11. TYING CONTRACTS

Background

The Microsoft antitrust case offers a new look at an old problem—tying contracts. A tied-in sale is one in which the purchase of one product is a condition of the purchase of another. In the most famous of all tied-sales cases, IBM forced the companies that leased its machines to purchase IBM tabulating cards. If they were caught using non-IBM cards, the lease was canceled.

The tied sale in the Microsoft case is the combination of the Windows 98 operating system with Microsoft’s Internet Explorer, a web browser. We will return to the Microsoft case in a moment. First, let’s review the legal history of tying contracts.

There are three factors in a tying arrangement: 1) different products; 2) monopoly power in the tying market; and 3) more than *de minimis* effect on commerce. The first element is that there needs to be different products. For instance, a new car and tires is not "different products" for purposes of tying. A "new car" and gas may be. Second, market power in the tying market can be provided by any means, such as natural monopoly, patent, copyright, or sheer size. Again this issue is determined by the product and geographic markets analysis with which we are quite familiar. Last, the effect on commerce must be more than "insubstantial."

Why tie? Tying is assertedly bad because it would extend the monopoly in one market to another product. That would allow a collection of monopoly rents in another product. But, if a firm truly had market power in the tying industry, why not just charge more for the tying product? This point was made by Stigler, and then also answered.¹ We will return to this shortly.

The defenses to tying are limited. First is that there is a new industry that requires special service that no one else can provide. An obvious response is that if this were true, then you would not need to tie because the market would take care of the problem. There is also the defense of "metering" or price discrimination, but since this can be accomplished through other means, then this is no good defense. Moreover, it is not clear that the court would view price discrimination as a good. There is also a protection of goodwill argument. Under this defense, the seller claims that the user must use its tied product in order to insure that the seller’s machine will function properly and preserve the goodwill of the seller. This defense rarely works.

In fact, the court has been extremely harsh in its treatment of tying contracts. Tying has been held to be *per se* illegal so long as the three conditions noted above hold. In spite of the court’s treatment of the practice, there is little economic justification that tying contracts create social harm.

Case History


FACTS: A.B. Dick had a patent for a mimeo machine that required as a result of its use compliance with license terms that required the user to buy Dick's ink and paper. Henry sold ink to a user of the machine. A.B. Dick sued Henry for patent infringement by virtue of the license agreement.

ANALYSIS: Court held that patent provided market power in the machine market, and since the public could choose to buy with these restrictions or not, there is no problem. The court implicitly recognized that Dick could always just charge more for the machine. Note that in spite of the fact that Dick could have charged more for the machine, it found that tying was the more profitable contractual arrangement. This market response is repeated time and again.

DISSENT: Dissent made what will become the standard argument that outlaws tying, that is, tying leverages a monopoly in one market into another.

WHAT YOU NEED TO GET: Early ties were not always a problem when the tying product was a patented item.


FACTS: IBM leased tabulating machines to business customers. These machines used cards in the process. IBM required that its leasees purchase their cards exclusively from it. IBM claimed that the tied sale was not illegal because it was done to ensure the proper functioning of the machines. The court noted that the gross receipts from its machines averaged $9.7 mil per year and the sales of cards averaged $3.2 mil. (It is not clear whether the $9.7 includes the $3.2 or not.) Also, the court noted that approximately 3 billion cards were sold annually.

ANALYSIS: The court ruled that the Clayton Act of 1914 made tying *per se* illegal whether or not the tying product was patented (thus, changing the precedent of A.B. Dick). The court’s view was that the tie limited competition in the card market and was therefore bad.

The standard economic theory explanation of the IBM card case is that IBM was using card usage as a way of price discriminating. That is, by charging a price in excess of cost for the cards, it could capture some consumer surplus from large volume users while still pricing its machines attractively enough to let smaller users afford them. This may be. However, note that the average price of a card was only .1¢, which does not seem excessive. The price level is 12.5 times higher. The current price of a piece of paper is around 1¢. At all events, IBM was not charging an exorbitant price for the cards.

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2 IBM punch cards were like long index cards, i.e., they were about three inches tall and six inches wide. They had rounded corners one of which was clipped so that the card could always be oriented.

FACTS: Salt Co. made patented machines that it would lease to others so long as all the salt required by the machines was purchased from Salt Co. Machines were the "Lixator" and the "Saltomat." The contract provided that Salt Co would have essentially a right of first refusal to salt sales. U.S. brought suit under Clayton § 3 and Sherman §1.

ANALYSIS: Court held that this was an illegal tie as an extension of the patent monopoly into the salt market. Salt Co. argued that the restraint may have been reasonable and that there was evidence that there was any monopoly in the salt market. The court rejected this notion and stated that so long as something more than "insubstantial" commerce was affected, there was no problem. Here, $500,000 per year in salt was enough. Additionally, that Salt Co merely retained a right of first refusal did not make the tie reasonable. The court likewise rejected the "goodwill" defense that would have required "high quality" salt to be used in the machines. The court did state that Salt Co could require a certain quality of salt, but not from a particular vendor.

WHAT YOU NEED TO GET: 1) tying is per se unreasonable; 2) threshold commerce level is low; and 3) may require quality in supplies but not vendor.


FACTS: This is a case of full line forcing. That is, if you want to buy the good films, you also have to buy the bad. That is, with "Casablanca" and "Sergeant York" came "Gorilla Man" and "Tear Gas Squad." The issue was whether this was a tie.

ANALYSIS: The court begins by stating the first element to a tying claim is that there is power in the tying market. With patents and copyrights, there is a presumption of market power as to that product. Without a patent or copyright, market dominance will suffice, and if you do not have that, then that power may be inferred from the tying product's desirability or uniqueness. In any case, the block booking is illegal as a tie. The distributor can, however, just charge more for the good films and less for the bad. However, bundling is a way of price discriminating as shown by Stigler as we will discuss shortly.

WHAT YOU NEED TO GET: 1) how market power is established; and 2) whether this makes sense.

5. *Siegel v. Chicken Delight*, 448 F.2d 43 (9th Cir. 1971) (p. 252)

FACTS: Chicken Delight would give away franchises in exchange for purchases of mixes, packaging, and hardware from the stores. Prices for these items was higher than others. Chicken Delight argued that there were not two products offered here—there was a franchise and with that came the specific products. This was like selling a car with tires, or a left shoe with the right.
ANALYSIS: Court begins with three elements of tying: 1) separate products; 2) power in the tying; and 3) effect on a substantial amount of commerce. Chicken Delight urges a fourth factor, that of "justification" or reasonableness. Court rejects this notion.

Chicken Delight's first argument is that its franchise agreements are one product. The court disagrees and states that whether the items should be treated as one product is determined by the nature and use of the product- whether the "items are normally sold or used as a unit with fixed proportions." With trademarks, the court must look to the function of trademarks. The court decides that a trademark is a brand name and so long as the quality of the brand name is assured, it matters not where the components come from. Thus, the value of the trademark does not depend on the tied items.

The court goes on to state that there was sufficient market power in this trademark, as a separate product. Thus, the agreement was a tie. Chicken Delight continues with urging it fourth factor. Chicken Delight claims that even if the arrangement is a tie, it is reasonable because 1) it was reasonable way to measure and collect revenue; 2) it was a new way of doing business that is hard to change now; and 3) the tie allows quality control. Court rejects all of these and states that there are other less restrictive means of accomplishing the same goal.

WHAT YOU NEED TO GET: 1) elements of tying; 2) justification is no defense.

QUESTION: What were the goals of Chicken Delight?; Was this arrangement pro-competitive from Chicken Delight's standpoint vis-a-vis other franchises? What are some less restrictive means?


FACTS: In this case a patient brought suit against the Hospital claiming that the Hospital was illegally tying surgery services to the anesthesia services of Roux, the sole provider of anesthesia for the hospital. The Court found that this was not an illegal tie. The real issue presented by this case was whether Rule of Reason or *per se* rules applied.

ANALYSIS: We read O'Connor's opinion. She begins be stating the elements of a tying claim: 1) monopoly in the tying product (through patents, or other factors); 2) effect on a significant amount of commerce in the tied market; and 3) separate products. This case focuses on the last element. Court assumes the first two.

In terms of the third, the key inquiry is whether, at a minimum, consumers might wish to purchase the goods separately. O'Connor correctly points out that few would want to buy surgery without anesth. Thus, there is serious question whether these are actually distinct products. But the Court goes further.

O'Connor goes on to state that the three elements are merely a threshold. If all these are met, then the Court must consider the anticompetitive effects of the tie and the countervailing benefits.
Here, there was apparently quality giving controls provided by the tie. Thus, the tie was legal either as involving different products or as reasonable.

WHAT YOU NEED TO GET: 1) Elements of tying cause of action; and 2) trend (?) toward Rule of Reason.


FACTS: Kodak sells copiers and other imaging machines. Kodak also sells service arrangements and replacement parts for its machines. Indep. Service organ. (ISOs) compete with Kodak in the service market. Kodak sought to limit ISOs access to replacement parts in order to impair the ISOs ability to compete in the service market. The parties agreed that the arrangement affected a substantial volume of commerce.

ANALYSIS: Since a substantial volume of commerce was effected, the next element to handle is whether the service and parts are separate. Then, inquire whether the sales have been tied. First, the markets are for distinct products. Since ISOs exist, there is evidence of separate products. Kodak claimed, unpersuasively, that service only comes with parts, thus the market is the same. The Court rejects this notion.

Then the Court returns to the market power issue. The key issue presented is whether Kodak's stiff competition in the copier market means that there is also competition in the parts and service market. The Court concludes that due to insufficient information and high switching costs, Kodak can have market power for parts without market power for the machine. That is, Kodak argues that all parts and service restrictions are considered when the consumer buys the machine in the competitive market, thus, there is no market power in the parts market. The Court eschews this reasoning and determines that the lack of consumer information and high switching costs does not produce rational buyers that would consider these added costs. Therefore, there is market power in the parts market.

DISSENT: Dissent has a field day with the majority. The Dissent argues that all consumers know enough to consider the effect of parts and service markets for their branded machine. Thus, the per se rule applied by the majority is inappropriate.

WHAT YOU NEED TO GET: 1) elements of tie relating to market power in branded goods; and 2) the eroding acceptance of the per se rule for ties.

Stigler’s Analysis

Stigler showed that while the court’s interpretation of the economic rationale for tying made no sense, there is one that does: Price Discrimination. Consider the cases shown in Table 1. Shown there are the demand prices of five individuals labeled i, j, k, l, and m, for three different goods, A, B, and C. In the first case the firm has a monopoly in all three products. The single monopoly price that the firm would charge for all three goods is $3. The revenue that this generates is $9.
That is, if the firm charges $3 for good $A$, it will sell the product to individuals $i$, $j$, & $k$, for $3$ each for a total of $9$.

Goods $A$ and $B$ have perfectly positively correlated demands. That is, the demand prices by each of the individuals are identical across the two goods. As a result, if the monopolist charges a single price in order to maximize revenue (and profits—let’s consider cost to be zero), it charges $3$ for $B$ as well as $A$ and sells to the same group of individuals.

On the other hand, good $C$ is perfectly negatively correlated with good $A$. If the monopolist charges a single price in order to maximize revenue, it also charges $3$ for $C$. However, it will sell this product to individuals $k$, $l$, and $m$, as opposed to $i$, $j$, and $k$.

Bundling goods $A$ and $B$ has no effect. The bundled consumer demand is simply twice the individual demands. The individual buyers and sales revenues are identical when $A$ and $B$ are bundled as is the case if $A$ and $B$ are sold separately at their single price monopoly revenue maximizing levels.

However, bundling $A$ and $C$ does have beneficial effects. The bundled value of $A$ and $C$ is $6$ for each buyer. The monopoly, by bundling $A$ and $C$ can charge $6$, sell the product to all five buyers, and capture revenues of $30$. This is $12$ more that can be gained from marketing $A$ and $C$ separately.

The first important conclusion to be gained from this exercise is that bundling$^3$ can enhance monopoly revenues because it acts as a price discrimination mechanism. It forces consumers to reveal their demand values when they otherwise would not. For instance, individual $i$ has a demand value for good $A$ of $5$. However, when $A$ is sold separately from good $C$, the monopolist only gets $3$ from individual $i$ for good $A$.

The second point to recognize is that bundling of this sort generates more sales of the product than would be the case when the products are marketed separately at monopoly prices. Both products are sold to all five consumers. This is a common result of price discrimination schemes and is generally considered to imply that price discrimination improves social welfare compared to single price monopoly.$^4$

The third point is that bundling is effective when buyers have heterogeneous demands that are not perfectly, positively correlated. Indeed, the more divergent are the demand correlations across individuals, the more valuable is bundling as a marketing tool.

$^3$ Or tying or full-line forcing.

$^4$ Stigler remarks that the effect of outlawing the bundling arrangement in the Loew’s case is to decrease the revenue of one set of monopolists (the copyright owners of the films) and increase the revenue of another set, the owners of TV licenses. He goes on to say that if the TV licenses were sold, banning bundling would be good. However, this does not seem to make any difference. TV broadcast frequencies are scarce. Giving away or selling the property rights does not seem to affect the efficient distribution.
Competition in the Tied Product

Now let’s consider how Stigler’s analysis fits into the Microsoft case. Let’s say that in our example from Table 1, that good C is sold in a competitive market where the prevailing price is $2. Because of this, the demand value of good C that will be revealed to our firm is $2 even though consumers k, l, and m have demand values for this kind of product of more. Because of the competitive alternative supply of C, the value of a bundled A and C package offered by our firm is the sum of the value of A plus the lesser of the demand value of C or the competitive price of $2. Thus, consumer i still has a demand for the bundled product of $6, but consumer k’s demand for the bundle is now $5 instead of $6.

Table 1

<table>
<thead>
<tr>
<th>Demand Price Good A</th>
<th>Revenue for Single Price Monopolist</th>
<th>Demand Price of A &amp; B tied</th>
<th>Demand Price Good C</th>
<th>Demand Price of A &amp; C tied</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>5</td>
<td>5</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>j</td>
<td>4</td>
<td>8</td>
<td>4</td>
<td>8</td>
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<tr>
<td>k</td>
<td>3</td>
<td>9</td>
<td>3</td>
<td>6</td>
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<tr>
<td>l</td>
<td>2</td>
<td>8</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>m</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

P(A)=3  P(B)=3  P(A&B)=6  P(B)=3  P(A&C)=6
Sell to i,j,k  Sell to i,j,k  Sell to i,j,k  Sell to k,l,m  Sell to all

Total Revenue A  Total Revenue A+B  Total Revenue A&B tied  Total Revenue C  Total Revenue A&C tied
9  18  18  9  30

CASE 2: Monopoly in A & B; Competition in C, P(C)=2

<table>
<thead>
<tr>
<th>Demand Price Good A</th>
<th>Demand Price of A&amp;C tied</th>
<th>Revenue for Monopolist Tying A&amp;C</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>j</td>
<td>4</td>
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<tr>
<td>k</td>
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<td>l</td>
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<tr>
<td>m</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

P(A)=3  P(C)=2  P(A&C)=4
Sell to i,j,k  Sell to j,k,l,m  Sell to i,j,k,l

Total Revenue A  Total Revenue C  Total Revenue A&C tied
9  8  16

If our firm bundles A and C, it can capture revenues of $16 by charging $4 for the package. If our firm sells A and C separately, it receives revenues of $9 from its sales of A. It receives some
portion of the sales of $C$ at $2. If it were to make all of the sales of $C$, then revenues would be higher by marketing the products separately than bundled. However, if it splits the sales in the market for $C$ with the competition, then its sales of $C$ are only $4 and total sales are $13 as opposed to the $16 it can enjoy by bundling $A$ and $C$. Hence, bundling can arguably increase total revenues for the monopoly seller of $A$.

There are other consequences of bundling in this competitive situation. If $A$ and $C$ are bundled, total sales of both $A$ and $C$ are higher. When $A$ and $C$ are bundled by the monopolist in the $A$ market, consumer $l$ gets good $A$ when this consumer would not have made the purchase if $A$ had been marketed separately. Similarly, individual $i$ receives product $C$ when that consumption would have been foreclosed if $C$ was only sold separately. More people consume $A$ and more people consume $C$.

Our firm is able to “leverage” its monopoly in the $A$ market into market share in the $C$ market. This market share comes partly at the expense of the competitors in the $C$ market. However, it also comes partly through additional sales in the $C$ market. Also, it is fair to say that the additional sales in the $C$ market are “bought” by lowering the price in the $A$ market. As a result, there are more sales of $A$.

The conundrum of this bundling problem, much like all price discrimination problems, is that the effect of the tied sale is to increase total consumption of the two goods, but at the same time affect the competitive distribution of sales. Whether or not this is welfare improving is open to question.

This model of competitive product bundling may apply to the Microsoft case. Let’s consider product $A$ to be Windows 98. Product $C$ is a web browser of which there are two: Microsoft’s Explorer or Netscape’s Navigator. The consumer choice in the purchase of product $A$ is between upgrading to Win98 or sticking with Win95. If they upgrade, they get Explorer in the package. If they stick with Win95, they can still get product $C$ by purchasing Netscape’s Navigator.

There are several questions that remain. First, the bundling of Win98 and Explorer and the pricing of them is somewhat more complicated. The web browser market is being fought over web server software as well as the end-user program. How this factors in is not clear. Second, even if the simple characterization of the tie between Win98, Explorer, and Navigator is correct, it is not clear that the bundling model would apply. For bundling to be effective as in the example given in Table 1, products $A$ and $C$ must be negatively correlated across consumers. The empirical relevance of this condition is not known. The situation is confounded by the fact that Microsoft gave away Explorer with Win95 and may be giving it away in sales of Win98.

5 Carlton & Perloff make the argument that it is not profitable to tie to a competitive product if the firm makes no profit margin on the competitive product. With this I heartily agree. They also give the M. Burstein argument for tying by selling the monopoly product at a low price (or giving it away) and charging a really high price on a competitive product that is a required purchase. My argument is a stake in middle ground. That is, there is some margin made on sales of the tied product, but this margin is limited by a competitive supply.

6 We see bundling in competitive markets all the time, but even here the welfare effects are often questioned.
Nonetheless, the simple bundling argument does rationalize the facts of the Microsoft case. It shows why Microsoft would want to bundle and it also shows why Netscape would want to stop Microsoft from engaging in this practice.

One thing is clear. Antitrust law and case precedent prohibits Microsoft from bundling unless it is able to argue that there is only one product, i.e., that Win98 and Explorer cannot be functionally separated. If the package is a marketing strategy, and even if it is welfare improving, the court has never recognized such a defense and will not likely start now.

**Some Notes on the Microsoft Case**

Microsoft is accused of coercing computer makers to package their computers with the Microsoft Internet browser. Microsoft has repeatedly attempted to show that the new Windows 98 must be run in conjunction with the Microsoft browser and to do otherwise would cause an inconvenient slow down in machine operation. Another assertion is that Microsoft significantly discriminated in pricing policy and extorted royalties against computer hardware companies who failed to play as Microsoft saw fit.

Some say that Microsoft has a significant interest in obtaining a dominance in the browser market. Currently the newest mobile computers, the Palm personal organizers for example, do not use Microsoft software. The best selling computer is currently the Apple iMac. Java can be used to write programs that work independent of operating systems in browser applications. Linux is making headway in the operating system market; it is free over the Internet. While Microsoft remains a formidable force, its products are not what is exciting the market.

However, if Microsoft is so intent on getting into the browser market because it doesn’t have products there, doesn’t this mean it doesn’t have a network monopoly after all? As an economic matter, is it consistent with profit maximization to tie Internet Explorer to Windows under the assumption that clients do not want it tied?

Microsoft is said to be in “dishonest practice” a practice addressed as forced upgrades. What this means is that every time Microsoft releases a new version of their products, they intentionally raise the standard for necessary hardware to run their products. So, every time they release a new product, it is about time for a new computer. They desire to force users to purchase a new system every year, instead of purchasing a computer which will last for years to come.

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8 There are also accusations that Microsoft is producing vaporware. This is the term used for advertising a product well before its release date to sway consumers from buying anything else sooner. This is amusing. The term vaporware is a PC vintage expression. Everyone does it, so much so that it spawned the joke: What’s the difference between a computer software salesman and a used car dealer? Ans: The used car dealer knows when he is lying.. The fundamental question is this, If Microsoft is just doing what everyone else does, is it illegal because they have a monopoly position in the operating system market?
10 http://users.ju.edu/~sjeante/Microsoft/antitrust.html.
In my opinion this is bunk. It is like saying that fashion designers force people to change their wardrobe. In the fashion industry this is clearer silly because there is such intense competition among designers. In the computer industry it is equally wrong because of the competition from the used computer market. Obsolete computers do not stop working, they are discarded. There is nothing wrong with them except that they are not as efficient as the newer models. No one is forced to upgrade.

According to a quote in the New York Times by one of Microsoft’s top executives, Paul Maritz, “Everything [Netscape’s] selling, we’re going to give away for free.” Some say that this quote clearly constitutes predatory conduct. Some question whether this is bad. Why is it illegal to give stuff away?

The following summary of the case is take from Policy.com:

“The government alleges that Microsoft was not prepared for its browser software to compete on its merits alone and that Microsoft executives plotted to destroy competition by giving away browser software that their competitors were trying to sell.

• In May 1995, Microsoft proposed to Netscape that Netscape’s browser become the sole browser for those with non-Windows operating systems while Microsoft would supply the sole browser for computers operated by Windows.
• Microsoft required computer manufacturers to license and install its browser as a condition of licensing the existing Windows 95 operating system.
• Microsoft intends to use the same tie-in contracts to force manufacturers to accept its browser with Windows 98. Isn’t the browser built in to Win98?
• Microsoft forces computer manufacturers to adopt a uniform first screen sequence of Microsoft's design, preventing them from giving more prominent display to a browser from one of Microsoft's competitors.
• Microsoft reached anti-competitive agreements with nearly all of the nation's largest and most popular on-line service providers and Internet service providers, which link computer owners with the Internet. These contracts require providers to offer Microsoft's Internet Explorer as the exclusive or primary browser through which they distribute their services.
• Microsoft has contracts with Internet content providers to give them one-click access on the Windows active desktop feature on condition they don't reach agreements for one-click access on competitor's browsers.”

If we assume that the simple bundling model does not apply what monopolistic advantage can Microsoft be enjoying from tying its web browser to Windows? A couple of things might be argued:

1) It is trying to drive Netscape out of business. But to what end? If Microsoft drives Netscape out of business by producing and selling for less, isn’t this the way competition is supposed to work?
2) Microsoft might be trying to transplant its monopoly in operating systems from the Win98/PC market to the internet browser market. But, again, why is this bad. Microsoft won its
monopoly in the PC o/s market by making a product that worked when others didn’t. If it does the same thing in the browser market, what is wrong with that? The key element of this charge against Microsoft is that the PC o/s market is dying and that the internet browser market is the new frontier. But this means that Microsoft is trying to leverage a monopoly position in a declining market into a dominant position in a new market. How can this harm consumers. The implication is that Microsoft doesn’t have monopoly power in the new market. The implication is that Microsoft is giving up potential profits in the old market in order to generate sales in the new. On this basis, Microsoft simply competing. It is lowering price in order to convince buyers that it has a better product. Lower prices are good.

Quite often commercial practices are like a fine diamond. There are many facets and each gives a slightly different view of the whole.

It very much appears that Microsoft wanted to become a player in the web browser business. It did "strong arm" vendors into supplying its browser product which was free. Hence, it essentially gave up some rents from its o/s product to get market share in the browser market. Integrating Explorer and Win98 furthers this goal. But to what end?

I am not strongly in favor of the price discrimination story. It may or may not organize the facts. For it to be the explanation, it requires that the correlation of values across users between PC o/s and web browsers be negative (or certainly not highly positive). This is suspicious.

What I suspect is going on is that Microsoft thinks that it can make the best browser and it want the market, especially the server part of the market to stay close to the kind of code that it does. Hence, it is willing to give up some o/s rents in the short-run to reduce large switchover costs in the long run.

In the long run, the best product will win. However, the winning product will have to pay switching costs. This is what is at stake.