

Effect of microsoft's monopolistic approach



The Effect of Microsoft’s Monopolistic Approach to Software Bundling on Innovation and Competition.

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Chapter 1 – Introduction

When mentioning Microsoft, one’s thoughts naturally turn to computers, as the two are inexorably tied together. And while they both need each other, software was the latter development in this marriage of needs. Based upon digits, computers utilize this foundation as the basis for their computations (Berdayes, 2000, p. 76). A digit is a “... numeral ... that represents an integer ...” and includes ... any one of the decimal characters ‘ 0’ through ‘ 9’ ...” as <https://assignbuster.com/effect-of-microsofts-monopolistic-approach/>

well as "... either of the binary characters ' 0' or ' 1' ..." (Atis, 2005).

Computers utilize digits under the ' base-2 number system', which is also termed as the ' binary number system' (Berdayes, 2000, p. 3). The base-2 system is utilized in computers as it implements easier with present day technology. A base-10 system could be used, however its cost in terms of technology innovation would make computers prohibitively expensive (Berdayes, 2000, pp. 53-56). Via the utilization of binary digits as opposed to decimal digits, bits thus have only two values, ' 0 and 1' (Barfield and Caudell, 2001, p. 344, 368). The preceding is important in understanding the relationship of numbers to computers as well as Microsoft's later entrance into this world. The following provides a visual understanding of how this works:

Table 1 – Decimal Numbers in the Binary System

(Swarthmore University, 2005)

Decimal Number	Binary Number
0	= 0
1	= 1
2	= 10
3	= 11
4	= 100

5	= 101
6	= 110
7	= 111
8	= 1000
9	= 1001
10	= 1010
11	= 1011
12	= 1100
13	= 1101
14	= 1110

In computers, bits are utilized in conjunction with bytes, which are represented as ' 8-bit bytes' that work as follows:

Table 2 – 8 Bit Bytes

(Barfield and Caudell, 2001. pp. 50-54)

Decimal Number	Bytes
-------------------	-------

0 0000000000000
= 000

1 0000000000000
= 001

2 0000000000000
= 010

65534 1111111111111
= 110

65535 1111111111111
= 111

The earliest computer has been traced back to the ' abax', which is the Greek word that describes ' calculating board' as well as ' calculating table' which as invented in China and called the abacus, it was also used in ancient Greece, the Roman Empire, Russia, Japan, and is still in use by the blind (qi-journal. com, 2005). Operating much as the bits and bytes in the modern computer, the abacus has a vertical row of beads that represent multiples of 10, 1, 10, 100, 1, 00 and so forth (qi-journal. com, 2005). The basic principle of the abacus operates in much the same manner as the modern computer, through numerical representation. The first generations of modern computers were huge in comparison with today's small, powerful and fast machines, and needed air-conditioned rooms to dissipate the heat.

Programming on the first commercial computer in 1951, the UNIVAC, was a group of related mechanisms driven my mathematical equations that had to

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be written in order for the UNIVAC to work on problems (hagar. up. ac. za, 2006). It would take another 6 years for the first personal computer to be developed, the IBM 610 Auto-Point, which was termed as a 'personal computer' because it only took one individual to operate it, however, the cost in 1957 termed at \$55, 000 translates in to well over \$100, 000 in today's value (maximon. com, 2006).

In 1975 saw the introduction of the Altair 8800, which sold for \$439, with 256 bytes of RAM, which also represented the year that Bill Gates, along with Paul Allen founded Microsoft (maximon. com, 2006). Altair was seeking a computer language, which Gates and Allen delivered via a program called BASIC on 23 July 1975, which they gave the company "... exclusive worldwide rights to ... for 10 years" (Rich, 2003, p. 34). Sold as an add-on with the Altair 8800 for \$75, the preceding provided the revenue underpinnings for Microsoft (Rich, 2003, p. 35). Generating just \$381, 715 in 1977, Microsoft was upstaged by Apple Computers that made machines as well as their own operating system (Rich, 2003, p. 36). Apple's success caught the attention of IBM, which was not in the personal computer market, the foregoing was the means via which Gates entered the picture with IBM based upon DOS, program it secured from Seattle Computer for just \$50, 000 that heralded the beginnings of the industry giant (Rich, 2003, p. 51). Microsoft MS-DOS represented the foundation for the beginning financial strength of the company, which would enable it to develop Windows 95 and successive versions leading to Vista in 2007. Along the way, Microsoft has been accused, rightly or wrongly, of a monopolistic approach to software bundling that has stifled competition and innovation. This paper will seek to

examine this facet, its effects, how it happened and the ramifications of the statement.

Chapter 2 – Literature Review

2.1 Monopolist or Fierce Competitor

In “ Trust on Trial: How the Microsoft Case is Reframing the Rules of Competition”, by Richard McKenzie (2000, p. 1), reflects that Microsoft in the last 25 years has become “... the world’s premier software company, dominating many of the markets it has entered and developed...” and also finds itself “...under legal assault ...” for monopolist behaviour. McKenzie (2000, p. 2) indicates that in the United States “...it’s the Justice Department against Microsoft, but behind the courtroom scenes there has been a good deal of political maneuvering by other major American corporate high-tech combatants -Sun Microsystems, Oracle, Netscape, IBM, and America Online, to name just a few - who would like nothing better than to see their market rival, Microsoft, get its comeuppance in the court of law”. In this instance it is the “...efficacy of antitrust law enforcement has been on trial” as the Microsoft case represents “...the first large-scale antitrust proceedings of the digital age;” (McKenzie, 2000. p. 2). McKenzie (2000, p. x) reflects upon the government case against Microsoft as a monopolist, indicating that while its operating system comes “ ... preloaded on at least nine of every ten computers containing Intel microprocessors sold in the country, if not the world” was it this that made the company a monopolist?

The market dominance that Microsoft has in the fact that its operating system comes preloaded in over 90% of the computers sold was expressed by the former United States Republican candidate Robert Dole, who stated “

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Microsoft's goal appears to be to extend the monopoly it has enjoyed in the PC operating system marketplace to the Internet as a whole, and to control the direction of innovation." (McKenzie, 2000, p. 28). This view was also repeated by the media as well as New York Attorney General Dennis Vacco who see Microsoft's "...product development strategies are evidence of monopoly power: ..." in that the "... Windows operating system has become almost the sole entry point to cyberspace" (McKenzie, 2000, p. 29). It is without question that Microsoft's dominance resulting from preloaded operating software provides it with an advantage in introducing other forms of software. But, is that simply good business practices or predatory behaviour? For consideration, McKenzie (2000, p. 47) points to the book written by Judge Bork "The Antitrust Paradox" where he stated repeatedly "... antitrust should not interfere with any firm size created by internal growth ...". And like it or not, that is how Microsoft got into the position it now enjoys. But, in all the rhetoric, there is another facet to Microsoft's dominance, the PC manufacturers themselves. As stated by the manufacturers themselves, there simply is no other choice! (McKenzie, 2000, p. 29).

Eric Browning, the chief executive of PC manufacturer Micron has said "I am not aware of any other non-Microsoft operating system product to which Micron could or would turn as a substitute for Windows 95 at this time" (McKenzie, 2000, p. 30). This sentiment was also echoed by John Romano, an executive at Hewlett-Packard who advised "... we don't have a choice ..." (McKenzie, 2000, p. 30). The tie-in between monopoly power and market dominance has been explained by Franklin Fisher, the chief economist for

the Justice Department as “ Monopoly power is a substantial degree of market power,” or the ability of a firm “(a) to charge a price significantly in excess of competitive levels and (b) to do so over a significant period of time” (McKenzie, 2000, p. 30). Fisher further asserts that Microsoft’s dominance in the market “... is protected by “ barriers to entry” in the form of “ economies of scale in production,” “ network effects,” and “ switching costs ...” (McKenzie, 2000, p. 30). Fisher adds that “ There are no reasonable substitutes for Microsoft’s Windows operating system for Intel-compatible desktop PCs. Operating systems for non-Intel-compatible computers are not a reasonable substitute for Microsoft’s Windows operating system” because there would be high costs to switching to non-Intel-compatible computers like Mac and Unix” (McKenzie, 2000, p. 30).

However, the monopolistic tendencies of Microsoft have not resulted in the company charging higher prices as a result of its dominant position. This view was put forth by the chief economic consultant for the state attorneys general in that “...the absence of viable competitors in Intel-compatible operating systems means that Microsoft doesn’t have to worry about raising its price or using its economic weight in other ways ...” (McKenzie, 2000, p. 30). He asserts that “ ... a monopolist would continue to raise its price so long as its profits rose. ...” (McKenzie, 2000, p. 31). Something that Microsoft has not done. Such is inconsistent with the manner in which monopolists behave. The line of reasoning for the preceding is that “...the cost of the operating system represents on average 2. 5 percent of the price of personal computers (and at most 10 percent for very inexpensive personal computers), so “ even a 10 percent increase in the price of the OS [operating

system] would result at most in a 1 percent increase in the price of even inexpensive PCs ..." (McKenzie, 2000, p. 31). Warren-Boulton thus concludes "...that Microsoft's price for Windows is very likely far below the monopoly price ..." which is a result of "...the so-called " coefficient" of the price elasticity of demand facing any firm (the ratio of the percentage change in the quantity to the percentage change in the price ..." (McKenzie, 2000, p. 31).

Therefore, argues McKenzie (2000, p. 32) a monopolist would not price its product in the very low range, "...because a very low elasticity implies that a price increase will increase profits ...", thus the government's case has opposing views of Microsoft's monopolist position, a telling facet in considering the overall implications of the company. The foregoing direct contradicts Franklin Fisher's, the chief economist for the Justice Department, claims that Microsoft earns " ... superhigh profits ...", which its low prices does not support (McKenzie, 2000, p. 32). Thus, in being a so-called monopolist, Microsoft's pricing policies do not reflect the behaviour of one. The complicated market, competitive, product and business realities of Microsoft in a competitive market must also be viewed as the company taking actions to protect its position through new product introductions as well as making it difficult for competitors to gain an edge, the manner in which all firms operate if they intend to remain in business and continue as market leaders. The fact that Microsoft provides its Internet browser free along with its operating system, serves the interest of customers in that they have this feature already available in the purchase of their computers. It also

represents a competitive action that limits other browsers from gaining an edge in the market.

McKenzie (2000, p. 32) aptly points out that “ ... Any firm that is dominant in a software market isn't likely to want to give up its dominance, especially if there are substantial economies of scale in production and network effects in demand ...”, something with both Fisher as well as Warren-Boulton indicate is true in the software industry. McKenzie (2000, p. 32) adds that if Microsoft were to start losing market share for its operating system “...it could anticipate problems in keeping its applications network intact, which could mean its market share could spiral downward as a new market entrant makes sales and those sales lead to more and more applications being written for the new operating system ...”. The flaw in the monopolist argue, as pointed out by McKenzie (2000, p. 34) is that even if a company had a 100% share of the market “...it must price and develop its product as though it actually had market rivals because the firm has to fear the entry of potential competitors ...”. To make his point, McKenzie (2000, p. 34) points to classic microeconomics textbooks that teach that a monopolist represents a ‘ single producer’ “...that is capable of restricting output, raising its prices above competitive levels, and imposing its will on buyers ...” therefore in the position of the U. S. Justice Department, Microsoft's high, 90%, market share is a near or almost monopoly, that McKenzie (2000, p. 34) aptly states is like almost being pregnant, you either are or you aren't.

To illustrate his point, McKenzie (2000, p. 34) points to the company called Signature Software, which at the time had “...100 percent of the market for a program that allows computer users to type their letters and e-mails in a font

that is derived from their own handwriting". He adds that despite it being the singular producer in the market, the company "...prices its software very modestly, simply because the program can be duplicated with relative ease." McKenzie (2000, p. 34) also points out that Netscape at one time almost completely dominated the browser market, yet did not price its advantage in monopolist fashion. In protecting its position, Microsoft developed and introduced new products, all of which any other firm had the opportunity to do and thus innovate, yet such did not happen. McKenzie (2000, p. 137) asserts that the aggressive development of new products by Microsoft was in defense of its market position as well as being good marketing and customer satisfaction practices. He points to the following innovations by Microsoft that helped to cement its market dominance and stave off competitive inroads, all of which could have been created by other firms (McKenzie, 2000, p. 137):

1. 1975

Microsoft develops BASIC as the first programming language written for the PC. A feat that could have been accomplished by another firm had they innovated and gotten the initial contract with Altair for the 8800.

2. 1983

Microsoft developed the first mouse based PC word processing program, Word.

3. 1985

The company develops the first PC based word processing system to support the use of a laser printer.

4. 1987

Microsoft's Windows/386 became the first operating system to utilize the new Intel 32-bit 80386 processor.

5. 1987

Microsoft's introduces Excel, the first spreadsheet that was designed for Windows.

6. 1989

Word became the first word processing system to offer tables.

7. 1989

Microsoft Office becomes the first business productivity application offering a full suite of office tools.

8. 1991

Word becomes the first productivity program to incorporate multimedia into its operation.

9. 1991

Word version 2.0 becomes the first word processing program to provide drag and drop capability.

10. 1995

Internet Explorer becomes the first browser to support multimedia and 3D graphics

11. 1996

Microsoft's Intellimouse is the first pointing device to utilize a wheel to aid in navigation.

12. 1996

Microsoft introduces Picture It, the first program to permit consumers to create, enhance and share photo quality images over their PC's.

13. 1997

DirectX becomes the first multimedia architecture to integrate Internet ready services.

14. 1998

Microsoft's WebTV in conjunction with the hit television show Baywatch becomes the first internationally syndicated Internet-enhanced season finale.

15. 1999

Windows 2000, which later becomes Windows NT adds the following innovations as firsts to a PC operating system,

- Text to speech engine,
- Multicast protocol algorithms that are reliable,
- Improvements in the performance registry,
- Inclusion of DirectX,
- Vision based user interfaces,
- Handwriting recognition,

and a number of other innovations to enhance its operating system, and maintain as well as increase its market position.

The preceding represents examples of innovation spurred by Microsoft that could have been introduced by its competitors in various fields first, but where not. Thus, Microsoft in these instances, as well as others introduce consumer enhancing innovations to further its market dominance through aggressive new product development, a path that was open to others as well.

2. 2 Bundling, Innovative or Stifling Competition

Rosenbaum's (1998) book "Market Dominance: How Firms Gain, Hold, or Lose it and the impact on Economic Performance" provides a perspective on the means via which companies gain as well as lose market share, and the tactics they employ to best their competition. Few people remember that when Microsoft introduced Microsoft Word and Excel, the dominant software programs for word processing and spreadsheets were Lotus 1-2-3- and WordPerfect (Rosenbaum, 1998, p. 168). In fact, WordPerfect was the application found in all businesses, period (Rosenbaum, 1998, p. 168). Each of the preceding applications cost approximately \$300, which Microsoft bested by selling his Office Suite program for \$250. Through providing limited use Word programs in Windows, consumer had the chance to test Word before buying it (Rosenbaum, 1998, p. 168). More importantly, Microsoft's spreadsheet, word processing, presentation programs were simply better and easier to use than the competition. By innovatively offering a free limited version of Word with the operating system, Microsoft induced trial, to which it had to follow up on with a better product.

In looking at competitive practices and competition analysis, there is a relationship that exists between the structure of the market and innovation,

to which Hope (2000, p. 35) poses the question as to "...whether monopoly is more conducive to innovation than competition ...". Hope (2000, p. 35) indicates that in response to the foregoing, there is no "...clear-cut answer, probably because there is none ...". Hope (2000, p. 35) puts forth the theory that "...Most economists, and virtually all designers of competition policy, take market structure as their starting point – as something which is somehow, almost exogenously, given (although it may be affected by competition policy), and which produces results in terms of costs, prices, innovations, etc ...". However, Hope (2000, p. 35) tells us that this is wrong, based upon elementary microeconomics, as "...Market structure is inherently endogenous... (and is) ... determined by the behaviour of existing firms and by entry of new ones, simultaneously with costs, prices, product ranges, and investments in R&D and marketing". Exogenous variables, if they in fact exist in a particular situation, represent facets such as product fundamentals such as "...production processes, entry conditions, the initial preferences of the consumers, variables determined in other markets, and government policy ...". (Hope, 2000, p. 35). As a result, Hope (2000, p. 35) advises that the questions as to whether "...there will be more innovation with monopoly than with competition is no more meaningful than to ask whether price-cost margins will be higher if costs are high than if they are low ...".

2. 2. 1 Bundling Examples in Other Industries

Aron and Wildman (1999, p. 2) make the analogy of Microsoft's bundling methodology with that of cable television whereby a broadcaster who owns a "... marquee channel can preclude competition in thematic channels (such as comedy or science fiction channels) by bundling their own thematic

channels with the ...” marquee channel. The preceding illustrates the idea that consumers tend to value channels such as HBO, Cinemax and Showtime that their reputation helps to cause consumers to consider other program platforms they offer. These channels advertise their other channels on their marquee stations and vice versa, offering bundling of channels at reduced prices to encourage purchase. Aron and Wildman (1999, p. 2) offer the logic that “...a provider that attempts to compete by offering a thematic channel on a stand-alone basis, without an anchor channel, would not be able to survive the competitive pressure of a rival with an anchor.” The argument that having a marquee channel, or anchor, is key to the viability of broadcasters is supported by the development of pay television in the United Kingdom. Aron and Wildman (1999, p. 2). The dominant pay television supplier is BSkyB which controls “...most of the critical programming rights in Britain, enabling it to use bundled pricing to execute a price squeeze against rivals ...” which as in the case of Microsoft “...the pay television industry is that a firm that monopolizes one product (here, an anchor channel) can effectively leverage that monopoly to preclude competition in another product market by using bundled pricing” (Aron and Wildman, 1999, p. 2).

Aron and Wildman (1999, p. 3) provide another example of how firms utilize bundling to inhibit their competition, through the example of Abbott and Ortho laboratories, which produce blood-screening tests utilized to test blood that is donated for viruses. Interestingly Abbott produced all five of the test utilized to check for viruses, whereas Ortho only produced three, thus Abbott bundled the five tests in a manner that Ortho was unable to compete, thus effectively making it a monopolist (Aron and Wildman (1999, p. 3). Were

these good business practices that this enabled Abbott to increase its market share at the expense of another company that did not innovate in producing all five tests to complete? Ortho claimed that “...Abbott was effectively a monopolist in two of the tests, Ortho claimed that Abbott could and did use a bundled pricing strategy to leverage its monopoly into the other non-monopolized tests and preclude competition there” (Aron and Wildman, 1999, p. 3).

The preceding examples show “...that a monopolist can preclude competition using a bundled pricing strategy ...” (Aron and Wildman, 1999, p. 3) and that in so doing can accomplish such without charging prices in excess of what is reasonable for their customers, which makes sound business sense in that capturing the market thus eliminates the need for such, and also provides the business condition that prevents competitors from re-entering the market at lower prices. Thus it is rational for a monopolist to behave as if competitors exist, which in fact they will if it provides such an opportunity through increased pricing. The examples indicated show that “ ... it is indeed possible in equilibrium for a provider who monopolizes one product (or set of products) to profitably execute a fatal price squeeze against a rival in another product by using a bundled pricing strategy” (Aron and Wildman, 1999, p. 3).

2. 3 The Case Against Microsoft

Spinello (2002, p. 83) in his work “ Regulating Cyberspace: The Policies and Technologies of Control” inform us that there are four distinct aspects of the United States government case which is based upon violations of the Sherman Act, which are as follows:

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1. The company's monopolization of the PC operating systems market was achieved via anticompetitive means, specially in the instance of the utilization of its browser, in violation of " Section 2 of the Sherman Act, which declares that it is unlawful for a person or firm to " monopolize...any part of the trade or commerce among the several States, or with foreign nations" (Spinello, 2002, p. 83).
2. That Microsoft engaged in "...Unlawful exclusive dealing arrangements in violation of Sections 1 and 2 of the Sherman Act (this category includes Microsoft's exclusive deal with America Online)" (Spinello, 2002, p. 83).
3. That Microsoft in its attempt to maintain it competitive edge in browser software "...attempted to illegally amass monopoly power in the browser market) in violation of Section 2 of the Sherman Act ..." (Spinello, 2002, p. 83).
4. And that the bundling of its browser along with the operating system was in violation of "...Section 1 of the Sherman Act (Section 1 of this act prohibits contracts, combinations, and conspiracies in restraint of trade, and this includes tying arrangements) ..." ..." (Spinello, 2002, p. 83).

Spinello (2002, p. 89) provides an analysis of the Department of Justice case against the company utilizing a distinct example as represented by Netscape. He contends that the option for consumer choice was never inhibited by Microsoft, and that Netscape's own practices contributed to the decline in popularity of its browser.

Chapter 3 –Analysis

3.1 Bundling, Competitive or Market Restrictive?

The Concise Dictionary of Business Management (Statt, 1999, p. 109) defines a monopoly as “ A situation in which a market is under the control or domination of a single organization ...”. The Dictionary continues that “ This condition is generally considered to be met at one-quarter to one-third of the market in question ... (and that) ... A monopoly is contrary to the ideal of the free market and is therefore subject to legal sanctions in all industrialized countries with a capitalist or mixed economy”. In addressing this facet of the Microsoft case, McKenzie (2000, p. 27) elaborates that Microsoft’s market position as a ‘ single seller’ in the market as a result of its dominance represents “... latent, if not kinetic, monopoly power” and in the opinion of the judge presiding over the case, the company is “...illegally exploiting its market power in various ways to its own advantage and to the detriment of existing and potential market rivals and, more important, consumers”. This goes to the heart of the matter concerning the assertion that Microsoft’s monopolist approach is stifling competition and innovation as its bundling practices effectively eliminates software such as Netscape and others from becoming an option for other companies as the Internet browser Explorer comes preloaded with Windows and Vista operating software. This view was publicly asserted by the United States Attorney General at the time, Janet Reno in a 1997 press conference where she stated on behalf of the Justice Department that “ Microsoft is unlawfully taking advantage of its Windows monopoly to protect and extend that monopoly” (McKenzie, 2000, p. 27).

Gillett and Vogelsang (1999, p. xiv) in "Competition, Regulation, and Convergence: Current Trends in Telecommunications Policy Research" advise that "...Bundling is a contentious element of software competition that has been at the heart of the Microsoft antitrust litigation, and represents an integral aspect in the examination of how and if Microsoft's monopolistic approach to software bundling has an effect on innovation and competition. They state that "... through bundling, can profitably extend this monopoly to another product, for which it faces competition from a firm offering a superior product (in the sense that it would generate more surplus than the product offered by the monopolist) (Gillett and Vogelsang, 1999, p. xiv). They continue that "...Bundling the two products turns out to be an equilibrium outcome that makes society in general and consumers in particular worse off than they would be with competition without bundling ...". Gillett and Vogelsang (1999, p. xiv) offer the idea that "...bundling is likely to be welfare reducing and that unbundling would not be a suitable remedy ..."

Aron and Wildman (1999, p. 1) advise us that through the use of bundling a company can exclude its rivals through the combined pricing, thus successfully leveraging its monopoly power. They continue that the preceding represents part of an equilibrium strategy by which the monop