Technological Growth and the Impact of Anti-Trust Violation in Relevant Market

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Abstract: **This paper shall try to probe into the concept of antitrust violation and anticompetetivness in the digital market or for that matter in the smart phone technology market. Although this paper shall highlight the economic perspective of the ways high technology market create anti competitiveness through acts that are Legally valid but economically invalid.**

Keyword : **economics, stock brokers, market**

1. INTRODUCTION

The rapid diffusion of IT with the uncertainty surrounding the appropriateness of various national policies to accelerate that diffusion suggests a vacuum of intellectual insight. Why are the appropriate policies for government action not clear, issued by various governmental agencies, commissions, and leaders? The answer, we propose, lies in the absence of research attention to the vital institutional factors that shape innovation generally, and IT innovation in particular.

The nature of commerce is changing before our eyes, at a speed that is unprecedented in our economic history. The total size of all electronic commerce accounted for 35 % - 40 % of that total. The electronic commerce total more than doubled in 1999 from the 1998 level. Employment-related growth is equally impressive- more than 650,000 new electronic commerce- related jobs were already added long back in 1999[1], Imagine the condition now. This is a revolution in commerce, one that has enormous implications for the way business is transacted and, ultimately , the way society's resources are allocated between business and consumers.

The most important aspect of the cyber world from the consumer's perspective is the increase in choices and especially information on the products and services they desire. A generation ago, a typical consumer may have been limited to choosing among a few local banks (perhaps limited to his other country or state), travel agent, stock brokers insurance agent, and local department stores.

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Now the consumer may choose from scores of online banks, travel intermediaries (such as makemytrip.com) or airlines that can be contacted directly, stockbrokers or online stock traders, insurance companies and direct marketers and manufacturers of goods.

As important as the breakdown of borders and the growth in the number of competitive alternatives is the tremendous growth in the number of intermediaries that can help ordinary consumers effectively process new sources of information. Some of these intermediaries create new services and markets; in other cases, they substitute for and compete against more traditional intermediaries.

Unlike steel, oil, automobiles, and other "smokestack" industries that arose in the latter part of the nineteenth century, the e-commerce market has grown from virtually nothing to an economic heavyweight in less than a decade. There are several implications for anti-trust policy in this rapid growth. Similar to other hi-tech industries, rapid growth in electronic commerce means that this market may not be conducive to long term market dominance by a single firm. Rapidly increasing demand and the constant introduction of new market product makes it harder for a single firm to retain market share year after year. This is the pattern that is consistent across several fast-growing industries.

Explosive growth in Computer games destroyed any market power that initially dominant Atari may have had. Some high-tech firms have managed to remain dominant over time. When firms such as Intel and Microsoft manage to retain market share over several product generations, closer Anti-trust scrutiny may be warranted when they engage in conduct that might contribute to that dominance in a manner that might not benefit consumers[2]

2. BARRIERS TO ENTRY

Entry Barriers are critical factor in any antitrust analysis. New, fast growing markets that do not have dominant firms might be expected to have low barriers to entry. And the dramatic increase in the number of internet competitors might suggest that entry barriers are relatively

low. New web sites are relatively easy to establish. The cost of capital may appear from some perspective to be modest, and the heavy reliance on human, as opposed to physical, capital can enable new companies to move quickly.

This initial intuition, however, may not be borne out in many Internet environments. Not all internet sites are successful, and the costs of entry are clearly sunk. Entry to get a site on the web may be relatively easy, but commercial success is a different question. After all, if entry were simple, several rivals to Amazon.com would be expected to enter the market effectively. And if entry is so simple, why do traditional firms acquire Internet sites rather than enter with their own site? Not all Web sites are equal, and consumers are reluctant to use sites that do not offer the optimal level of service[3].

Tying and Bundling in Anti- Trust Law

Anti-Trust law exist to maintain competitive markets, prevent market failures, and protect consumers. However, application of antitrust law to emerging, layered technologies remain controversial. Overextension of antitrust law to emerging integrated products in the cyber world can stymie innovation- decreasing Consumer welfare. By the same token, refusing to extend antitrust laws may lead to higher prices- which also result in a decrease in consumer welfare. Yet, by striking an appropriate balance, consumers can benefit both from enhanced innovation and lower prices[4].

Although such a goal is laudable, determining when product combinations shift from competitive offerings to anticompetitive ties or bundles is challenging in the real world. Gone are the days when the competitive concerns over technologies, such as telephone services, were well defined and the injuries on consumer prices were more easily perceived. Clear perception of competitive concerns in modern technology markets, such as the smart phone market or the digital market are obscured by rapid cycles of innovation and opaque pricing strategies. However, simply because anti competitive conduct is difficult to detect does not mean that it is not present. Rather, Obscurity increases the likelihood that anticompetitive actions will be taken to increase market share or even short term profits. Teasing out the true nature of competition for multilayered technology products and applying antitrust concepts, such as tying and bundling, to anticompetitive behavior is a critical challenge as antitrust laws adapt to evolving market.

This paper tries to illustrate the dual nature of e.g. a high technology market by evaluating the integration of a smartphone mobile operating system ("MOS") with an application clearing house. An application clearing house is a middle-ware market software application that identifies, sells, and distributes downstream third party application (e.g. the iTune store, Blackberry's app world, Google's play (also known as the Android market) , are all applications that sell other applications, anything like Angry bird) Obviously there are many ways to understand the market for these software products. However, if a MOS (such as Android MOS) ties or bundles the MOS with an applicatipon clearing house like google play , then it is possible for the producer to exert market power on the market for third party applicvation clearing houses. The result is increased application prices for end consumers. Ties like this could also be used in any Anti competitive way, to buttress a producer's MOS market share by controlling or manipulating the market for applications that run on that MOS. These types of claims are similar to those raised in the *Microsoft case* Yet the viability of such claims remains unresolved.

In order for tying and bundling doctrines to remain effective in high technology industry, tying and bundling must adapted to address:

1. Non-equilibrium based economic theories
2. Dynamic shifts in technology markets that may suggest a multiple product at one timeframe and single products in a later time frame, or vice versa
3. Flexible, sub market specific timeframes for analyzing competitive effects.

3. THE FUTURE OF TYING AND BUNDLING: The smart phone technology

There might be a question why smart phones are an appropriate industry for the hypothetical application of tying and bundling law. The answer is simple – because smart phones are increasingly ubiquitous (thereby magnifying the implications of even relatively small consumer harms) and because the primary market for smart phones for smart phones and the secondary markets for applications exhibit the representative economic characteristics of many dynamic smart technology industries. These characteristics include high barrier to entry (i.e. significant startup cost), heterogeneous product offerings, and rapid innovating cycle. Thus making smart phones the ideal foil for evaluating the utility of current tying and bundling law principles.

Furthermore, the smart phone market characteristics naturally result in highly concentrated markets- an antitrust indicator that naturally result in highly concentrated

market- an anti competitive indicator that naturally raises the eyebrows off trustbusters and consumer advocate alike. Yet, it is axiomatic that a market is not anticompetitive simply because it exhibits characteristics correlated with monopolies or oligopolies. Rather, these may be indicators that that the competitors are aggressively seeking "the spectacular prize" – namely large pecuniary awards through innovation and rapid growth or output[5].

4. THE SMART PHONE PROBLEM

There can be possibly three basic perspectives on how competition between smartphones relates to competition for application clearinghouses. :

1. Smart phone MOS can be viewed as an individual market. Within that market, the MOS producer creates a single application clearing house that provides the primary interface for obtaining third party application. If the market is not viewed as a feature of the MOS, then tying may foreclose competitors from entering the application clearing house market. Furthermore, the only constraint on the separate market for clearinghouse service are mobile internet browsers, which allow individuals to access third party applications directly. Tying or pre-installing of application clearinghouses can result in higher prices charged by the application clearinghouses directly to consumers who are a captive market for these clearing houses.
2. Within a single MOS market, multiple clearinghouses created by the MOS producer or third-party competitors compete on price to sell the same applications to consumers. This is a more competitive market than the above example, but competitive harm harm can still result if the MOS producer ties its MOS to its application clearinghouse and uses its market to illegally constrain competition from third party application clearinghouse or to buttress the MOS producer's monopoly.
3. Different smart phones MOS platform compete with each other partially by proxy wars in app. Clearinghouses. Customers may be locked in to a MOS platform with higher prices for application in tied application clearing houses, even though they would prefer to switch to a different MOS platform[6].

   As Justice Scalia's dissent in *Eastman Kodak observes,* Cross- Elasticity between MOS platforms can constrain anti competitive prices for third party applications.

United States v. Microsoft[7] is perhaps one of the most famous and even a landmark judgment on tying related to technology products. In the subsequent case, the plaintiffs alleged Microsoft's abused power of Monopoly on Intel based personal computing system in its handling of OS sales and web browsers sales. The issue central to the case was whether Microsoft was allowed to bundle its flagship Internet Explorer (IE) web browser software with its Microsoft Operating system. Such an alleged bundling led to Microsoft's victory in the browser wars as every Windows user had a copy of Internet Explorer that could not be removed with the delete option or add/remove option. It was further alleged that it restricted the market for competing web browsers such as Netscape Navigator or Opera that were slow over modem and took a long time to download or had to be purchased from the store thus discouraging people to buy one. Although Microsoft countered that the merging of Microsoft Windows and Internet Explorer was the result of innovation and competition, that the two were now the same product and were inextricably linked together and that now the consumer were getting all the benefits of IE for free. Those who opposed this counter argued on Microsoft's position that the browser is still a distinct and separate product which did not need to be tied to the operating system, since a separate version of internet explorer was available for Mac OS. They also asserted that IE was not really free because its development and marketing cost would have been higher if segregated. The court reached a settlement that required Microsoft to separate its OS frame its Internet explorer thus leading to a competitive behavior in the market.

The competitive '*fix' : cross platform solution.*
(fix – mobile internet browsers)

One of the most common defenses in softwares tying action is that any plausible competitive concerns are fixed by the existence of cross platform products or complementary software functionalities that restrain a competitor's ability to charge anticompetitive prices. This issue, of whether secondary market software applications can act as a competitive relief valve, was never definitely resolved in the *Microsoft's* case and the issue continues to elicit strong opinions in the academic literature.

Under this theory, any competitive problem that arises because of a tie between mobile operating systems and the application clearinghouses can be solved by potential use of mobile internet browsers, which give consumers an alternate means of accessing the end users product directly. Therefore, it does not matter whether application clearinghouses are tied to mobile operating systems, because the producer cannot charge anticompetitive prices for application in the clearinghouses without losing sakes

to direct purchases via mobile internet browsers. Essentially, if prices for applications get too high in the application clearinghouse, then consumers can bypass the clearinghouse via mobile internet browsers and get the application thaey want directly from the third party producer at a lower price. Such a competitive fix is possible because application clearinghouses are zero-priced (thus there is no explicit cost associated with the means of obtaining the third party applications.)

However, the competitive fix des not address the underlying issues of information costs related t rent seeking out of a particular end-product (such as a apecifc third party application) without the use of an application clearinghouse, frm nascent cross-platform application clearinghouses. Such a result is even more troubling in a world where utility of the Internet itself, versus the utility of applications is in question. In other words, the competitive fix may be obscuring foreclosure that would allow smart phone or digital technology applications or websites producers to produce just one version f the product.

What is clear from the competitive fix application t the smartphone paradigm is that both economic and legal rationales remain viable because they address basic conceptions of the market. From a resource based economic perspective, the mere existence of a competitive fix opens the door for competitors to fundamentally change the market dynamics by reallocating their resources in more efficient, competitive combinations that bypass any 'bottleneck' held by a current competitor. However, from a path-dependence perspective, competitive fixes may be magnifying the utility of complementary software functionalities. Thus, competitive fixes should not be presumed to support a precompetitive outcome, but should be evaluated closely based on the structure and dynamics of a particular market[8].

5. CONCLUSION

This paper has tried to explain the perspective of antitrust law and anti competitiveness in the digital market and the smart phone application software market. This paper has tried to not only give the legal perspective of the tying and bundling doctrine supported by case laws but in fact has also tried to give an Economical perspective of such an anti competitive behavior which although seems to be legally valid but is in fact economically leaving a deep impact on the competitive behavior thus proved in the *Microsoft* case. Although this paper has mostly tried to highlight the problem of such an issue but hasn't given the any solutions to the problem thus highlighted, so as the author I would like to conclude this paper by atleast stating a few possible solutions. Nevertheless, current tying and bundling law can be tailored to address critics by :

1. Recognizing that antitrust law is based on the assumption that a competitive equilibrium is achievable, and that non-equilibrium based assertions and defenses, while not excluded should be the exception.
2. Making greater use of the rule of reason in high technology tying cases
3. Viewing natural experiments buttressed by econometric evidence as indicative of anticompetitive conduct.

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