

Waste Charging and Recycling  
DM Chiu, 25/2/2024

1) Is tourism a major factor?

A respected KOL recently made a commentary about the upcoming Waste Charging scheme. He pointed out that since Hong Kong has more visitors than other cities, estimated to be around 9 times of the population of Hong Kong each year, and such visitors will not behave differently after waste charging, Hong Kong's effort to reduce waste by charging is not optimistic, at least less successful than other places. To double-check the likely visitor impact, I looked up the statistics from Hong Kong Tourism Board (2018 had the highest number of tourists in recent years) as below:

	2018 (millions)
Total visitor arrivals	65.14
- Overnight arrivals	29.26
- Same-day arrivals	35.88
Average stay of overnight visitors	3.1 (days)
Population at end of 2018	7.48

Assuming same-day visitors spend 1 day in the city:

$$\text{total number of visitor-days} = (29.26 \times 3.1) + (35.88 \times 1) = 126.59 \text{ M}$$

$$\text{total number of resident-days} = 7.48 \times (365 - 5) = 2692.8 \text{ M}$$

For the second equation, it is assumed a resident spend 5 days a year away from city on average (note the result is not sensitive to this assumption at all). The ratio of visitor-days (that will not reduce waste due to charging) to resident-days (that may reduce waste) is thus 4.7%. So the visitor effect is limited by that amount. Since the other cities we are compared to have visitors too, our disadvantage may be 1-2% only. Thus tourism should not be a major factor for waste charging success or not, unless there is reason to believe that a visitor generates way more waste than a resident on average.

2) It is all about recycling

Although most of the briefing and discussion is about waste charging and disposal (using green bags), the main issue and goal is about waste recovery and recycling. The government has stated that the money collected from waste charging will be spent on recycling. In other places in the world, governments also push for recycling; they may or may not use waste charging as incentive. If not, they are using other tax money to support waste disposal and recycling. By waste charging proportional to the waste disposed, waste recycling will be supported more by people who dispose more waste.

The Environmental Protection Department, the government unit responsible for waste disposal and recycling, publishes a lot of good information at their web site: [https://www.epd.gov.hk/epd/english/environmentinhk/waste/waste\\_maincontent.html](https://www.epd.gov.hk/epd/english/environmentinhk/waste/waste_maincontent.html), especially the annual data and statistics about monitoring solid waste in Hong Kong. To briefly summarize for 2022, on average each person disposed 1.51 Kg of Municipal Solid Waste (MSW) per day, out of which 0.93 Kg is domestic and 0.59 Kg is from commercial and

industry. Out of this total amount of MSW, only 32% was recovered for recycling (the rest went to the landfills). Although the percentage has more than doubled in the last 5 years, it can certainly be improved for our environment and sustainability. The challenge for recycling in Hong Kong is that we do not have a good industrial eco-system to absorb the recycled material, making recycling costlier for us. The areas we are doing well are paper and metals, the recycling of which are done outside Hong Kong. For things like plastic, it is less welcome from other places, hence more challenging. Right now, the types of waste going to the landfills are 30% food waste, 20% plastic and 20% paper.

The website also contains good information explaining how citizens can do waste recycling and reduction today, many are in the form of short videos, very helpful.

### 3) Suggestions

Here are some suggestions to make people potentially more receptive to waste charging and recycling:

- a) Explain waste charging only as a part of the bigger effort of recycling:  
Explain how people can do more recycling to minimize paying for disposal; do this for different types of residential types and districts. Even if EPD does not have capacity to accommodate sudden increase in recycling, come up with a plan and explain it. For people willing to make the effort to sorting waste and help recycle, they should come away with a feeling that waste charging will not affect them much. For those needy and cannot manage waste much (e.g. elderly), the government already said subsidies will be given.
- b) Consider alternatives to charging by green bags  
Waste charging using green bags seems a clever way to make people pay proportional to the amount of waste they produce, but it may not be the best for all situations. For some businesses such as restaurants and hotels, they cannot easily make customers pay for amount of waste they produce; in offices and schools, and many other settings, it may not be realistic for everyone to keep their own waste in green bags. If waste is not collected by individuals who produce it, it seems sheer extra effort to make the institute (who collect and dispose waste) put the waste into green bags (instead of other containers). How about charge them by weight at roughly the same rate as the green bag rate? Even at the residential buildings, it may be easier for the building management to pay for the waste not in green bags by weight, rather than having to use green bags to pay for the violators.
- c) Collect more data at source:  
Most of the data and statistics published by the EPD are about total disposed and recycled waste. Could they collect more data and statistics near the source where waste is produced? This can serve as least the following purposes:
  - Monitor the effectiveness of waste reduction, for different types of source (residential, offices, schools, businesses etc)
  - Monitor the rate over time, and potentially reward those that are doing well, and adjust policy for those not doing so well.
  - Monitor violation rates, and apply enforcement measures or give education and incentives as appropriate.