THE ECONOMICS AND MANAGEMENT OF GLOBAL COUNTERFEITING

Derek Bosworth
Professor of Economics

Manchester School of Management, UMIST, PO Box 88, Manchester M60 1QD, UK
derek.bosworth@umist.ac.uk

Deli Yang
Lecturer in International Business

Bradford Management School, Bradford University, West Yorkshire, BDG 4JL, UK
d.yang@bradford.ac.uk

Paper Submitted to the Sixth World Congress on Intellectual Capital and Innovation

Current Draft: September 2002
Abstract. Counterfeiting is a global problem of enormous magnitude. The paper considers the problems of measuring counterfeiting and provides evidence of the magnitude of the problem worldwide. Despite its obvious importance, relatively little attention has been paid either to the economics or management of counterfeiting. The present paper provides a conceptual framework of the private and social costs and benefits of anti-counterfeiting measures. The framework highlights a number of the key driving forces of counterfeiting, including the existence of unsatisfied demand at the prevailing prices – a demand that is fuelled by advertising and other promotional activities. The paper draws on a range of conceptual and empirical work to develop an agenda of items for company policy makers. Finally, the conclusions draw together the main results of this exercise, along with a number of suggestions for government and supranational policies that should reduce the extent of counterfeiting activity.
1. Introduction

This paper examines the economics and management of counterfeiting. The focus of the present paper concerns the counterfeiting of privately produced goods and services, rather than the issue of the counterfeiting of currency *per se*, which is a somewhat different though related issue (see US Treasury Department, 2000).

The definition of counterfeiting is crucial not only for understanding the subject, but also in terms of measuring the extent and nature of the problem. In practice, the boundaries of counterfeiting are blurred for at least two reasons: first, that the definition rests on views about consumer perceptions; second, goods are counterfeit and which are *legitimately* parallel traded is not always immediately obvious and may have to be determined under the law. The use of the term "counterfeiting" has evolved and now,

"... encompasses any *manufacturing of a product which so closely imitates the appearance of the product of another to mislead a consumer that it is the product of another*. Fence, it may include trade mark infringing goods, as well as copyright infringements. The concept also includes the copying of packaging, labeling and any other significant features of the product." (OECD, 1998, p.3)

While counterfeiting is generally associated with the infringement of trademarks, it may involve any aspect of IPRs (i.e. patents, copyright, etc. or some combination of them). The effect of counterfeiting can be extremely debilitating for the IPR holder (we use the
shorthand, "originator" to refer to this company or organization), as the fake goods are usually of lower quality and lower price.² Thus, insofar as such goods confuse or mislead consumers, they tend to eat into the originator's market and the value of the originator's intellectual capital.

Section (2) provides estimates of the magnitude of the counterfeiting problem. Section (3) considers a number of the economic issues concerned with the measurement and modeling of counterfeiting activity. Section (4) examines the management of counterfeiting and its impact on the IPR holder. Finally, Section (5) draws the main conclusions and, in addition, outlines a number of the issues to be considered by government and supra-national bodies.

2. Scale of Counterfeiting

2.1 Scale and Dimensions

All of the evidence points to the enormous magnitude and the important implications of counterfeiting activity. Trembly (1999) suggests that the overall loss to USA companies from IP infringement is around US $250 billion a year. The Counterfeiting Intelligence Bureau (CIB) of the International Chamber of Commerce (ICC) calculated that "counterfeiting increased from 3% of world trade in 1990 to more than 5% in 1995, representing about US$250 billion in 1995 (ICC/CIB, 1997). In 1993, the Customs..."
Service estimated 750,000 jobs were lost amongst US companies. Counterfeiting also resulted in tax losses estimated at over $350 million per annum for New York in 1994 and $7.5 billion for California (25,000 jobs) in 1993. Thus, while world trade increased by about 47% from 1990 to 1995, trade in counterfeit goods rose more than 150%. Most commentators report a significant growth in counterfeiting in recent years, for example, 32.0% of respondents from 145 UK Trading Standards Departments expected the time spent on anti-counterfeiting measures to increase over the next three years, while only 12.9% expected it to decrease (Clark, 1999).

Space does not permit a comprehensive review (see Bosworth and Yang, 2002), but we provide examples of the statistics published by type of IPR, sector of goods, and country of origin and destination. Sources include the US Customs Service seizures, US court cases, and a recent EC survey of counterfeiting, which identify cross-border flows of counterfeits. While data from UK Trading Standards Departments could reveal the scale of domestically produced counterfeits for the domestic market, they are not available by country of origin.

2.2 Type of IPR

The only large-scale evidence we have found to date as to the type of right infringed comes from the EC Counterfeiting Survey. Taken across all EC countries in 2001, 78% of infringements related to trade marks, 15% to copyright, 6% to design rights and 1% to patents. This breakdown reflects the types of products that are most frequently infringed,

http://publish.iacc.org/teampublish/109_476_1677.cfm#anchor18583
for example, high quality “designer products”, such as watches, sunglasses, skis, etc., but also pharmaceuticals, automobile parts, etc.\(^4\) This distribution differs significantly across countries, again reflecting their sectoral orientation and, thereby, the importance of different forms of IPRs. In Germany, for example, only 72% of cases, are reported to be associated with trade mark infringement, 16% with copyrights, while 10% with designs and utility models and 2% with patents. The higher proportion of design, utility models and patents for Germany reflects their greater use, given the strength of manufacturing in Germany. The growth in the internet and electronics technologies has contributed to a general increase in copyright infringement.\(^5\)

### 2.3 Sector/Type of Counterfeits

Chen (1996, p.115) argues that, “…worldwide, the cost of piracy of software products is estimated to be between $10 and $20 billion in lost revenue” (\textit{Financial Times}, December 10\textsuperscript{th}, 1992, p.7). The International Intellectual Property Alliance (IIPA), representing 1350 US companies, reports that, in 1996, US copyright-based industries lost US $10.7 billion because of piracy of its goods in other countries (Ganguli, 2000, p.171).\(^6\) The Anti-Counterfeiting Group (ACG) argue counterfeiting cost UK companies about £6 billion a year in lost sales, of which perfume and toiletries contributed £37.8 million.

---

\(^4\) Overall in Europe most cases in 2000 were associated with Sony (9%), Nintendo (8%), Rolex (4%), Pfizer (4%), Adidas (4%), IFPI (3%), TH (2%). Other marks were important for particular product groups (but not within the overall total), such as Armani (8% of perfumes and cosmetics) and Nike (32% of sportswear).

\(^5\) A recent US survey for the Software Information Industry Alliance (SIIA), found 21% of business users downloaded information using services without paying the subscription – 33% received content once a week and 16% at least once a day; 46% of the content was distributed to them by business colleagues. (KPMG, 2001, also [http://www.siia.net/divisions/CONTENT//pubs/kmpg.pdf](http://www.siia.net/divisions/CONTENT//pubs/kmpg.pdf)).
Similar estimates are available for other countries, such as Brazil, Germany, New Zealand and Spain (op cit. p.171). The global software piracy survey of the Business Software Alliance (BSA) and the SIIA (Ganguli, 2000, pp.171-172) reports that, of the 615 million business software applications installed world-wide during 1998, 38% were pirated – a rise of 2.5 million applications over the previous year. The incidence of piracy within each country tended to be lower for the more developed (generally in the low 30’s) and higher for the less developed countries (often over 90%). The losses within Asia in 1998 were US $3 billion, with global revenue losses for the software industry of US $11 billion.

A survey of Trading Standards Department’s seizures within the UK (as opposed to cross-border), revealed around 1.3 million seizures of counterfeit goods, with a “street” and “genuine” values of £22.5 and £65 million (Clark, 1999). The main types of products confiscated were clothing (39.8% by “street value” and 31.9% “genuine value”) and computer software (38.7% by “street value” and 47.4% “genuine value”). While the clothing result is broadly the same based upon “street” and “genuine” values, this is not computer software exhibits a high ratio of genuine to street value. Over all product types, genuine value was just under three times the street value, although the ratio differed significantly across products, with the highest ratios for sunglasses and watches, followed by computer software.

The EC Counterfeiting Survey only provides data on the numbers of cases and articles (in

---

6 Comprising, motion pictures (US$1.8 billion), recording and music (US $1.2 billion) and computer programs and books (the balance).
Taking the EU as a whole, the “other goods” category (i.e. car parts, pharmaceuticals, etc.) is particularly important, although it would be much more revealing if this large category were sub-divided in the data.\footnote{Computer software is subsumed in the CD, DVD and cassette category and/or computer articles.} Clothing is again an important counterfeiting activity (48.5% of all cases), although forming only 6.8% of items seized. The low ratio of clothing items seized in the EU appears different to the UK, where clothing formed 30-40% by value and 49.9% of the total number of items. There are clearly important differences between EC and UK Trading Standards\footnote{There are at least three sources of differences: (i) in year – 1999 for the UK, compared with 2000 for the EC; (ii) use of domestic TSDs \textit{vis a vis} Customs in the EU survey; (iii) between the UK’s experience and that of other EU countries (Bosworth and Yang, 2002).} survey results.\footnote{\url{http://publish.iacc.org/teampublish/109_476_1742.cfm}}

Seizures by the US Customs Service rose from a domestic value of $45,327,526 (3,244 cases) in the financial year 2000, to $57,438,680 (3,586) in 2001.\footnote{\url{http://publish.iacc.org/teampublish/109_476_1742.cfm}} “Media” was the largest area of activity reported in 2002,\footnote{Comprising motion pictures on tape, laser disc, and DVD, interactive and computer software on CD-ROM, CD-R, floppy disc, and music on CD or tape. (\textit{op cit.})} followed by consumer electronics.\footnote{Comprising cell phones and accessories, radios, power strips, lights, lamps, electrical tools and appliances.} The same source provides examples of counterfeiting activity, including: (i) loses of $12-16 billion \textit{per annum} for the US computer software industry – more than 40% of total revenues, with over 90% illegitimate copies in some countries; (ii) U.S. automobile manufacturers and suppliers lose $12 billion a year in revenues globally (210,000 jobs); (iii) illegal videos of new films are often available on the street before the movies appear in cinemas – a recent film cost over $100 million to produce; videos were available for $10.00 prior to its launch.
2.4 Global Network of Flows

The USA, as the technology leader and the largest single market in the world, has been particularly vociferous about the problems caused by counterfeiting. Thus, the US developed a “Watch List” and “Priority Watch List” of “offending countries” under the auspices of the United States Trade Representatives (USTR) in accordance with the "Special 301", introduced under the Omnibus Trade and Competitiveness Act, signed by Reagan in 1988. The Watch List identifies countries that do not offer adequate and effective protection of IPRs or equitable access for U.S. persons. The USTR then designates Priority Foreign Countries, according to the extent of the problem and the efforts the country is making to rectify the problem (Sun, 1996).

Bosworth and Yang (2000) outline the pressure placed on China by the USA under “Special 301”; China was in the PWL twice during the period 1991 to 1995 (Sun, 1996, p.161). Evidence from US Customs Service seizures indicates the problems posed by Asia Pacific countries (i.e. Taiwan, Hong Kong, Singapore, Malaysia, Korea and Thailand), with China ranked the most important source by value of counterfeited products in 2000 and 2001. However, many other countries have appeared in both the Watch List and in the Customs Service rankings as IPR problems have emerged, including Argentina, Brazil, as well as a number of European countries (Bosworth and Yang, 2002). Interestingly, one or two countries bordering the USA also appear in the

---

12 This Act added grievances about IP to the existing Section 301 (Liu, 1996, pp.155-160; Sun (1996, pp.160-161).
Customs Service rankings, such as Panama and Mexico and Honduras. This suggests that the proximity of low cost producing countries, with poorer IP enforcement, close to a large market plays a part in driving counterfeiting activity. While persistent offenders are likely to reappear in the various rankings, we note that there is considerable movement of countries in the listings - caused by the vagaries of discovering counterfeit goods, the relocation of illegal production facilities and variations in the vigilance with which countries police IPRs.

A number of Asia Pacific countries also present significant problems to the EU. The countries involved are largely those highlighted by the USA, although China is not quite so important in the EU (care has to be taken in comparing the different measures – cases and values). In addition, just as the US has problems with some European countries, the EU reports problems with counterfeits from the USA (largely watches and jewelry). Also, the EU has similar problems to the US with its lower income neighbours with poorer IP standards (i.e. Czech Republic, Poland and Turkey). The EU also reports intra-European problems, with Greece one of the principal countries involved, although such issues are small relative to non-EU countries. Finally, particular EU countries have problems with their colonies or ex-colonies, such as Djibouti in the case of France.

2.5 Factors Determining the Origin and Destination of Counterfeits

Taken in their entirety, these comparisons suggest a number of interesting leads. First,
there appear to be countries that tend to be more important sources of certain goods (such as Thailand in the case of CDs, DVDs and cassettes, and the USA in terms of watches). Second, high technology-high income countries are likely to be similarly affected by cross-border flows of counterfeit goods. Third, lower-income neighbouring countries are likely to be a source, where the probability of being involved declines with the physical, cultural and social distance between countries. Fourth, industrializing countries, particularly those in the Asia Pacific (and to a lesser extent the Middle East) are important sources because of their lower cost base, poorer legal framework of IPRs, lower levels of enforcement, size of their unsatisfied domestic market, and the likelihood that MNEs use them as a production base.

3. An Economic Framework

3.1 Stylised Model

The present section presents a stylized economic model of counterfeiting. This model has two assumptions that we question further: (i) trademarks and branding lead to higher future consumer welfare because they encourage discretionary investments such as R&D, advertising and training; (ii) counterfeit goods cause confusion and therefore reduce consumer welfare.

---

The original goods manufacturers and their governments offer a view which is heavily
dependent on the roles of price and, particularly, quality. Originator firms are argued to
have spent significant amounts to develop the quality and brand image of their products,
through invention, design, informative advertising, etc. The result is a high quality
product, occupying a market niche offering the originator some degree of monopoly
power and protection from counterfeits. This raises the originator firm’s current and
expected future profits, enabling it to pay for future discretionary investments, which
maintain their position in the longer term by generating future monopoly power (Cowling
and Mueller, 1978 and 1981). These actions are legal (within a specified framework of
IPRs) and characterize the dynamic process of competition through quality improvement.

In the stylized model, counterfeiting impinges on this virtuous circle of dynamic
performance in at least two ways: first, transferring demand from the originator to the
counterfeiter; second, because counterfeits are of lower quality, it confuses consumers
about the quality of the originator’s goods and reduces the premium they command. The
effect of both is analogous to the imitation of an invention in the absence of patents - a
free-rider issue, where the counterfeiter trades on the name and the quality of the
originator’s products. The counterfeiter does not incur the costs of brand development
and the originator fails to receive the due revenue from the branded product, as the
counterfeiter takes part of their market and pays no royalties (Chen, 1996, p.116). Hence,
official dealers and retailers also suffer, as does their special relationship with the
originator (op cit. p.116). The originator’s brand image may be undermined, reducing

---

14Discussion of parallel trading can be found in NERA (1999), OECD (2002) and Bosworth and Yang
(2002).
their intangible assets, market valuation and their returns on discretionary investments.

OECD (2002, p.31) suggests that the (potential) counterfeiter undertakes “… some form of direct or indirect cost-benefit analysis before embarking on criminal enterprises”. Their expenses not only include the direct production and distribution costs of fake goods, but also the penalties if caught, appropriately weighted by the risk of capture. The risks are complex, comprising the chance of being caught, redress the originator seeks (i.e. confiscation, etc.), probability of conviction, and other penalties. The risk-return profile varies across sectors and countries, in particular, between “deceptive” and “non-deceptive” counterfeits (Grossman and Shapiro, 1988a,b). Thus, anti-counterfeiting schemes attempt to reduce the risk adjusted returns (OECD, 2002, p.31).

The stylized model also argues the consumer is better off without counterfeits, and that trademarks and other IPRs are fundamental to ensuring a level playing field for competition\footnote{“Trade mark rights, the Court has held, constitute an essential element in the system of undistorted competition which the Treaty is intended to establish.”, \textit{Bristol-Myers Squibb v. Paranova} Joined Cases C-427/93 and C-429/93 and C-436/93 ECR [1995] I-3723 para 43.}, thereby underpinning market-based competition (Demsetz, 1967, p.347; Cornish, 1989, p.393). The stylized view argues that trademarks provide valuable information to consumers in a number of ways, i.e. that: (i) the good is the product of the manufacturer in question; (ii) the purchase at one time will generally be identical to the same brand purchased at another time – continuity in the level of quality; (iii) avoid confusion amongst consumers, reducing consumer search costs; (iv) encourage the IP owner to invest in further product development and quality improvement.
While a more formal discussion of a model of counterfeiting is presented elsewhere (Bosworth and Yang, 2002), the “stylized model” clearly makes at least two assertions requiring justification or revision, that: (i) trademarks and brands act as an incentive to invest in new product development, thereby improving company performance and raising consumer welfare; (ii) counterfeiting leads to confusion and reduces consumer welfare.

3.2 Brands and Performance

A basic tenant of the welfare argument is that the development of brands, via trademarks and market promotion, leads to more rapid product innovation. This is a simple extension of the standard Schumpeterian hypothesis, that static welfare losses arising from the monopoly power of branded goods is more than off-set by the dynamic gains to product quality.

Perhaps the paper which comes closest to addressing the issue is PIMS (1998). This study of 168 branded “fast-moving consumer goods” companies (fmcgs) uses three key measures of performance: (i) gains in relative market share (i.e. effectiveness in competing for customer preferences); (ii) growth in value added (i.e. contribution to GDP); (iii) return on capital employed (i.e. the ability to compete in capital markets). The drivers of market share are: (i) product R&D, product know how and speed to market - which drive increased innovation, resulting in innovation advantages such as competitiveness and market share; (ii) while no evidence was found that R&D led to cost
improvements or quality advantages, quality and cost advantages were found to drive
gains in value advantage and in image and reputation advantage, again improving
competitiveness and market share; (iii) image and reputation advantages are driven by
advertising, quality and service advantages (i.e. better displays, leading to higher
consumer awareness) *(op cit. p.5)*. The study goes on to provide other evidence, perhaps
the most compelling of which is the link between branding and product innovation *(op
cit. p.10)* and the two-way relationship between market growth and product introduction
*(op cit. p.18)*. The authors argue that “brands boost the value of R&D”, as shown by the
relationship between branded to unbranded value added *per employee* *(op cit. p.19)*.

While the precise results may be questioned, PIMS (1998) confirms a number of findings
established elsewhere in the literature. First, the dynamics of the process, when taken
across a number of companies, with current monopoly profits being partly reinvested and
leading to higher future profit (at the *individual* company level, however, discretionary
investments are risky and may fail). Certainly, the literature suggests that R&D leads to
improved future productivity performance and higher market valuation (Griliches, 1992;
Hall, 2000) and that advertising impacts on intangible assets and brand performance
(Peckham, 1976; Grabowski and Mueller, 1978; Hall, 1993). Second, is the finding
about substitution and complementarities between the various dynamic investments such
as R&D and advertising (Mueller, 1967; Bresnahan, *et al.* 1996; Freeman and Soete,
1997).

A weakness with these results, however, is that, while they point to possible synergies
between discretionary investments and a “virtuous circle” of current and future profit, the evidence relates to company performance rather than consumer welfare. Thus, while economists might argue the “virtuous circle” reflects persistence in innovation, it is also a persistence in monopoly power. Thus, while the net benefits for consumers from new product development may be positive where the IPRs are limited in scope and length, this may be reversed if IPRs result in self-perpetuating monopolies (Cowling and Mueller 1978 and 1981 discuss the welfare issues).

3.3 Consumer Confusion

A fundamental premise of the “stylized model” and the economic and welfare underpinnings of trademarks, is that counterfeits lead to consumer confusion – consumers are misled into buying products that, with perfect knowledge, they would not purchase. What, however, if consumers are not confused, but clear which is the counterfeit and which is the original? What if, in addition, they are clear about the consequences of buying the counterfeit, for example, that its quality and after-sales backup are likely to be poorer? In this case, such goods might fill a gap at the lower end of the income distribution for those who cannot afford the official product. A competitive supply of such goods in a market with high income inequality seems likely to be welfare enhancing from a static perspective.

A number of studies support the view that there is a risk of confusion where goods imitate successful brands (i.e. Miaoulis and D’Amato, 1978). Kapferer (1995), for
example, uses experimental techniques to test for confusion between 15 national brands and their “private label copies”. The experiments impose a state of limited consumer attention in one of two ways: (i) restricting the time to decode a picture; (ii) allowing unlimited time, but bringing a blurred picture gradually into focus. The results suggest brand confusion occurs frequently, although the methodology suffers from a number of limitations (op cit. p.556) and may be particularly suspect in the case of pharmaceuticals, where prescribing is carried out by a doctor or pharmacist (European Economics, 2000).

Grossman and Shapiro (1988a,b), make the important distinction between “deceptive” and “non-deceptive” counterfeits. The prevalence of the two differs across markets, with deceptive counterfeiting more likely in pharmaceuticals, automobile components, consumer electronics, etc., while non-deceptive more likely in luxury branded goods. Thus, for certain kinds of goods, consumers are likely to know with reasonable certainty which is the “counterfeit” and which is not (i.e. because the channels of distribution are quite different). If the original and counterfeit are absolutely distinct, the question arises whether there should be redress under trademark law as there is no confusion (Stipp, 1996), although the distinction may be less clear in the majority of cases.

Even non-deceptive counterfeits may drain demand from the genuine product (Hustak, 1990). Nia and Zaichkowsky (2000) examine the impact of counterfeit goods on the image of and the desire to own 25 luxury brands. The authors investigate the reasons for buying well known brand names, such as the need to satisfy a “symbolic meaning” and a mechanism for “expressing one’s values” (op cit. p.487). The survey compared the
dominant dimensions of image (i.e. quality, status symbol, price, durability, exclusiveness, commonness, fun and prestige). With the exceptions of price and fun, originals were significantly more favourably rated than counterfeits (op cit. pp.490-491). The perceived inferiority of counterfeits was greater the “better the image” of the original and the worse that of the counterfeit (op cit. p.491). 69% of respondents disagreed or disagreed strongly that the value, satisfaction and status of original brands were reduced by the counterfeit products; 23% agreed or strongly agreed with this statement. In addition: (i) those not owning counterfeits believe such goods have a lower image than those who own them; (ii) non-owners tend to have higher incomes than counterfeit owners (op cit. p.494). Although their results suggest original products are relatively unaffected by counterfeits, the authors nevertheless argue strongly that counterfeiting has significantly unfavourable effects and needs to be tightly controlled.

The absence of confusion is not sufficient proof that such goods should be allowed. Several issues still need to be resolved, not least the extent to which the originator’s demand is reduced by free-riding. However, one theme outside of the “stylized model” is that the presence of recognized counterfeits may impact positively on the originator’s demand, by: (i) reducing envy and dissatisfaction amongst those unable to afford the official prices; (ii) forming a type of advertising which promotes the branded product. The positive impact may help explain why original manufacturers do not always pursue cases with the vigour expected by anti-counterfeiting authorities.

4. Corporate Management Issues
An IACC survey of US Fortune 500 companies reported they spend an average of between $2 and $4 million per year to combat counterfeiting, with some spending up to $10 million. Thus, the threat of counterfeiting and pirating requires a set of management responses and, in this section, we set out areas requiring consideration in order to develop cohesive and effective policies to defend and enforce their IPRs.

4.1 Broadly-based Strategy

Counterfeiting should be tackled within a general, consistent and synergystic package of measures to ensure the protection of corporate IP (Chen, 1996, p.120). In particular, the company must: (i) continuously monitor the need for IP protection and the form this should take (i.e. patents, designs, trademarks, trade secrets, etc.); (ii) know and bear in mind the legal and administrative rules for IPRs (i.e. first to invent versus first to apply); (iii) develop strategies to manage IP (i.e. who should “own” the right - the parent or subsidiary/how to minimize the tax burden and whether to develop a “universal” or series of “national” marks); (iv) undertake early assessment of the value of each element of IP, ideally separating the value of the asset from the value added by IPRs; (v) establish a mechanism to evaluate the returns to continued protection, and renew protection as appropriate (i.e. preventing premature lapse of rights); (vi) develop a framework to monitor infringement and, where appropriate, pursue a case against infringers; (vii) maintain access to legal experts in IPRs.

16 http://publish.iacc.org/teampublish/109_476_1677.cfm#anchor185830
4.2 Price and Quality

Section (3) indicated the importance of keeping the originator’s product distinct from those of (potential) counterfeiters. If the originator fails in this fundamental action, their goods slip into becoming generic and any remaining IPRs become difficult, if not impossible to defend. Thus, maintenance of distinctiveness is a pre-requisite for many of the anti-counterfeiting strategies described below. This suggests that limit pricing is not likely to be a central strategy for the originator firm faced by (potential) counterfeiters.\(^\text{17}\)

Insofar the originator is able to prevent entry, this helps maintain the distinctiveness of the product, but where entry occurs, the incumbent is likely to be increasingly forced into price rather than quality competition. Thus, distinctiveness is the crucial aspect - it defines the scope of the monopoly and the grounds for protection of the monopoly because of consumer confusion. Thus, strategies to differentiate their protect and defend against counterfeiting depend fundamentally on the originator establishing their IP through the use of trademarks, copyright and other forms of IPR, reinforced by market promotional activities such as advertising.

4.3 Instigation of Cases against Counterfeiting

Section (3) suggested that, while the originator must maintain distinctiveness and protect their brand, they may not pursue every claim of counterfeiting, and certainly not to the

\(^{17}\) Limit pricing lowers the originator’s price below that charged under a monopoly with extensive barriers to entry, and is simply another form of price competition arising from contestable markets (Baumol, 1982). Pricing strategies appear more important when faced by increasingly more extensive exhaustion regimes (Bosworth and Yang, 2002)
bitter end. This is not to say that, in certain instances, high profile legal cases are not warranted, but each case should be considered both on its own merits and in terms of the combined effects of all such activities on the value of the brand. We have already demonstrated that, in some instances, consumers are not confused between counterfeit and original goods. The counterfeit goods may satisfy a market need for low priced, low quality products that the originator would not want to be associated with, while promoting the market for the original goods amongst higher income groups. However, where the net effects are detrimental, the originator must weigh the costs and benefits of each stage of each type of action against the counterfeiters.

4.4 Anti-Counterfeiting Technologies

Anti-counterfeiting technologies are increasingly being used to protect and authenticate products (OECD, 2000, pp.31-32; Peticolas, et al. 1999). This trend reflects the increasing availability of such technologies, their falling cost and the rising losses from counterfeiting. While solutions offering complete protection are rare, in many areas (some combination of) technologies can significantly delay or reduce the magnitude of counterfeiting. OECD (2000, p.32) argues that the technology must be “… cost-effective, compatible with the distribution of the product, consumer-friendly, resistant and durable”. Peticolas, et al. (1999, p.1074) argue that, while there are no general solutions, there are a “… wide range of tools, which if applied intelligently should be sufficient to solve most of the problems that we meet in practice.” Such technologies range from, “… simple cost effective printing technologies through optical technology, biotechnology,
chemical and electronic fields” (op cit. pp.32-34). The technologies can be covert or overt, where covert devices constitute a key trade secret of the enterprise and should form a carefully guarded secret.

4.5 Licensing Management

One source of counterfeiting is the over-production of goods under licence. However, properly regulated licensing may offer opportunities that deflect potential counterfeiters (Yang, 2000; Bosworth and Yang, 2002). Offering a licensing opportunity to a potential counterfeiter lowers the returns to counterfeiting, as long as the contract is properly designed and enforced. Licensee counterfeiting can be controlled by: (i) constructing a legally binding contract between the parties, stipulating the actions of each party if the other breaches the contract and, in particular, specific punishments to licensees who exceed agreed production quotas; (ii) inspecting and supervising the production and marketing of the goods produced under licence.

4.6 Managing Enforcement

Legal remedies generally only block goods entering the country without eliminating them at source and the customs services have neither the power nor the resources to inspect all incoming goods (Chen, 1996, p.119). Thus, even the seizure of cross-border shipments depends heavily on property right owners policing and reporting counterfeiting to the customs or other relevant authorities (OECD, 2000, p.36). Thus, the main
responsibility for enforcement lies with the businesses affected and, "Businesses should set up an effective system of their own to monitor the flow of counterfeit goods and keep the relevant institution of their governments well informed.” (op cit. p.36; Chen, 1996, p.128). However, the costs and benefits need to be weighed in determining the scale and nature of such “policing activities”. Chen (1996, p.120) argues that Apple Computer seem to have got the balance about right, Bosworth and Yang (2002) suggest that Manchester United should have done more to monitor and disseminate information to the authorities – or set up foreign invested enterprises in place of their lose, arm’s-length licensing arrangements.

4.7 Anti-Counterfeiting Networks

Where sole action is not cost effective, companies can establish networks with other “brand name” companies. Trademark managers in MU, for example, meet regularly with their counterparts, such as Levis and Puma, to discuss their counterfeiting experiences (Bosworth and Yang, 2002). In addition, there are a large number of national and international anti-counterfeiting organizations, some of which specialize in particular product areas (OECD, 1999, p.36). They liaise with governments and enforcement agencies; undertake surveys; publicize information about counterfeiting; lobby for increased protection and enforcement; and sometimes provide training for customs officials (op cit. p.36).

4.8 Administrative and Judicial Support
The originator needs to build good working relationships with administrative and legal authorities dealing with pirating and counterfeiting. In countries, such as China, this has proved problematic as either the official bodies have been too passive or had insufficient time and resources. Nonetheless, given sufficient evidence, relevant organisations can be very co-operative in taking action to punish infringement. In addition to government support, sometimes, judicial remedy may be appropriate, although it is not always (or even generally) in the company’s interest to litigate, because it is often costly and it may be unnecessary to exact criminal penalties when financial punishment and public apologies are more effective. Thus, companies often prefer administrative solutions, such as warnings, injunctions, public apologies, fines, etc.

4.9 Necessary Proof

To prove the infringement of, say, a trademark in UK courts, the plaintiff would need to demonstrate that they had established a protectable right under Common Law or through the registration of a trademark. In addition, the originator must demonstrate that the defendant’s product or mark is sufficiently similar to cause confusion or to mislead. Confusion may arise because the product is similar or the defendant’s company is “… associated, affiliated, connected, approved, authorised or sponsored by plaintiff” (European Economics, 2000, p.32). US courts have generally looked at eight factors, the: (i) similarity in impression created by the two marks (ii) similarities of the goods involved; (iii) strength of the plaintiff’s mark; (iv) evidence of actual confusion; (v)
physical proximity of the goods in the marketplace; (vi) intent of the defendant in adopting its mark; (vii) degree of care likely to be exercised by the consumer; (viii) likelihood of expansion of the product lines. (*op cit.*)

4.10 Cultures and Systems

When dealing with counterfeit goods manufactured or marketed in other countries, the laws, administrative systems and cultures can be very different. For example, the Chinese IP system cannot be viewed in isolation from its cultural background of Confucianism (O’Connor and Lowe, 1996, p.63). During Mao’s times, Marxism, Leninism and Mao Zedong-thought advocated public ownership in China, and the principle of IPRs ran counter to that of a planned economy. The formal legal position changed dramatically after the “Open Door Policy” in 1979, but enforcement of such laws in China has lagged some way behind the levels expected within most developed countries. China’s cultural background has also influenced the approach to dispute resolution, with a preference for arbitration and mediation over litigation.

5. Conclusions

It is clear from the discussion in Sections (2) and (3) that there is a need for a greater consistency in the measurement of the problem that can probably only be resolved by an international survey of the global counterfeiting problem, organized by a supra-national body such as WTO or WIPO. Nevertheless, the available statistics confirm the widely
held view that counterfeiting is a major global problem. The evidence also helps
distinguish some of the major sources of counterfeit goods (i.e. China and other parts of
the Asia Pacific), but also helps to dispel the view that it is a localized, developing
country problem. The statistical evidence also helps highlight some of the key causal
factors associated with the production and flows of counterfeit goods (i.e. income and
cost disparities, the size and proximity of the market, etc.). In the present paper we
present a “stylized economic model”, which generally makes the case for strong anti-
counterfeiting measures by companies and governments. However, the subsequent
discussion raises questions about at least two of the assumptions of the model: that
consumers are confused and that strong anti-counterfeit laws improve the dynamic flow
of new products, raising consumer welfare. While a more complete model will have to
await future research, the current version at least gives a number of insights, for example,
as to why firms do not always pursue counterfeiters to the extent that the stylized model
suggests is warranted. Nevertheless, the discussion of management issues focuses
primarily on the range of tools available to companies to delay the onset and reduce the
magnitude of counterfeiting activities. These emphasize the need for holistic solutions,
within a broad framework which recognizes the role of intangibles in driving firm value
and the need to protect these assets to ensure the continuity of good dynamic
performance. The measures range from technological solutions to counterfeiting, through
to setting up external networks for the exchange of information about the problems and
their solutions. While we concur that the problem of counterfeiting can never be wholly
resolved, in part because company success creates an inherent incentive to counterfeiters,
we argue that firms can do a great deal to manage the magnitude of the problem and the
effects on performance.
References


Clark, A. (1999). “Preliminary Results of the National Counterfeiting Survey”.

http://www.law.warwick.ac.uk/lawschool/efg.


