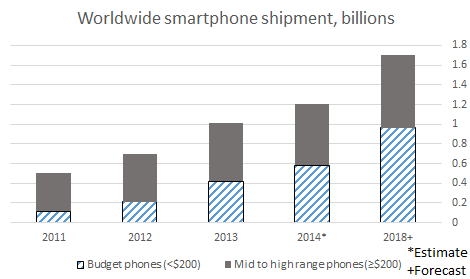
**J2 H1 Economics CSQ Q2**

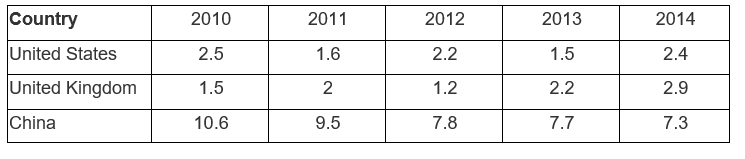
**Smartphone: For the better or worse**

**Figure 1: Worldwide smartphone shipments**

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Source: The Economist, April 2014

**Table 1: GDP growth of selected economies (annual %)**



Source: The World Bank

**Extract 1: China’s Xiaomi plans to more than double smartphone sales in 2014**

Chinese budget smartphone maker Xiaomi plans to sell 40m handsets in 2014, more than double the number it sold in 2013, its chairman said on Thursday, reinforcing the company's ambitions to outsell more expensive offerings from Apple and Samsung Electronics. Xiaomi's business model – offering "flash sales" of its mobile phones which generate excitement among would-be buyers, and have seen thousands sold in seconds – has led to its rapid rise. Xiaomi is happy to sell phones essentially at cost, and then to make money from selling services on them, and noted that countries such as India, Russia and Indonesia were "sweet spots" for its business. Xiaomi is expected to start selling its phones in Singapore later this year.

Xiaomi's growth has come largely through word of mouth – the company sells high-end products, which use Google's Android operating system, at low-end prices. Costs are kept low because the company spends little on advertising and on distributing stock to physical stores, selling mostly via its website. Overall growth in China is far greater than the world market, because there are more people there who don't yet have a smartphone, and people tend to replace cheap phones much more quickly – on average every 13 months, according to data collected by sites there.

Source: The Guardian, 2 January 2014

**Extract 2: The rise of the cheap smartphones**

In both rich countries and poor ones, cheaper smartphone brands are making inroads. Demand for pricey phones, mainly in developed economies, is slowing, but that for less expensive devices is booming. People buying their first smartphones today care less about the brand and more about price than the richer, keener types of a few years ago. They are likely to pay less for a nice new smartphone than they did in the past because the cost of making smartphones has tumbled. Vendors can buy standardised processors which chip designers competing furiously to provide in ever-rising quality at ever-lower prices.

The declining cost of making phones means that buyers are getting more for their money. In 2012, says Mr Jeronimo, 42% of phones priced at less than $80 had a processor faster than 1 gigahertz; by last year 87% did. The proportion of cheap phones with screens more than four inches across went up from less than 8% to 38%. Two years ago the median price of a smartphone was $325. Last year it was $250. This year it may be $200.

Source: The Economist, 5 April 2014

**Extract 3: Smartphones and the rise of accidents**

The problem with much mobile technology is that it is not really designed to be used while the user is actually mobile – or at least, not if being mobile demands the user to concentrate on something other than your mobile technology.

Research shows the response time of a user on a smartphone to access social media, games, emails or texts slows by around 37.5%, far more than after drug abuse or alcohol consumption. This has resulted in accidents involving users slamming into doors, colliding into other pedestrians, or tumbling down stairs, which can not only injure themselves but also affect others’ safety.

In America, towns have started fining pedestrians who use smartphones while walking. Here, London streets have hosted experiments that have involved attaching pads to lampposts and bollards in an effort to reduce injuries from "inattention blindness".

Source: The Guardian, 18 June 2013

**Extract 4: Enterprise apps on smartphones allow micro-moments of productivity at work**

A study suggests that 60% of British employees now use apps on smartphones for work-related activity. As a result, enterprise apps boost worker productivity by more than 34%. They allow employees to do work while on the go, which is both convenient and time-saving.

These enterprise apps enhanced existing work process and made them executing on mobile. For example, an employee reporting a defective product could snap a picture of the item using the camera function of a smartphone. The picture could then be submitted to the company’s incident management system within a micro-moment and the tap of a finger. They must also be easy to use, making it possible to be productive even when on a crowded bus or in the back of a cab weaving through rush hour. Micro-moment functions should be short and snappy and not overwhelm users with too much information – one screen to give enough information to make a decision and one thumb tap should be all it takes to take an action.

Source: The Guardian, 19 June 2014

**Extract 5 Improve efficiency – switch off your smartphone**

Email – A technology that was once a magical tool for communicating has somehow become a millstone round people's necks. It was bad enough when email was confined to desktop PCs. But, once the smartphone arrived, had the power to penetrate into the deepest recesses of the day – and night. The result was an inexorable lengthening of the working day, especially for those working in high-pressure jobs, because of an expectation that they could always be reached by email through their smartphones – and a corresponding expectation that any message would receive a speedy response.

Furthermore, accessing email and other apps on smartphones eats into people's working and thinking time, for example, distracts them from doing "real" work and generates guilt feelings that ratchet up stress levels to unsustainable levels.

Source: The Guardian, 20 May 2012

**Questions**

(a) Explain the likely magnitude of the following:

(i) The price elasticity of demand for smartphones. [2]

(ii) The price elasticity of supply for smartphones. [2]

(b) Identify and explain 2 demand factors why the growth in smartphone market is faster in China as compared to the world. [4]

(c) Using Figure 1, compare the changes in worldwide smartphone shipment between budget phones and mid to high range phones from 2011 to 2014. [2]

(d). Explain the impact of cheaper smartphone on the impact on two other related markets [4]

(e) (i) Explain the external cost of using smartphones. [2]

(ii) Discuss whether the imposition of fines on pedestrians using smartphones is an appropriate policy in addressing the external cost. [6]

(f) Discuss whether the use of smartphones will always lead to increased productivity. [8]

[Total: 30]

**Suggested Answers**

**(a) (i) Explain the likely magnitude of the price elasticity of demand for smartphones. [2]**

Price inelastic demand, magnitude less than 1 in absolute terms. A device for user to stay connected on the go with no close substitutes available. The need to stay connect wherever and whenever makes smartphone a necessity to the user. Price of smartphone takes up insignificant portion of income as it becomes more affordable.

**(a) (ii) Explain the likely magnitude of the price elasticity of supply for smartphones. [2]**

Price elastic supply, magnitude more than 1 in absolute terms. Manufactured products with short production time. Existence of spare capacity of smartphone producers.

**(b) Identify and explain 2 demand factors why the growth in smartphone market is faster in China as compared to the world. [4]**

Low smartphone penetration rate relative to other countries, hence has greater potential to grow faster. Hence demand likely to increase faster and thus growth in smartphone market is faster in China.

High economic growth rates over past few years, relative to other countries, leads to faster increase in demand for smartphones and thus growth in smartphone market is faster in China.

As Chinese consumers tend to replace cheap phones much more quickly given its low price relative to high-end smartphones, the increase in quantity demanded can be greater and thus growth in smartphone market is faster in China.

**(c) Using Figure 1, compare the changes in worldwide smartphone shipment between budget phones and mid to high range phones from 2011 to 2014. [2]**

Both increases, with shipment for budget phones increases in a faster rate.

**(d)** Explain the impact of cheaper smartphone on the impact on two other related markets [4]

**(e) (i) Explain the external cost of using smartphones. [2]**

External cost is using smartphone is the cost on 3rd party who is not directly involved in the consumption/use of smartphone. Example, a pedestrian who uses smartphone while walking and places too much focus on the use may collide into other pedestrians.

**(e)(ii) Discuss whether the imposition of fines on pedestrians using smartphones is an appropriate policy in addressing the external cost. [6]**

Fines may disincentivise pedestrians from using smartphones while on the move, as there is the risk of them getting caught and get fined for it. The external cost can thus be reduced, or removed if all pedestrians stop using smartphones while walking.

However, it is difficult for the authorities to enforce the fines as many pedestrians can still get away from using smartphones while walking without getting caught. It will be extremely difficult to monitor each pedestrian’s action and high cost needs to be incurred in employing manpower in supervising the pedestrians, hence it may not be appropriate in addressing the external cost. Also, the fines need to be substantial enough in order to deter pedestrians from using smartphones, if not the penalty might not be heavy enough to change the pedestrians’ behaviour.

Other measures such as public education may be a more appropriate policy as it helps to inform the pedestrian the risk of using smartphones while on the go to themselves as well as to other road users can help in altering their behaviour, thus reducing or removing the external cost of using smartphones. Although this policy make require longer time for the effect to take place as pedestrians may need time to change the way they use smartphones. It also must ensure that the message reach out to more pedestrians, one way can be through the use of TV ads or programme to reach out to a larger audience.

**(f) Discuss whether the use of smartphones will always lead to increased productivity. [8]**

Use of smartphones increase productivity as there are many different apps with useful functions, where smartphone users can use them to increase productivity. But the use of smartphones does not always lead to increased productivity if more time has to be spent on work.

Through the use of enterprise apps, with some simple clicking on the smartphone, users can send in work to their companies with minimal effort and can be done at time beyond working hours in office, such as during transit, which is convenient and time saving leads to increase in the productivity. Results was observed in a study done in UK where the use of these apps on smartphones increases worker productivity by more than 34%.

However, over-using smartphone may be counterproductive as smartphone users access email and other apps on their devices eats into their working and thinking time and distracts them from doing their real work. This is especially true when the workers are required to use time to reply long emails or using smartphones for non-work related purposes during working hours. Furthermore, with smartphones, working time and leisure time is blurred, where there could be possibility that workers continue to work beyond their working hours through their smartphones, which means that longer time is spent to do the expected amount of work, thus it could be less productive for these workers who uses smartphones for work.

Overall, smartphones with enterprise apps and email functions are meant to help to increase workers’ productivity and allowing them to do work anytime, anywhere. But to truly ensure that the use of smartphones leads to increased productivity, there is need to ensure that the same work that is done through smartphones really reduces the time spent in completion as compared to doing the work through other means. Secondly, it should not eat into the workers’ personal space, as it is harmful for their well-being and is unlikely to be sustainable.