



**HWA CHONG INSTITUTION**  
**JC2 Preliminary Examination**  
**Higher 2**

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**GEOGRAPHY**

**9751/01**

Data Response Questions

**15 September 2017**

**INSERT**

**3 hours**

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**READ THESE INSTRUCTIONS FIRST**

This Insert contains all the Resources referred to in the questions.

## Resource 1 for Question 1

## Location of Panasonic Singapore in Bedok



## Resource 2 for Question 1

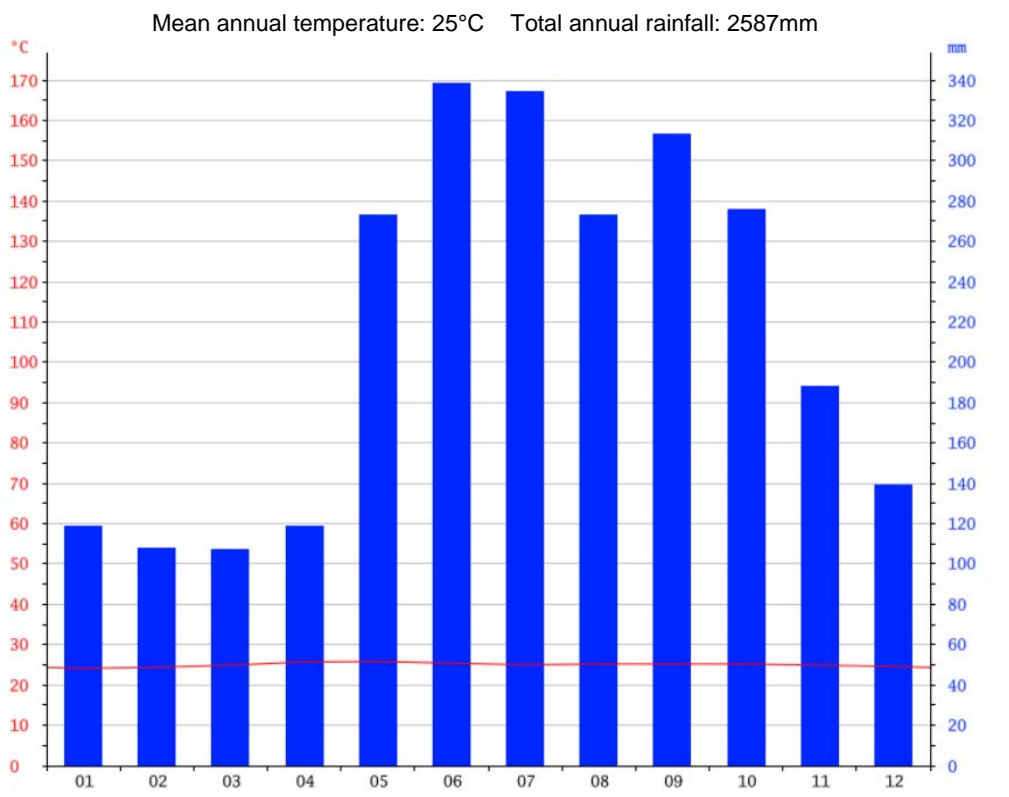
## Selected businesses within 500m from Panasonic Singapore

Nature of business	Name of business	Distance from Panasonic Singapore (m)	% of customers who are employees of Panasonic Singapore	% of customers who have business relations with Panasonic Singapore
Hawker centre stall	Tian Lai Fishball Noodles	390	35	5
Hawker centre stall	Best Chicken Rice	374	27	7
Supermarket	NTUC Fairprice	460	12	2
Minimart	Kim Joo Minimart	247	56	6
Fast food	MacDonald's	476	5	2
Coffee shop	KSL Eatery	230	47	9

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## Resource 3 for Question 2

## Map of Mindanao in the Philippines, the Province of Bukidnon and its climograph

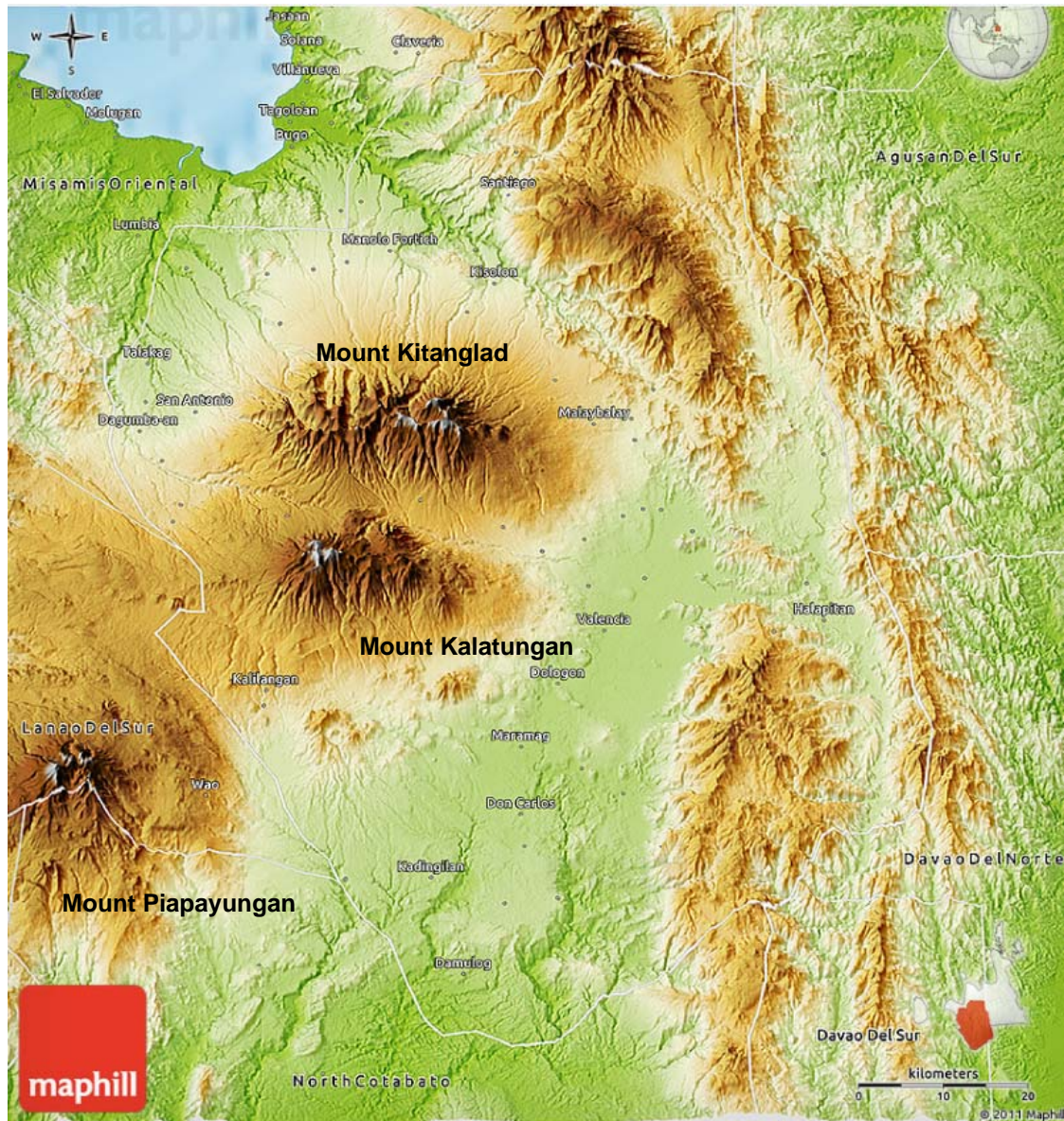


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## Resource 4 for Question 2

## Topography of the Bukidnon and the highest mountains



Altitude: > 2400m 900 - 1200 m 600 - 900 m <600m

Bukidnon is a landlocked province and is subdivided into three topographical zones which comprise:

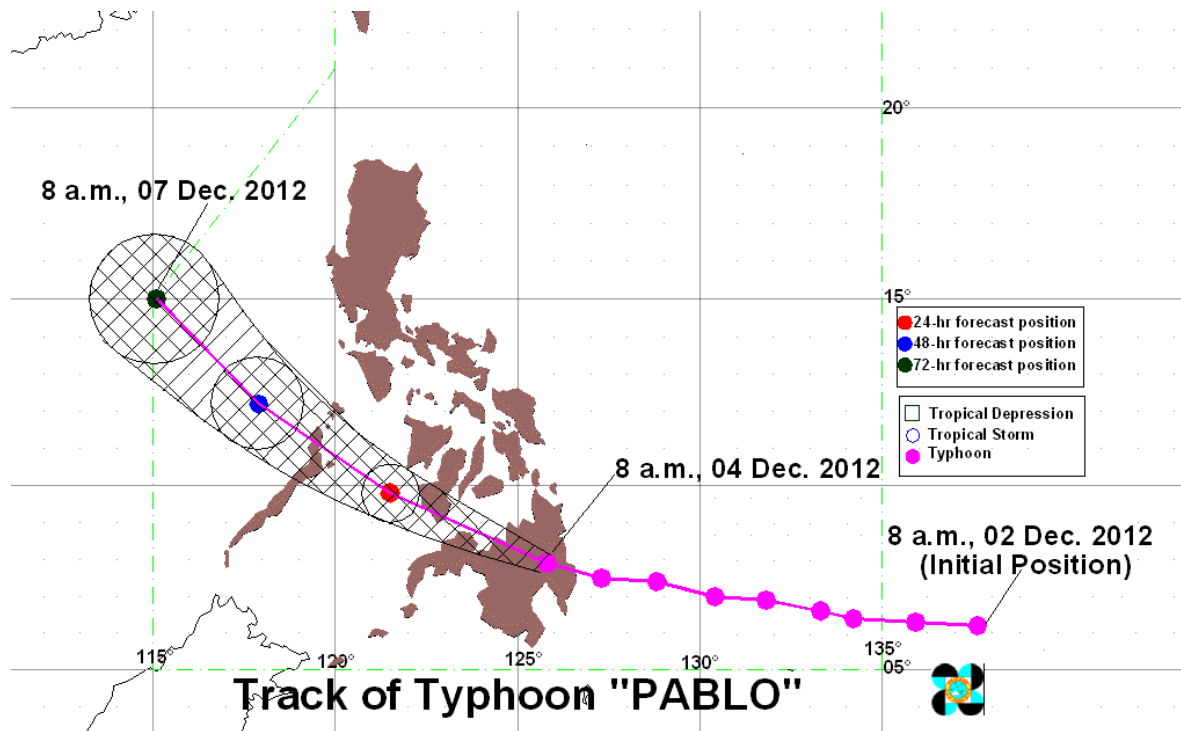
- the volcanic mountain zone of Mt. Kitanglad (2,899 m) and Mt. Kalatungan (2880m) and the Central Cordillera of Eastern Bukidnon at elevations from 1,200-2,950 m above sea level,
- the high altitude volcanic plains, terraces and footslopes surrounding Mt. Kitanglad and Mt. Kalatungan with elevations ranging from 600-1,200 m,
- the low altitude volcanic plains, terraces and hills with elevations < 600 m.

Note that Mt. Kitanglad is classified as an active volcano and Mt. Kalatungan is classified as a potentially active volcano.

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## Resource 5 for Question 2

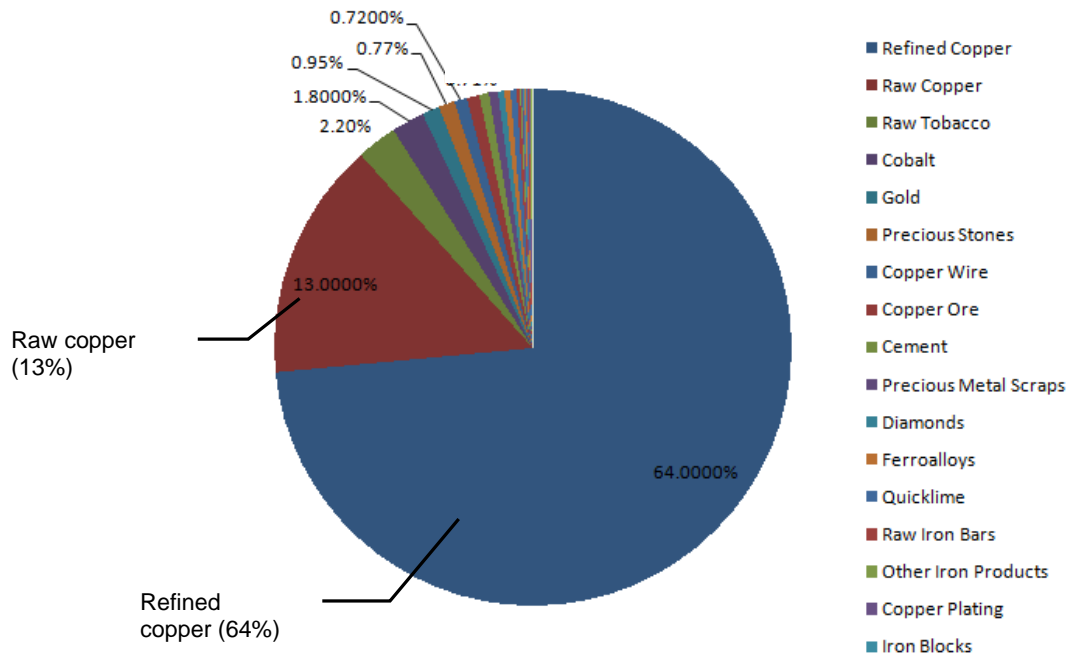
## The track of Typhoon Pablo across the island of Mindanao in 2012



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## Resource 6 for Question 3

## Zambia's major mineral exports

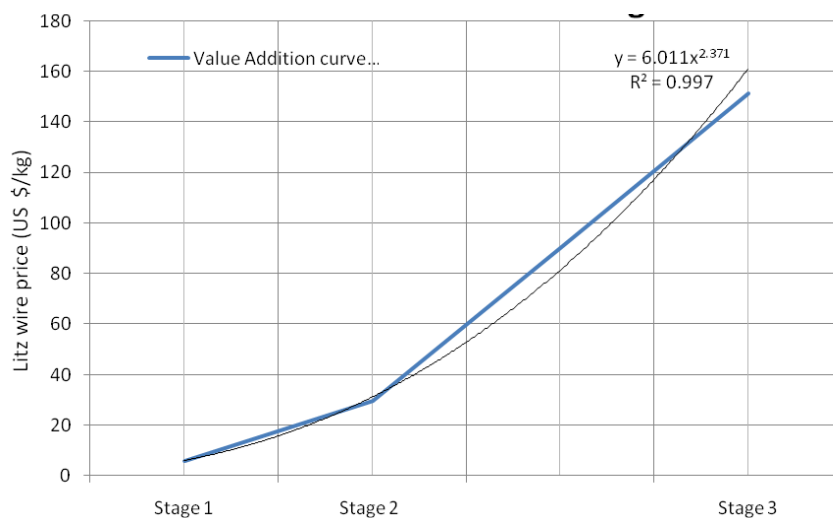


## Resource 7 for Question 3

## (A) Value addition of copper

Mineral	Stage 1 value (Refined Copper)	Stage 2 value (Litz wire)	Intra stage 2 (Litz wire Inductor coil)	Stage 3 value (Litz wire Inductor coil music speaker)
Copper	\$ 5.80/ kg	\$ 29.94/ kg	\$ 90.14/ kg	\$151.40/ each

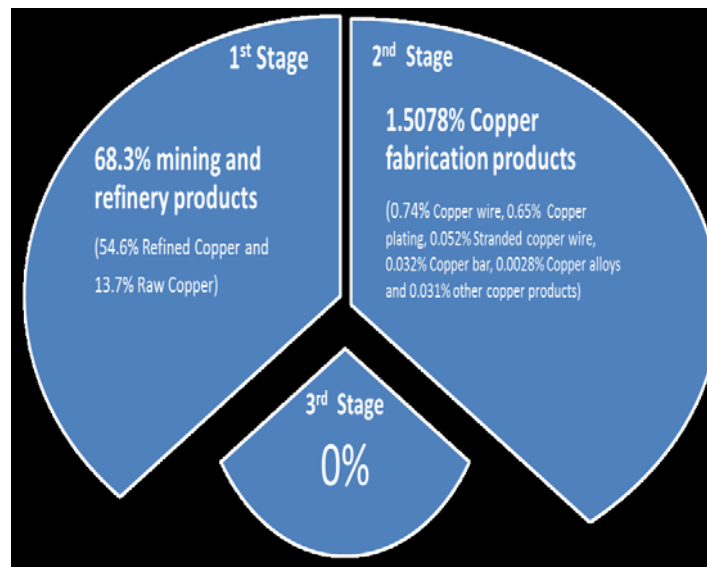
## (B) Value addition of copper across stages from refined copper to Litz wire music speaker



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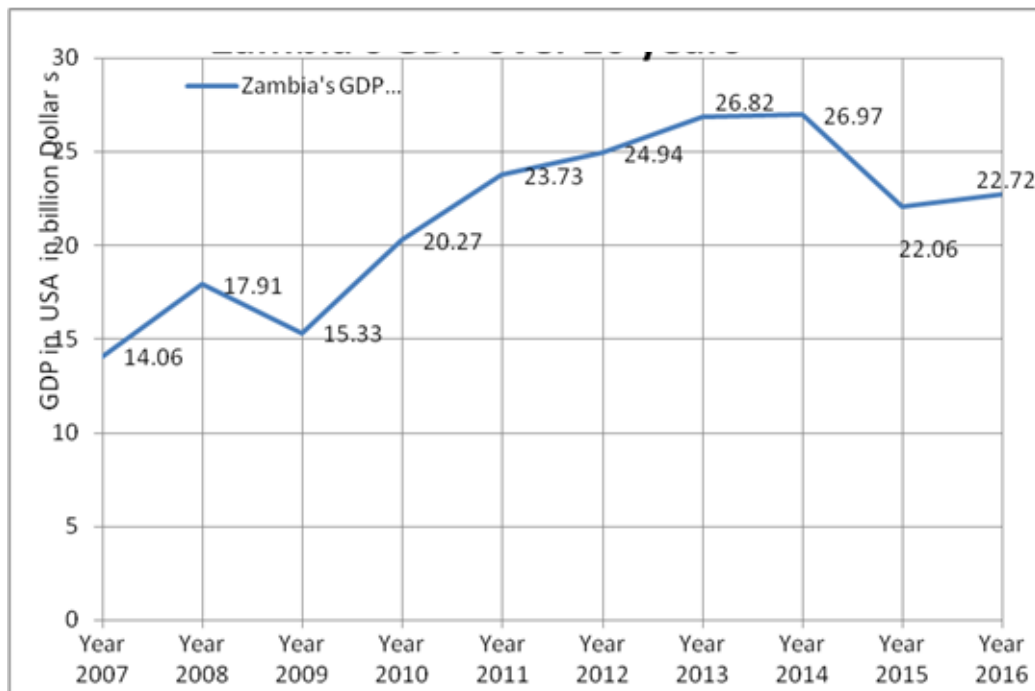
## Resource 8 for Question 3

## Zambia's participation in the copper mineral conversion stages



## Resource 9 for Question 3

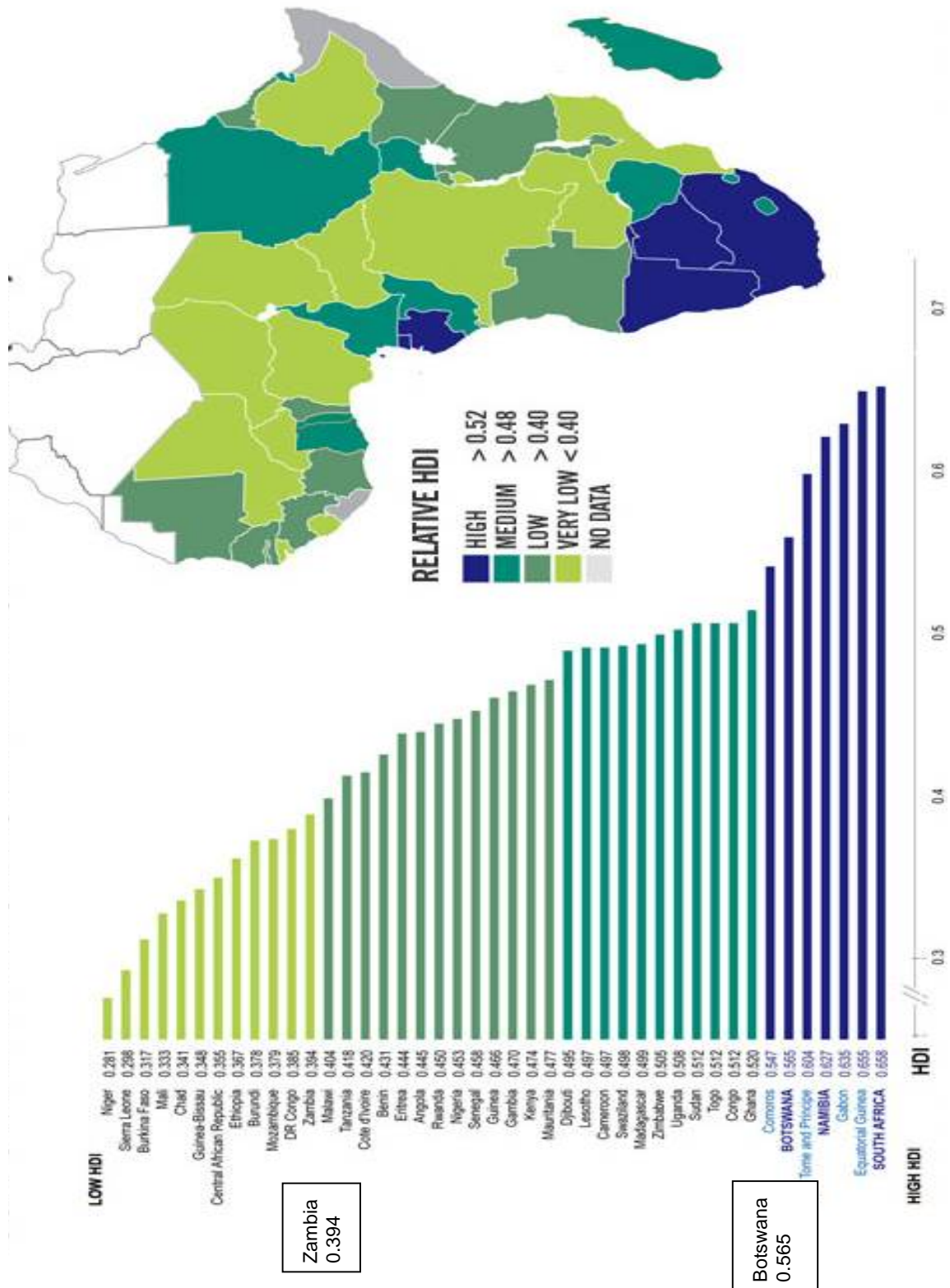
## Zambia's GDP over the past 10 years



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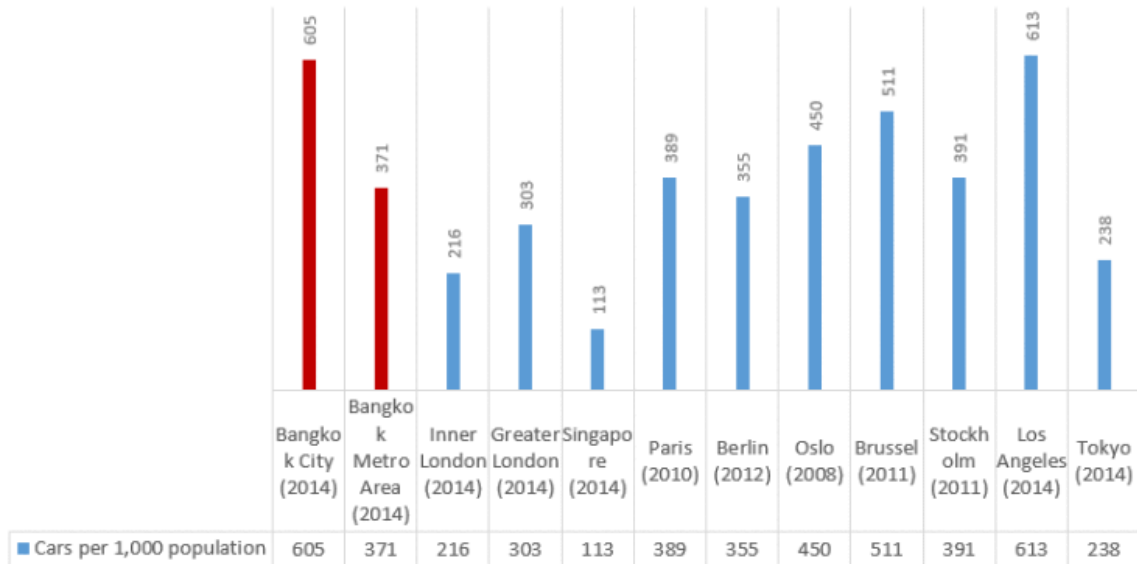
**Resource 10 for Question 3**  
**Relative Human Development Index (HDI) values of some African countries (2005)**





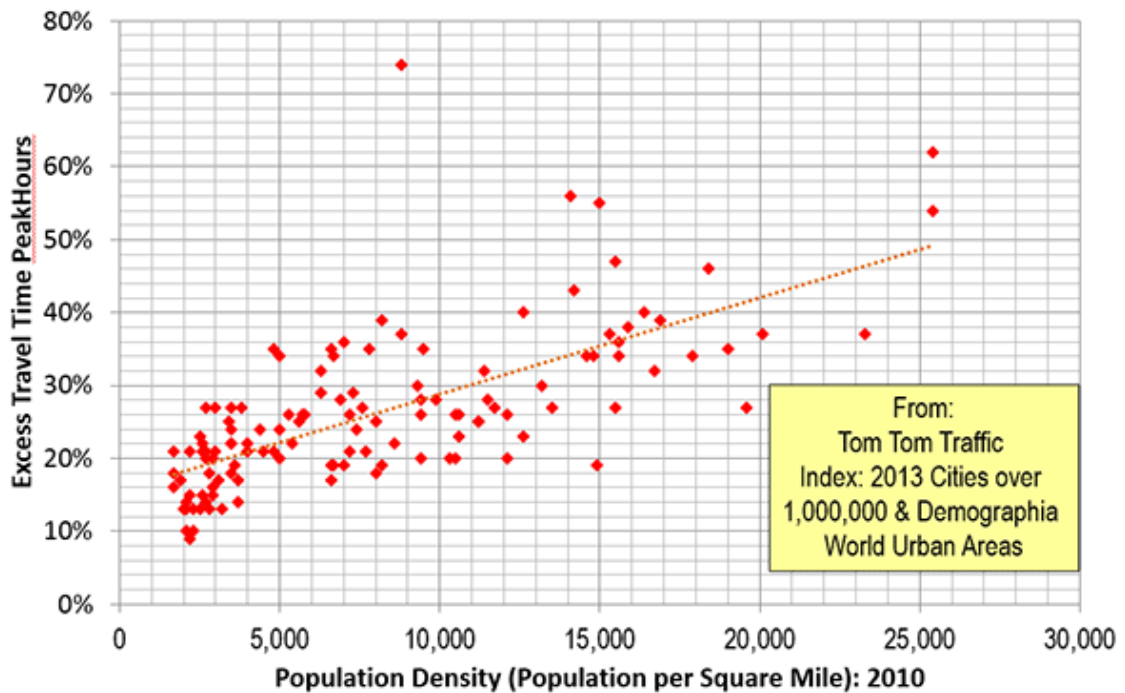
## Resource 11 for Question 4

## Vehicles per 1000 population in selected cities



## Resource 12 for Question 4

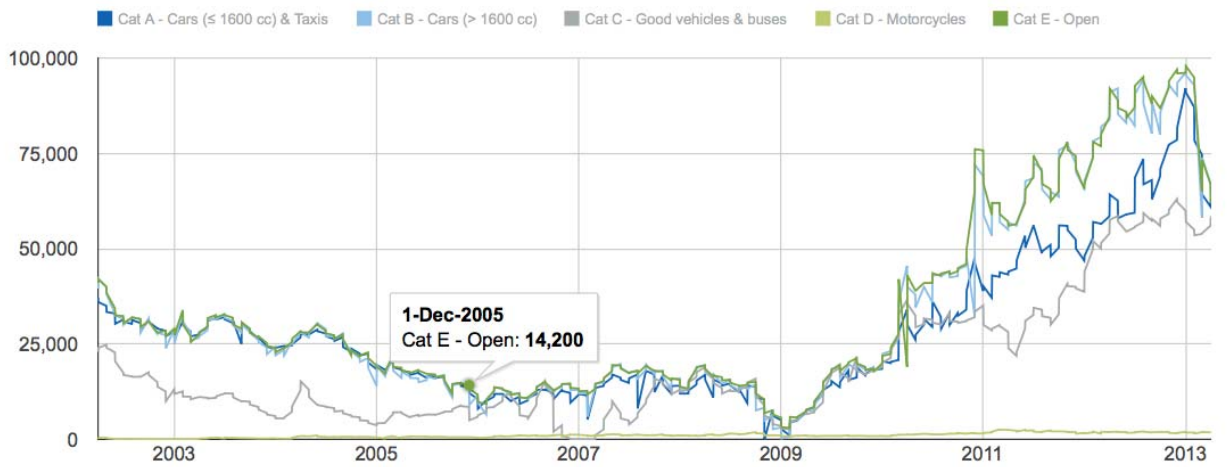
## Urban densities and Average peak hour traffic congestion



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## Resource 13 for Question 4

## Prices of Certificate of Entitlement (COE) 2003 – 2013



\* The prefix 1 in the months (eg 1-Jun-2006) indicates the first COE bid for the month, while a 2 prefix (2-Jun-2006) indicates the second bid for the month.

\*\* Chart starts from the April 2002 bidding exercise. That was when the COE Open bidding system - where bidders are allowed to track the prevailing strike price "live" - fully replaced the Closed bidding system.

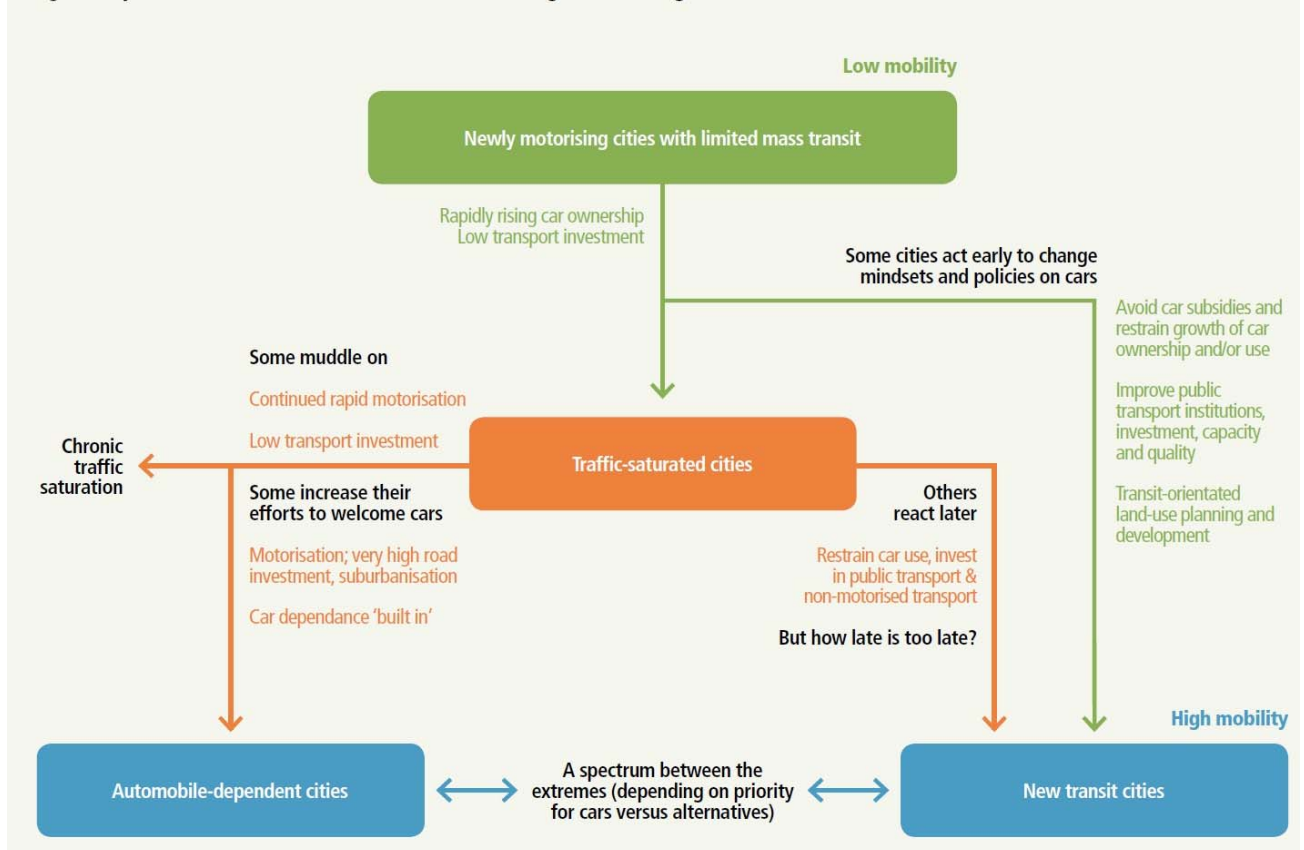
Data Source: Land Transport Authority  
Graphics: Derrick Ho | Last Updated: Mar 27, 2013 16:05hrs

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## Resource 14 for Question 4

## (A) Trajectories for cities that entered a mass car ownership era without significant mass transit and (B) the effect of congestion pricing on traffic congestion in 4 cities

Figure 1 Trajectories for cities that entered their mass car-owning era without significant mass transit



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*Acknowledgements:*

Question 1 Resource 1	© <a href="http://www.streetdirectory.com/">http://www.streetdirectory.com/</a>
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Question 2 Resource 3	© <a href="http://www.maphill.com/philippines/">http://www.maphill.com/philippines/</a>
Question 2 Resource 4	© <a href="http://www.maphill.com/philippines/">http://www.maphill.com/philippines/</a>
Question 2 Resource 5	© <a href="http://bagyo.ph/page/21/">http://bagyo.ph/page/21/</a>
Question 3 Resources 6 – 9	© <i>International Journal of Science and Research</i> (ISSN 2319 – 7064)
Question 3 Resource 10	© UNDP (2005)
Question 4 Resource 11	© <i>Intro to Regional Planning</i> (2015)
Question 4 Resource 12	© <i>Tom Tom Traffic Index Report</i>
Question 4 Resource 13	© <i>Land Transport Authority</i>
Question 4 Resource 14	© <i>The State of Asian and Pacific Cities</i> (2015), <a href="http://www.edf.org/page.cfm?tagID-6241">http://www.edf.org/page.cfm?tagID-6241</a>