amount of producer surplus is $(\frac{1}{2} \times 300) \times \$1 = \$150$.
- **5.** This represents the extra earnings of the producers over and above the minimum that they were prepared to accept.
- 6. This is because the price elasticity of supply is more elastic than the price elasticity of demand.

Exercise 8.2

- **1.** a) The equilibrium price is \$4.50.
 - b) The equilibrium quantity demanded and supplied is 700,000.
- **2. a)** The equilibrium price is \$4.00.
 - b) The equilibrium quantity demanded and supplied is 800,000.
- **3.** Producer revenue increases from \$3,150,000 (\$4.5 x 700,000) to \$4,000,000 (\$5 x 800,000). This is an increase of \$850,000.
- **4.** Consumer expenditure increases from \$3,150,000 (\$4.5 x 700,000) to \$3,200,000. This is an increase of \$50,000.
- 5. The government expenditure on the subsidy is \$800,000 (\$1 x 800,000).
- 6. Consumers will benefit because they get to purchase more of the drug at a lower price. Producers will benefit because they receive an increase in revenue.
- 7. If the government is paying the subsidy, then they need to fund the expenditure. This could mean that they will have to raise taxes, and so taxpayers would lose out. The government could fund the subsidy by reducing expenditure elsewhere in the economy, in areas such as education or healthcare, but this would have an opportunity cost that could harm other people. The government could borrow money to fund the subsidy, but this would have a cost in the future, when the loan is repaid.

Exercise 8.7

- **1. a)** The equilibrium price is \$2.
 - b) The equilibrium quantity demanded and supplied is 2 million bushels.
- **2.** The price floor should be a horizontal line at \$3.
- **3.** At a floor price of \$3, 1 million bushels will be demanded, and 3 million bushels will be supplied!
- **4.** Producer revenue will fall from \$4 million (\$2 x 2 million bushels) to \$3 million (\$3 x 1 million bushels).
- **5.** a) The government could purchase the excess supply of carrots, which would cost \$6 million (\$3 x 2 million bushels), and then store it.
 - b) The government could purchase the excess supply and then sell it abroad.
 - **C)** They could increase advertising to promote the demand for carrots.
 - **d)** A more radical solution might be for the government to abandon the floor price and then subsidise the production of carrots. They would need to reduce the price to \$1 to clear the market and this would mean a subsidy of \$2 for 3 million bushels, which would also be a total government expenditure of \$6 million.

Student's own answers.

Chapter 10

Exercise 10.1

1.

The explicit costs are:

Wages and salaries	40,000
 Raw materials Electricity and services 	100,000
	<u>40,000</u>
	<u>180,000</u>
The implicit costs are:	
Cost of factory	90,000
Cost of machinery	20,000
Owner's opportunity cost	70,000
Opportunity cost of owner's investmer	nt <u>3,000</u> (5% Of \$60,000)
	<u>183,000</u>

2. Accountant's profit = 450,000 - 180,000 = \$270,000 Economist's profit = 450,000 - (180,000 + 183,000) = \$87,000

Exercise 10.2

1.

Price (\$)	Quantity demanded	Total revenue (\$)	Average revenue (\$)	Marginal revenue (\$)	PED
20	1	20	20		
				+16	
18	2	36	18		10
				+12	
16	3	48	16		4.5
				+8	

14	4	56	14		2.67
				+4	
12	5	60	12		1.75
				0	
10	6	60	10		1.2
				-4	
8	7	56	8		0.833
				-8	
6	8	48	6		0.571
				-12	
4	9	36	4		0.375

In the elastic region of the demand curve, as price falls, total revenue increases.
 In the inelastic region of the demand curve, as price falls, total revenue decreases.
 Total revenue is maximised where PED is equal to one and where the marginal revenue is zero.

Paper 3, HL – Part questions

a)

Output	тс	TFC	тус	AFC	AVC	ATC	МС
0	40	40	-	-			
							50
1	90	40	50	40	50	90	

							40
2	130	40	90	20	45	65	
							30
3	160	40	120	13.33	40	53.33	
							40
4	200	40	160	10	40	50	
							50
5	250	40	210	8	42	50	
							70
6	320	40	280	6.67	46.67	53.33	

Exercise 11.1

1. Firms are price takers because if they try to raise price by the smallest amount above the market price, their demand falls to zero. Thus, they have to charge the market price.

2. Student's own diagrams.

Exercise 11.2

Perfect competition	Abnormal profits possible?	Losses possible?	Allocatively efficient? (MC = AR)	Productively efficient? (MC = AC)
Short run	Yes	Yes	Yes	No
Long run	No	No	Yes	Yes

Exercise 12.1

- **1.** The canteen has a monopoly of cooked food in the school.
- **2.** The doctor has a monopoly of medical care, but only in that neighbourhood.
- 3. The local disposal system has a monopoly in the specific area, but not in a wider area.
- 4. Your school would only have a monopoly in a very small area.
- **5.** The national telephone service may have a monopoly on landlines (depending on where you live) but not on telephones.
- 6. The national postal service may have a monopoly on collection and distribution of mail (depending where you live) but it does not have a monopoly on mail delivery.

Exercise 12.4

- **1.** Breakfast cereal manufacturers: High concentration.
- **2.** Textile mills: Very low concentration.
- **3.** Breweries: High concentration.
- 4. Wineries: Close to medium concentration

Chapter 13

Exercise 13.1

 The GDP of Canada in 2018 (fourth quarter) is C + I + G + (X-M): 1,614,165 + 424,259 + 417,805 + (664,437 - 654,843) = CAD\$ 2,465,823 million

2. C =
$$\frac{1,614,165}{2,465,823}$$
 x 100 = 65.46%
I = $\frac{424,259}{2,465,823}$ x 100 = 17.21%
C = $\frac{417,805}{2,465,823}$ x 100 = 16.94%

$$G = \frac{10.94\%}{2,465,823} \times 100 = 10.94\%$$

$$(X-M) = \frac{664,437-654,843}{2,465,823} = 0.39\%$$

3. Because the imports figure represents money going out of the country, and so the GDP of the country would be overstated if the import expenditure was not subtracted.

Exercise 14.3

- a) From January 2019 to February 2019, the consumer sentiment index fell from 98.8 to 86.5. This represents a fall of 12.45%.
- (b) From February 2018 to February 2019, the consumer sentiment index fell from 105.2 to 86.5. This represents a fall of 17.78%.

Exercise 14.4

1. From the last quarter of 2018 to the first quarter of 2109, business confidence fell from 31 to 28. This represents a fall of 9.68%.

Chapter 15

Student's own answers.

Chapter 16

Student's own answers.

Chapter 17

Exercise 17.2

- **1. (a)** The multiplier is 1/1-MPC, or 1/MPW. Thus, 1 MPC = MPW. So, in this case, the marginal propensity to withdraw is 1 0.8 = 0.2.
 - (b) The multiplier is 1/MPW = 1/0.2 = 5.
 - (C) If national income needs to rise by \$10 million, and the multiplier is 5, then the injection

needed is $\frac{10}{5}$ = \$2 million.

2. The original MPW is 0.1 + 0.3 + 0.1 = 0.5. Therefore, the original multiplier is $\frac{1}{0.5} = 2$.

The new MPW is 0.1 + 0.2 + 0.1 = 0.4. Therefore, the new multiplier will be $\frac{1}{0.4} = 2.5$. Thus, the value of the multiplier has increased.

Exercise 17.4

- **1. (a)** The money multiplier is 1/Minimum reserve requirement. So it will be 1/5% = 20.
 - (b) The money multiplier is 1/20% = 5.
 - (C) The money multiplier is 1/25% = 4.
- A minimum reserve requirement of 40% gives a money multiplier of 1/40% = 2.5. A new deposit of \$2 million would therefore lead to an increase in the money supply of 2.5 x \$2 million = \$5 million.
- **3.** If the minimum reserve requirement in question 2 is reduced to 25%, then the money multiplier becomes 1/25% = 4. This would mean that a new deposit of \$2 million would now lead to a greater increase in the money supply. It would increase to 4×2 million = \$8 million.

Exercise 17.5

- **1.** The real interest rate = nominal interest rate inflation rate. So, the real interest rate here would be 8% 3.5% = 4.5%.
- **2.** The real interest rate would be 4.2% 7.5% = -3.3%.
- **3.** If the real interest rate is -2.5% and the inflation rate is 5%, then the nominal interest rate will be the real interest rate + inflation rate = -2.5% + 5% = 2.5%.

Chapter 18

Student's own answers.

Chapter 19

Student's own answers.

Chapter 20

Exercise 20.4

The Japanese economy had **inflation** until March 2009. There was a positive percentage increase in consumer prices for each time period up until then.

- a) The Japanese economy had **disinflation** from July 2008 until March 2009. Consumer prices were increasing but at a falling rate.
- **b)** The Japanese economy had **deflation** from March 2009 onwards. Consumer prices were decreasing.

Exercise 20.6

1. The average index for 2022 is $\frac{(110+106+120+110+105)}{5} = \frac{551}{5} = 110.2.$

The average index for 2023 is $\frac{(120+110+120+100+105)}{5} = \frac{555}{5} = 111.$

2. The unweighted inflation rate is:
$$\frac{\text{Index for}(X+1) - \text{Index for } X}{\text{Index for}} \times 100$$

Thus, here, it is $\frac{(111-110.2)}{110.2} \times 100 = \frac{0.8}{110.2} \times 100 = 0.73\%$

4.

Category	Index for 2022	Weight	Index for 2022 x weight	Index for 2023	Weight	Index for 2023 x weight
Housing	110	0.35	38.5	120	0.35	42.0
Foodstuffs	106	0.25	26.5	110	0.25	27.5
Travel	120	0.15	18.0	120	0.15	18.0
Clothing	110	0.15	16.5	100	0.15	15.0
Entertainment	105	0.10	10.5	105	0.10	10.5
Totals		1.0	110		1.0	113

5. The weighted inflation rate is: Weighted Index for 2023 - Weighted Index for 2022 Weighted Index for 2022

Thus, here, it is $\frac{(113-110)}{110} \times 100 = \frac{3}{110} \times 100 = 2.73\%$

6. The weighted inflation rate is 2% greater than the unweighted inflation rate. This is because the increases in housing and foodstuff prices is given a greater weight than the fall in clothing prices. In the unweighted version, the fall in clothing prices negates more of the increase in the housing and foodstuff prices.

Exercise 21.1

a. The economic growth rate is $\frac{\text{Real GDP in } 2016 - \text{Real GDP in } 2015 \times 100}{\text{Real GDP in } 2015}$

 $\frac{(1,721,000-1,697,000)\times100=1.41\%}{1,697,000}$

b. The economic growth rate is $\frac{\text{Real GDP in } 2017 - \text{Real GDP in } 2016 \times 100}{\text{Real GDP in } 2016}$

 $\frac{(1,774,000-1,721,000)\times100=3.08\%}{1,721,000}$

Chapter 22

Student's own answers.

Chapter 23

Exercise 23.2

1.

Countries	Kilos of rice	Opportunity cost of 1 kilo of rice	Metres of cloth	Opportunity cost of 1 metre of cloth
China	5	⁴ ∕₅ = 0.8 metres of cloth	4	5/4 = 1.25 kilos of rice
Pakistan	3	3/3 = 1 metre of cloth	3	3/3 = 1 kilo of rice

4. China has an absolute advantage in both products. However, they have a comparative advantage producing rice. They only have to give up 0.8 metres of cloth for every kilo of rice grown, whereas Pakistan gives up 1 metre. Pakistan has a comparative advantage in the production of cloth. They only have to give up 1 kilo of rice for every metre of cloth produced, whereas China has to give up 1.25 kilos.

Exercise 23.3

Amazonia			Bretonia				
Coffee (km)	Opp. cost of 1 kg of coffee	Tea (km)	Opp. cost of 1 kg of tea	Coffee (km)	Opp. cost of 1 kg of coffee	Tea (km)	Opp. cost of 1 kg of tea
500		0		600		0	
400	0.5kg of tea	50	2kg of coffee	500	2kg of tea	200	1kg of coffee
300	0.5kg of tea	100	2kg of coffee	400	2kg of tea	400	1kg of coffee
200	0.5kg of tea	150	2kg of coffee	300	2kg of tea	600	1kg of coffee
100	0.5kg of tea	200	2kg of coffee	200	2kg of tea	800	1kg of coffee
0	0.5kg of tea	250	2kg of coffee	100	2kg of tea	1000	1kg of coffee
				0	2kg of tea	1200	1kg of coffee

Chapter 24

HL Paper 3 Questions

- **1.** Domestic equilibrium price and quantity is \$1.50.
- **2.** Total consumer spending before the imports is \$1.50 x 1 million = \$1,500,000.
- 6. Before the subsidy, consumer spending is \$1 x 1.5 million = \$1,500,000.
 After the subsidy, the spending is still \$1 x 1.5 million = \$1,500,000.
 There is no change in consumer expenditure.
- 7. Foreign producers were receiving \$1 x 1 million = \$1,000,000.
 After the subsidy, they receive \$1 x 500,000 = \$500,000.
 The change in their revenue is -\$500,000.
- **8.** The cost of the subsidy is $0.50 \times 1 \text{ million} = 500,000$.

Chapter 25

Student's own answers.

Exercise 26.2

Over the period in question, the value of the euro has strengthened against the Canadian dollar. At the beginning, 1 euro would buy about 1.4330 Canadian dollars. By the end of the period, 1 euro would buy about 1.4475 Canadian dollars.

Over the period in question, the value of the Canadian dollar has weakened against the euro. At the beginning, 1 Canadian dollar would buy about 0.6975 euros. By the end of the period, 1 Canadian dollar would buy about 0.6910 euros.

The two graphs are mirror images of each other.

HL & SL Paper 2 – 2-mark and 3-mark questions and HL Paper 3 questions

- **1.** S\$1 = $\frac{1}{1.5}$ = €0.67
- **2.** The cost of a good that is \in 150 would be 150 x $\left(\frac{1.5}{1}\right)$ = S\$225.
- 3. With the exchange rate at €1 = S\$1.5, the cost of a €120 waffle maker would be S\$180. With the exchange rate at €1 = S\$1.4, the cost of a €120 waffle maker would be S\$168. The price of the waffle maker falls by S\$12. A fall of 6.67%.

Chapter 27

Exercise 27.2

The balance of trade in goods shows a deficit of -\$891,322 million.

The balance of trade in services is a surplus of \$269,207 million.

Net income flows show a surplus of \$133,635 million.

The three figures combined give an overall current account balance of -\$488,480 million.

The capital account shows a small surplus of \$9,408 million.

The financial account shows a surplus of \$479,072 million.

The two figures combined give an overall capital and financial account balance of +\$488,480 million.

The positive inflows from the capital and financial account balance out the negative outflows from the current account.

Chapter 27: Assessment advice

1. Exports of goods = +\$387,800 million

Balance of trade in services = +\$40,400 million

Net income flows = -\$5,400

Current account balance = -\$238,400 million

Reserve asset funding = +\$21,185 million

Capital and financial account balance = +\$238,400

Chapter 28

Student's own answers.

Chapter 29

Exercise 29.1

1. Uganda's (GNI per capita ranking - HDI rank) is +13.

Guinea's (GNI per capita ranking - HDI rank) is -11.

The suggestion is that Uganda may be putting more into healthcare and education, thus leading to a higher human development from their GNI per capita standing.

2. South Africa's (GNI per capita ranking - HDI rank) is -23.

Bangladesh's (GNI per capita ranking - HDI rank) is +9.

The suggestion is that Bangladesh may be putting more into healthcare and education, thus leading to a higher human development from their GNI per capita standing.

Exercise 29.2

1. There would appear to be a positive correlation between HDI ranking and gender equity. In general, the higher the HDI position the higher the gender equity.