2. Literature review:

2.1 Chapter overview

In the following chapter, the *author* will discuss in detail the literature and research done by other researchers on price bundling. This chapter will start with the benefits of price bundling from a consumer perspective. The second part will pay attention to the benefits of price bundling from business perspective followed by a discussion on issues concerning price bundling strategy namely "unbundling" and "antitrust".

2.2 Benefits of price bundling:- A consumer perspective

The study on advantage of price bundling is pioneered by Stigler (1963) who observed that price bundling can be profitable if consumers' willingness to pay for two goods is negatively correlated. Monroe (1990) suggested that in light of <u>lowered search</u> and <u>acquisition cost</u>, consumer is more likely to purchase a bundle product or service. Yadav et al (1993) provide evidence that consumers gain transaction utility from discount associated with the individual item plus additional discount associated with the bundle.

On the other hand, Crawford (2008) argued that consumers only benefit from price bundling under the circumstance when the majority of bundle components are of importance to the consumers and the bundle is offered at a discount (compare to individual price). Crawford (2008) further pointed out that consumers will be on the losing end when they only place great value on small number of component while force into buying other undesirable component all together. This in turn benefit the firms that sell such bundle.

However, Nalebuff (2005) disagreed on Crawford's viewpoint and claimed that the leading firm might leverage on their bargaining power to exploit the end user by passing on the saving to distributor using a complicated bundling strategy as part of their anti-competitive move. He cited the example from the adhesive tape giant - 3M, whereby 3M undergoes rigorous effort in designing its rebate programs to ensure the saving with it "Scotch Tape - Private label" bundle did not benefit consumer and lead to price erosion in the consumer market. For instance, 3M designed its programs so rebates were not paid to the distributors until after year-end to discourage distributors from using the rebate in terms of price cutting in the market.

The rationale behind this price bundling practice was that 3M foreseeing their distributor in maintaining the market price when the rebate reaching few months later and thus discourage the distributor from cutting the price. The pricing benefits stores over consumers according to Nalebuff (2005) interpretation and he cited that the bundle discount has enabled 3M to displace its competitor while maintaining the price of its private label tape. But at the end of the day, the consumer is not eligible to any form of economic saving from the competition in the open market.

2.3 Benefits of bundling:- A business perspective

2.3.1 Price Bundling as a discriminatory pricing tool.

In the hands of the modern era managers, price bundling strategy also serves as a powerful tool to deter new competitor. For instance, the infamous ongoing antitrust lawsuit on Microsoft for their price bundling practice between the popular Window Operating System and peripherals software is a classical example for such practice (Mitchener and Kanter 2004).

Similarly, Varian (2003) found that modern day business managers are leveraging on price bundling as a discriminatory strategy to reap maximum returns from the consumer market. Varian (2003) further commented that price bundling practice decreases price sensitivity and increases individual consumers' purchase likelihood. It is highly possible that price bundling yields larger profit and there is strong positive relation between the contribution margin, and the economies of scale (Varian, 2003). Thus, services or goods with high development costs—such as high-tech products generally have more to gain from price bundling than do goods with high marginal costs, such as consumer durables or industrial goods.

Crawford (2008) suggests that managers can achieve second-degree price discrimination through price bundling since it has the ability to segregate consumers surplus and this viewpoint is coincided with Stigler (1968) and Adams et al (1976) findings. For instance, for buyers that have differential preference on a number of products, a monopolist may adopt price bundling strategy to minimize the perceived difference and use this as a mean to capture better margin at the expense of the buyers since this will eventually lessen the option for the end user.

A research by Stole (2003) suggests similar effects in oligopoly markets whereby it was found that the Oligopolist tends to design product lines that extract maximum consumer surplus through proper customization of the bundling package. Bakos and Brynjolfsson (1999) explained that firms tend to benefit the most when they can leverage on the price discriminatory aspect of price bundling, while on the other hand consumer welfare can fall, particularly when bundling requires consumers to purchase products in which they have little interest.

In contrast, consumers do gain from price bundling under the circumstances whereby a firm reduces price (lower than buying the items individually) in accordance to the benefit of consumers that place moderate value on a large number of bundle components. A priori, there bound to be loser and winner in price bundling.

2.3.2 Price Bundling as a deterrent of new entrant.

Fuerderer, Hermann, and Wuebker (1999) is of view that price bundling has emerged to play an increasingly critical role in many industries to the extent that some businesses even base their corporate strategies solely on price bundling strategies. They cited the renowned example of Microsoft. By strategically combining its application software into the "Office" bundle, Microsoft increased the market share of its database (Microsoft Access) and presentation (Microsoft PowerPoint) application. Fuerderer et al (1999) pinpointed that due to this highly successful price bundling strategy of Microsoft, there were very limited sizable competitor within the industry that can have the capability to challenge Microsoft Office bundled software.

Similarly, Nalebuff (2004) sharing the same view that price bundling strategy is a very effective marketing tool which can assist the monopolist to deter new competitors from venturing into their industry. For example, a market leader that held a different position in two markets may opt to bundle these two goods together, and capitalize on market that they have monopoly to cover up for the weaker product. What makes this strategy remarkable is that unlike most entry deterrent strategy (such as predatory pricing), price bundling can actually raise profits in the absent of new entry based on Nalebuff (2004) observation.

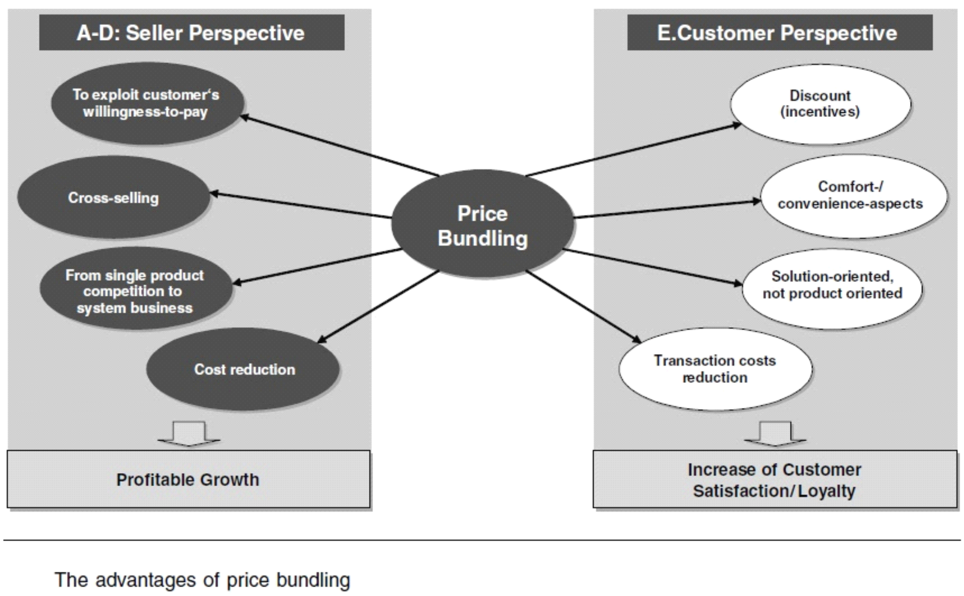

Diagram 2.1 The advantages of price bundling

(Source: Koderisch et al 2006)

2.4 Issue in bundling: Unbundling & Antitrust

Discounting derive from bundling may prompt a rival who makes only one of the products in the bundle (or a smaller subset of products than the dominant firm offers) to give a larger per item discount in order to compensate the buyer for the forgone discount on goods that the rival does not sell.

Hovenkamp and Hovenkamp (2008) revealed that bundling practice of certain industry where public interest is concerned is subjected to collision between private and social incentives. Taking the e-journal industry for instance, there are publication house that willing to bundle its journals for profit maximization at the expense of society at large. In particular, small scale publishers are having difficulties in selling quality journals that they own since the big publishers are leveraging on price bundling to marginalize the former. It is noteworthy that this price bundling strategy in publishing industry already taking tolls on smaller publisher when the sixth-largest player forced to exit scientific publishing in light of fierce competition from larger publishing house that bundle their journal (Gooden, Owen, and Simon 2002).

Hovenkamp et al (2008) further highlighted that price bundling has another two impact on competitive rivalry of an industry. First, price bundling creates incentives for mergers. However, social welfare will be compromised in the event of ongoing mergers among industry player which decrease healthy open competition in the market. Contrary, merger between smaller publisher which otherwise would not be able to sell their journal is likely to increase social welfare.

Secondly, Hovenkamp et al (2008) is of view that price bundling can affect the transformation of business sector through consolidation among industry player and evidence shown that in the absence of bundling each competitor has the same willingness to pay for a journal, whereas under bundling the largest competitor always has the highest willingness to pay. As a result, price bundling may lead to the extinction of smaller publishers since it will become increasingly difficult for them to compete with the big players.

2.4.1 Bundling deter new entrants, less competition

Although price discrimination provides a reason to bundle, the gains are small compared with the gains from the entry-deterrent effect. Research findings from Nalebuff (2004) suggest that when consumer valuations are independent and uniformly distributed, a monopolist company gain 9% in new entrants protection via price bundling strategy. On the other hand, the new entrant might experience a drop in profits by as much as 60% due to the price bundling strategy from the monopolist firm.

The classical example for this situation can be best described using Microsoft Office, whereby the spreadsheet (MS Excel), word processor (MS Word), presentation (MS PowerPoint) software are sold as a bundle package. In the absence of the Microsoft

Office, the consumer could have the freedom to choice the software base on preference. According to Nalebuff (2004), consumers could be better off by selecting their own “best-of-breed” components over the Microsoft Office package, perhaps combining Microsoft’s PowerPoint with Corel’s Word Perfect, IBM’s Lotus 123, and Qualcomm’s Eudora for email.

While criticising Microsoft's price bundling practice, Nalebuff (2004) also acknowledge that the Microsoft Office does offer some added value to its customer. For instance, the standardize commands and the ability to create links between Microsoft applications enable the end user to integrate their work from various software. In addition, the customer also can solve his entire software problem by calling the same vendor which in turn save time and hassle. From the business perspective, it makes more economical sense to sell bundle of software on a single disc instead of individually.

While looking at the positive side of price bundling, consumer must take note that price bundling may also lead to inefficiency since they are “forced” to purchase all the bundle component even when some item is of no value to them (Adams et al 1976).

Papandrea et al (2003) arrived at a similar verdict through their research study in Australia whereby they held that a leading firm may fence off their tuff through aggressively price their bundle at a level that equal to the cost price of competing firm, while continue selling the component item separately at normal price. Through this price bundling practice, the leading firm can virtually fenced off any new entrant that unable to provide similar bundle without the need to meet the selling price of their competitor.

In addition, **Papandrea et al (2003)** also pointed out that in the event that new competitor trying to provide bundle to compete with existing firm, it may eventually lead to a vicious cycle which economist regarded as a prisoners' dilemma (Economides 1993). In such circumstances, price bundling strategy serve as a strategic tools in price competition which is likely to reduce long term profitability to the benefits of the end user.

Ultimately, price bundling strategy can bring about different impact on the society depending on circumstances such as the marginal cost of production, economies of distribution, the elasticity of demand for the products and market structure.