The concept of pricing to market economics essay

The term ‘ Pricing to Market’ was first examined by Paul Krugman in 1987 (Kasa, 1992). The concept of PTM was explained by Krugman with the reference to the example of European automobile industry, in which he describes that the increase in US dollar against the European currency was the reason for the price difference in automobiles in US and Europe. Due to this difference in price the firms in the US started importing from Europe. In response the European firms adjusted there price against US dollar to maintain the export price in the market. This phenomenon of adjustment to the export price by the foreign firm is known as Pricing to Market.

Similar definition for this concept, for instant, given by Mark (2001) in which he described PTM as the ability to set different prices in the domestic and foreign market, this price discrimination is practiced by monopolistically competitive firms in order to take advantage of international pricing differences.

Therefore, we can say that PTM is the way of adjustment of prices for different market by firms in order to exploit the international price differences.

He also explained that integrated international market have given rise to this concept, by segmenting it into two different markets, Domestic and foreign market, as well as the concept of price discrimination. This essay will outline and review the concept of pricing to market. It will be followed by the implications of PTM for purchasing Power Parity. Furthermore the empirical evidence on the extent of pricing to market will be discussed.

According to Knetter (1989) value of goods to be exported by a firm varies due to the fluctuations in the exchange rate between the home country and the foreign country, which effect the marginal cost of the goods, to stabilise the effect of exchange rate the same type of goods are sold for different price in different market, this term in literature is known as pricing to market.

The concept of pricing to market deviates from the law of one price, which states that goods of same type are sold for same price in different markets (Sarno and Taylor, 2002). It means that PTM deviates from PPP or does not hold PPP.

The factors responsible for this deviation are the:

Price discrimination: if the producer is selling similar tradable goods in different markets which are segmented as a consequence of transportation costs, imperfect information and trade barriers then the producer maximise its profit by discriminating price, different price for same product in different market.

Exchange rate pass through: it means that the fluctuation in the exchange rates in the international market is adjusted by the changes in prices of the goods in domestic market.

Temporal shift of profits: monopolistically competitive firms willing to increase their profit margins when there is an increase in the foreign currency.

The above statement is explained by Kasa (1992) in which he states that the pricing to market was not only driven by price discrimination as well as some other factors were also influential.

As stated by Krugman (1987) that the pricing to market is related to market structure of the respective country in the international trade. There three factors explained by Cheung (2001) responsible for the adjustment of relative prices to the exchange rate are the following:

Market integration or separation

It means when the price in market A and price in market B are strongly related to each other, then it is said to integrated market and in the absence of this relation it is known as market separation. The reason for this due to factors like absence of transaction cost to foster competition, to increase the flow of investment and consumption and the market structure.

Substitution between domestic and foreign variant of a product

If there is a close substitute between the domestic and foreign then the demand for the product will be elastic and vice versa. We can also state it as market power, because if there is no close substitute for a particular product in a specific market, then the firms are having significant market power to set prices.

Market structure

Market segmentation determines the level of competition in the industry, which affects the response of the firms to the exchange rate changes and result in price discrimination.

Since, PTM plays a significant role in determination of exchange rate in international macroeconomic fluctuations, studying it reason for existence is very important.

There are few reasons stated by:

According to Krugman (1987) PTM exist if the import prices are not adjusted in proportion to the changes in exchange rate.

Knetter (1993) explains that PTM occurs as a result of adjustment costs or intemporal demand linkage.

As well as Alexius and Vredin (1999) explained that degree of PTM is also influenced by the aggregate import demand of the destination country.

As explained by Naug and Nymoen (1996) that maintaining the import price is significant for its performance in international trade because it effects the terms of trade and trade balance as well as there are many other reasons like domestic inflation and foreign competition.

However now we are going to explain the implication of PTM for Purchasing Power Parity (PPP), but first briefly elaborated the term PPP. It means that a unit of currency should have the same worth in different country if the prices are expressed in common currency. As stated by Grauwe (1996) the theory of PPP explains that exchange rate equilibrium is determined by the changes in the domestic and foreign price ratio. Taylor and Taylor (2004) argue that PPP theory means " the nominal exchange rate between two currencies should be equal to the ratio of aggregate price levels between the two countries, so that a unit of currency of one country will have a same purchasing power in foreign country”.

The basic concept underlying this theory is that the arbitrage forces will result in balancing the prices of goods in different countries by exploiting the price differences across borders. This implies that the use of PTM by monopolistic firms is not appropriate, but this concept still exist because there are many reasons to support that the price can’t be equal everywhere like trade cost , tariff and non-tariff barriers, trade policies etc. Due to which the firms are forced to set different price because these factors are not reflected in the exchange rate, low exchange rate pass through.

There are two version of this theory:

Absolute PPP: it is states that prices of identical goods are equal in different country if the exchange rate is in common currency. Algebraically, it will be stated as

$S = P / P^*$

Where S = Exchange Rate

P = Price of identical goods in domestic country

P^*= Price of identical goods in foreign country

According to Pilbeam (2006) in the case when domestic inflation rises with respect to the inflation in foreign country, there is a proportional decrease in the home currency to the foreign currency.

Relative PPP: it simply states that the difference in inflation level of two different countries is reflected in the exchange rate adjustment.

Algebraically, it will be represented as

% (change) S = % (change) P – % (change) P*

Where % (change) S = percentage change in exchange rate

% (change) P = percentage change in the domestic inflation rate

% (change) P* = percentage change in foreign inflation rate

The exchange rate movements and PPP are inversely related (Grauwe, 1996) which was experienced by US in 1980s when their currency and inflation rate increased more than German inflation rate.

According to Betts and Devereuse (2000) PTM increases the volatility in exchange rate which in result affect the consumption and output pattern of the country. It also shifts the global demand toward the weak currency, therefore the aggregate export of the particular country increases. In the example US and Germany automobile export, assuming that there is imperfect completion, Germany is having significant market power. If there is an increase in US dollar against German currency, the prices of German export will decrease in US, the US importer affects the price rise Germany by implementing PTM. According to Cheung (2001) there are deviations in PPP due to the incomplete pass through of exchange rate, which caused due to PTM. Therefore, if there is low exchange rate pass through, the exchange rate does not affect the price rise in Germany which in result states that it does not hold PPP.

Furthermore, the empirical evidence on the PTM is discussed with reference to the work of many scholars as follows:

According to the research conducted by Krugman (1987) in which he investigated the extent of PTM with respect to the foreign suppliers to prove that the concept PTM is real but not applicable in all cases. In case of US and German automobile industry, he studied the correlation between the market structure and PTM through trade models. The basis of comparison to study the extent of PTM was:

US manufacturing import price with the import price index by using export price of major trading partners.

German's price on export of automobiles with other European countries (extra European export).

Comparing the export price of Germany to the US and the rest of world.

The conclusion of the above study done by Krugman (1987) was that when PTM comes into existence when the exchange rate changes in the case of US and German trade, because when the US dollar appreciate the price of US import and price identical goods in rest of the world is affected. But there were some limitations of PTM, in the case of US and German trade the effect of PTM was only seen in transportation equipment and machinery industries, due to which it can be stated as a universal phenomenon.

In 1992 Kasa studied the effects of exchange rate on prices of goods using the adjustment cost model. According to him the monopolistically competitive firms which are capable of setting prices for different market utilise their profit margin to maintain different price in foreign markets. He also developed a dynamic price setting model by analysing the firms using PTM for trading in foreign markets.

Due to the price adjustment by the firms the marginal cost of supplying goods to the foreign market causes systematic deviation of PTM from Law of one price. Finally he states that the transitory component of exchange rate are the only significant factor which influence the PTM, which was supported by the fact that German import prices appreciated in US, in relation with other countries due to the effect of rise in US against Deutschmark.

Lavoie and Liu (2007) examined the result of PTM when the differential products are taken as export units in which he revealed that the PTM shows false result in the case of differentiated product taken in export units (value and volume of specific product and country). According to him the deviation in the result of PTM is positively related to the degree to differentiated product.

Similarly, Alexius and Vredin (1999) argued that systematic differences between the prices in different markets and the export prices are affected by the macroeconomic conditions of the respective country. His research stated that aggregate demand in export market and the exchange rate affects the PTM. As well as he described the large and persistent deviation of PTM from Law of one price, are due to the changes in exchange rate.

In conclusion, PTM is the actual phenomenon which is influenced by many factors like degree of exchange rate fluctuation, product differentiation, macroeconomic factors of the respective country, and amount of aggregate export of a country, but can be applied universally. At last it would be appropriate to state that PTM is efficient pricing behaviour by the monopolistic firms.