Supply and Demand Framework for iPhone 6

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Demand and Supply Framework

The demand and supply framework explains how price of a product changes due tochanges in aggregate demand and aggregate supply. The framework explains if demand of a product increases more than its supply *ceteris paribus*the price of the products increases to discourage demand and to reach equilibrium. Similarly when the supply of a product increases more than its demand *ceteris paribus*the price of the product decreases to reach equilibrium (McGuigan, Moyer, and Harris, 2013).
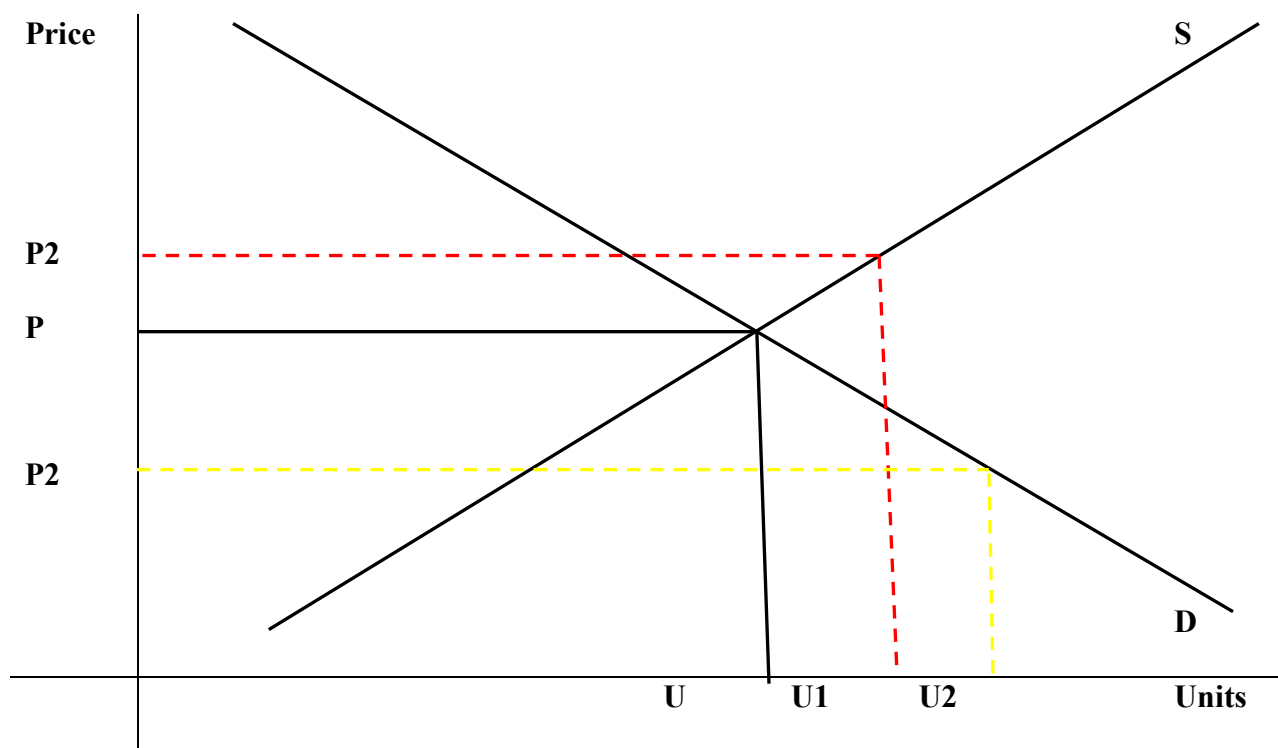
The effects can also be observed by changing prices. If price of a product increases the demand is expected to reduce and consequently supply reduces and vice versa. Thus if demand of a product is falling producer can reduce price to stimulate demand (Liu, Lovely,

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andOndrich,2013). *ceteris paribus* above means other factors remaining the same. These other factors explain why behavior of price of a product deviates from what demand and supply frameworks postulates. This implies that for some products even if the price is increased or decreased the overall demand remains the same. This happens when price elasticity of product is low or the product is inelastic. Another factor is the income elasticity which postulates that when income of consumers rises the demand for some products (typically inferior goods in terms of their quality) decreases although it ought to be increased as purchasing power of consumers has increased (Ghose and Han, 2014).

In case of iPhone6; Apple sold 47.5 million iPhones units in Q3 2015. This is around 35% increase in supply on year-on-year basis compared to 2014 but interestingly the table below shows that Apple's sales revenue increased by 59%. This implies that both supply and price increased yielding higher revenue (Apple, 2015). This is in accordance with the demand and supply framework that increase in demand of iPhone6 stimulated increase in supply but since producer i.e. Apple could not meet the demand therefore it also increased price to control demand. However it must be noticed that iPhone6 is exempt to certain factors such as price elasticity and income elasticity. In the next section this paper illustrates and calculates both these factors and present interpretation of their numerical values.

Table 1: Extracted from: Apple 2015

Apple: Operating Segments	Q3 2015 (Revenue in millions)	Q3 2014 (Revenue in millions)	Year/Year Change (%)
Americas	$20,209	$17,574	15%
Europe	10,342	8,659	19%
Greater China	13,230	6,230	112%
Japan	2,872	2,627	9%
Rest of Asia Pacific	2,952	2,342	26%
Total	$49,605	$37,432	33%

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Price elasticity of iPhone 6

Price elasticity of demand the responsiveness of product towards prices changes and is calculated as percentage change in demand divided by percentage change in price. If there is high change in demand in response to low change in product then it is called highly elastic product (elasticity>1) and in reverse case the product is called inelastic (elasticity<1). Typically goods having a strong brand with high level of customer loyalty are inelastic. Goods produced by monopoly also tend to be inelastic (Gillespie, 2011). Similar is the case of Apple iPhone6. The brand is so strong that many of its customers will continue to buy iPhones even if price increases (as shown in previous section). In addition iPhone6 can also be categorised as monopolist product as only Apple produce them.

Income Elasticity of iPhone6

Income elasticity of a product reflects the responsiveness in aggregate demand of a product with respect to a change in income of the consumers *ceteris paribus*. It can be calculated by dividing percentage change in quantity demanded by percentage change in income. Products with more than 1 ratio are called high elastic while products with less than 1 ratio are called inelastic. Luxury products are typically highly income elastic. Income elasticity postulates that if there is an increase in the income of the consumers the demand for the product will increase (Boyes and Melvin, 2012).

Since iPhone is a luxury product and a status symbol therefore income elasticity of iPhone6 is high. This can also be reflected by the fact that iPhone prices in all countries except USA are pretty high as compared to smartphones and products of Apple's competitors. In case purchasing

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power of consumers increase due to increase in income and if they could afford to buy iPhone there will be significant increase in the demand.

Factors affecting Price Elasticity

A major factor that affects the price elasticity of demand is the availability of substitutes of a product (Dahl, 2012). Considering the case of iPhone it can be observed that although there are competitive products but there are no substitutes for iPhone. The nearest product that can be treated as substitute for iPhone6 is older versions of iPhone such as iPhone5, iPhone4, etc. but customers of iPhone are highly loyal and iPhone6 is status symbol with very low price elasticity of demand. However, if a substitute emerges in the market it will definitely affect the demand for iPhones.

Another factor that affects price elasticity is change in preference and taste of consumers. If there is a change in taste and preferences of customers for example due to increasing focus on environmental sustainability many of the consumers in food market are attracted towards green products. If there is a change in taste and preferences of iPhone customers then price elasticity will be affected (Farnham, 2015).

Business use of Price Elasticity

Elasticity is significantly related to price and demand of a product which are directly related to the profitability of the firm. If products are inelastic then managers can increase their prices to maximise profitability. However if products are elastic then a change in price would directly influence the level of demand and therefore affect the profitability of the company (Anderson, *et*

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al., 2013). In case of iPhone6 it has been established that it is an inelastic product therefore Apple has been able to charge premium prices and enjoy high level of profitability.

It can also be observed that as new iPhone model is launched older model become relatively elastic. This is because the latest version is actually the most desirable product for the consumers because it offers more features and better performance (Granger, 2014). For example iPhone 6 is slimmer as compared to iPhone 5. This trend can also be observed by the fact the Apple reduces the price of older models when it launches new model as it is the case when iphone6 was launched there was a decrease in the price of older models including iPhone5, and also previous models. This was done to stimulate demand for older models. Decreasing the price also creates demand among those customers who cannot afford latest model but can afford to buy previous model. By using this strategy Apple has stimulated sales for iPhones and currently iPhone sales are more than 2/3 of total Apple revenue as shown in figure below

Product Summary	Q3 2015		Q3 2014		Year/Year Change	
	Units	Revenue	Units	Revenue	Units	Revenue
iPhone (1)	47,534	$31,368	35,203	$19,751	35%	59%
iPad (1)	10,931	4,538	13,276	5,889	- 18%	- 23%
Mac (1)	4,796	6,030	4,413	5,540	9%	9%
Services (2)		5,028		4,485		12%
Other Products (1)(3)		2,641		1,767		49%
Total Apple		$49,605		$37,432		33%

Figure 1: Extracted from: Apple 2015

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