The costs to those businesses whose products are pirated and counterfeited include:

(i) loss of sales; (ii) competitive disadvantage to those enterprises which free-ride on the research and development and marketing expenses of legitimate enterprises; (iii) the possibility of product liability from defective imitation products; (iv) loss of goodwill and prestige by a brand, where counterfeits are freely available; and (v) the expense of monitoring the market and instituting legal proceedings against infringers. These costs will be incurred in both developed and developing countries.

The prevalence of infringing activities in a country will also discourage investment from those industries in which proprietary rights are important. Thus for example, the pirating of music CDs and computer software will discourage investment in the music and information technology sectors.

As counterfeiting and piracy are illicit activities, they will be engaged in by criminals, who will use their gains from these activities to subsidise further criminal activities. As these activities are not engaged in by ethical businesses, they will not observe basic employment standards, will avoid contributing to public revenues through the payment of taxes and excise and they will have no concern that the products which they produce are of an acceptable consumer standard, and safety.
(b) Trade Diversion

The 1998 EC Green Paper on counterfeiting and piracy, refers to the report of the Counterfeiting Intelligence Bureau set up by the International Chamber of Commerce (ICC) that counterfeiting accounts for between 5% and 7% of world trade in value terms.\(^3\) The immediate impact of this global trade is the loss of sales and the consequent impact upon employment. The US copyright industry puts its losses due to piracy at between USD 12 billion and USD 15 billion a year. According to the International Federation of the Phonographic Industry (IFPI) sales of illegal CDs account for 14% of the relevant market at world level. In May 2003, the UK music industry reported that sales of pirate CDs have outstripped the sales of genuine products. In the light of the responses which the Commission received to its Green Paper on the fight against counterfeiting and piracy in the Internal Market, it transpires that, within the European Union, counterfeit and pirated goods account for 5 to 10% of vehicle spare parts sales, 10% of sales of CDs and MCs, 16% of film (video and DVD) sales and 22% of those of shoes and clothing.\(^4\) The Commission in its proposal for a counterfeiting Directive\(^5\) refers to a survey carried

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\(^5\) COM (2003) 46 Final
out in France in 1998 by KPMG, Sofres and the Union des Fabricants which reported that the average loss to the businesses which replied to the survey, was put at 6.4% of turnover. It also refers to a 2000 study by the Centre for Economics and Business Research (CEBR) on behalf of the Global Anti-Counterfeiting Group (GACG), which quantified the average annual reduction in profits was: EUR 1.266 million in the clothing and footwear sector; EUR 555 million in the perfumes and cosmetics sector; EUR 627 million in the toys and sports articles sector; EUR 292 million in the pharmaceuticals sector. Finally it reported a study carried out by the International Planning and Research Corporation (IPR), on behalf of the Business Software Alliance (BSA) which quantified the losses in western Europe (EU + Norway + Switzerland) from software piracy in 2000 to be more than USD 3 billion.

All countries, whether developed, developing or least developed are vulnerable to trade diversion from piracy and counterfeiting. For example, the development of extensive computer software and movie industries in India, has spawned equally extensive developments in copyright piracy, affecting those industries. The global market for folkloric works, whether music, art, sculptures, textile products and other artefacts has spawned a global industry for the counterfeiting of these products. With the development of niche markets for agricultural products, an illicit market has developed in which geographical indications are counterfeited.

(c) Revenue Effects

It is estimated that the tax and excise losses caused by counterfeiting and piracy are considerable. The paper accompanying the Commission proposal for a Directive on the enforcement of intellectual property rights, estimated that in the phonographic sector VAT losses incurred by EU governments as a result of counterfeiting and piracy are said to amount to EUR 100 million. It refers to the

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6 Economic Impact of Counterfeiting in Europe*, Global Anti-Counterfeiting Group, June 2000.
7 Sixth Annual BSA Global Software.
study conducted in June 2000 by the CEBR on behalf of the GACG which estimated the average loss of tax revenue in the EU to be: EUR 7581 million in the clothing and footwear sector; EUR 3017 million in the perfumes and cosmetics sector; EUR 3731 million in the toys and sports articles sector; EUR 1 554 million in the pharmaceuticals sector. The survey carried out in the United Kingdom in 1999 by the CEBR on behalf of the ACG estimated that counterfeiting led to a reduction in GNP of GBP 143 million per year and to a GBP 77 million increase in government borrowing. 

Revenue losses are also incurred in those countries in which counterfeit and pirated products are produced. As this trade tends to be clandestine, the producers of infringing products will hide the size of their production output also from the tax authorities. False documentation will accompany the false products, understating their sale price, for the purpose of reducing tax imposts in both the producing and importing countries.

(d) Investment Effects

The major cost to those countries in which piracy and counterfeiting occur is the loss of access to foreign investment, because of concerns by investors that intellectual property which is produced as the result of the relevant investment, will be stolen by others. This discouragement of investment has the obvious short-term effect of reducing taxes and revenues and the longer-term effect of stifling economic development. More specifically, the establishment of key industries in developing countries, such as those in the IT, biotechnology and pharmaceutical areas,
where intellectual property rights play a key role, will be difficult to establish in the absence of effective intellectual property laws or enforcement.

Similarly, technology transfer arrangements will be difficult to secure, where the basis of those arrangements is the bundling of proprietary technologies as part of the technology package. If there is an ineffective legal regime for the protection of those technologies, their transfer will be discouraged.

(e) Competition Effects

Innovation has become one of the most important vectors of sustainable growth for businesses, and of economic prosperity for society as a whole. Businesses must constantly improve or renew their products if they wish to keep or capture market shares. Sustained inventive and innovatory activity, leading to the development of new products or services, puts businesses at an advantage in technological terms and is a major factor in their competitiveness. Businesses often invest large amounts of money in research and
development and in the advertising and marketing of their products. This investment will not be undertaken unless they are in a position to recoup their expenditures. Appropriate and effective protection of intellectual property helps to establish the confidence of businesses, inventors and creators and is a powerful incentive for investment, and hence for economic progress.

Counterfeiting and piracy are detrimental to the proper functioning of competition. Since counterfeit and pirated goods are, by definition, substitutes in the economic sense for lawfully marketed goods which they imitate, the divergences in the cost base for illegal operators will also give rise to differences in the conditions of competition for the lawful operators. Counterfeiters and the producers of pirate goods are saved the research and development costs and the marketing costs of legitimate traders. Their free-riding enables them to capture an increasing share of the market, thereby producing distortions in the conditions of competition and to diversions of the natural trade flows of legal goods. The phenomena of counterfeiting and piracy thus lead to the loss of turnover and market shares by legitimate businesses. Additionally, they suffer the loss of future sales from the loss of brand image with their customers. The spread of counterfeit and pirated products leads to a prejudicial downgrading of the reputation and originality of the genuine products particularly when businesses gear their publicity to the quality and rarity of their products. This phenomenon also involves additional transaction costs for businesses (costs of protection, investigations, expert opinions and disputes) and in certain cases may even lead to tort actions against the de facto right holder of the products marketed by the counterfeiter or pirate where the proof of good faith is in doubt.

(f) Employment Effects

In social terms, the damage suffered by businesses because of counterfeiting and piracy is reflected ultimately in its impact upon employment. Initially, employment may improve in those countries where pirate and counterfeit goods are produced. However, where local industries are developed which are dependent upon intellectual property rights, the local capacity to produce infringing products may have an ultimately harmful effect upon employment. For example, the development of computer, electronics and film industries in India are vulnerable to the piratical activities of local imitators,
which then have an adverse impact upon investment in those industries. Similarly, local music and art industries are vulnerable to the pirating and counterfeiting activities of copyists.

To some extent, the production of counterfeited goods in developing countries arises from the fact that the production of legitimate branded products in those countries, makes available to the authorised factory outlets, the brands and the tools of the trade mark proprietor. Sometimes unauthorised use is made of this equipment in the production of counterfeit products. To recover control over the integrity of its products, the brand proprietors will relocate that production in countries where control over the intellectual property rights can be assured.

In addition to revenue to the State (customs duties, VAT), there may also be infringements of labour legislation where the counterfeit or pirated goods are made in sweatshops by undeclared workers. The phenomenon is a serious threat to economies in general as it may destabilise the markets, including such fragile markets as that in textiles and clothing.

(g) Public Security

Counterfeiting and piracy have an adverse effect upon public security, where profits from this trade are appropriated by organised crime, which uses them as a means of recycling and laundering the proceeds of other unlawful activities (arms, drugs, etc.). Counterfeiting and piracy, which were once craft activities, have become almost industrial-scale activities offering criminals the prospect of large economic profit.
without excessive risk. With the advent of e-commerce the rapidity of illegal operations and the difficulty of tracking the operations further reduce the risks for the criminal. Counterfeiting and piracy carried out on a commercial scale are even said to have become more attractive nowadays than drug trafficking, since high potential profits can be obtained without the risk of major legal penalties. Counterfeiting and piracy thus appear to be a factor in promoting crime, including terrorism.

Organised criminals often combine counterfeiting and piracy with smuggling. The trade routes which were developed for the smuggling of drugs and arms have provided an existing infrastructure for the trade in counterfeit and pirate products. Indeed, the profitability of infringing products is now beginning to exceed that of drugs and arms, on a profit/weight basis.

The structure and commercial strategies of these organised crime groups is similar to those of licit enterprises. In response to market forces, participants in each are equally intent on being profitable. But the key difference between legitimate commercial enterprises and criminal ones involve the manner in which commercial disputes are settled, contracts enforced and dealings with the authorities are regulated. As those of criminal enterprises have to occur outside the court system, violence, coercion and corruption are a pronounced feature of this trade. Because manufacture is illegal, labour standards are not observed, reducing labour costs and taxes are not paid on the illicit manufacture, minimising revenue expenses, thus those involved in illicit trading in infringing products have a number of economic advantages over legitimate manufacturers, wholesalers and retailers.
The most serious consequences of the trade in counterfeit and pirate products is the stimulation of organised criminal activity and the consequential effects upon public and private corruption. This penetration of organised crime into otherwise lawful economic sectors also has a pernicious impact on public morality. As a contraband market develops, it puts significant pressure on retailers to either participate or go out of business. If they decide to join in, they may be forced to do other kinds of business with organised crime.

Legitimate businesses see their prices undercut by cheaper contraband products and feel obliged to enter the black market to protect their businesses and their livelihoods. Once they have entered this trade it becomes difficult to withdraw.

The World Economic Forum in Davos in January 2003 was informed by the World Customs Organization (WCO) that the trade in counterfeit and pirate products was as high as US$ 450 billion per annum and was controlled by organised crime and was being used to fund terrorist activity.

To the extent that consumers participate in a contraband market, this undermines respect among ordinary citizens for the law. Studies have shown that the initial act of law-breaking can influence subsequent behaviour. Once people develop a taste for cheating, they keep on cheating. Thus, a key societal consequence of participating in a contraband market is that it serves to sanction tax evasion and other forms of law breaking.
A European survey by the Alliance Against Contraband (AAC) on the significance and influence of organised crime in counterfeiting and piracy identified the penetration of organised crime in the following industries:

• Branded goods, including clothing, footwear, perfume, and household consumer products;
• Cigarettes;
• Alcoholic beverages;
• Pharmaceuticals;
• Software; and
• Recorded music.

The results of the survey can be found on the website of the World Customs Organization, www.wco.org.

Counterfeiting and piracy likewise have damaging consequences for consumers. They generally involve: (i) extorting a higher price from consumers for the infringing product, than they would be prepared to pay for copies; (ii) consumer deception about the quality of the counterfeit product, with...
the consequent risk to health and safety; (iii) the absence of after-sales service or any effective recourse in the event of damage or injury.

Counterfeiting and piracy are generally accompanied by deliberate cheating of the consumer as to the quality entitled to be expected from branded products since counterfeit or pirated products are produced without the quality checks imposed by public standards authorities and by the brand proprietor, which will inevitably be concerned to protect the quality standards associated with registered brands.

In addition to its economic impact, counterfeiting and piracy have been identified as having a damaging effect upon public health in both developing and developed countries. The ICC has reported that:

- Dozens of people died in Cambodia through taking ineffective, counterfeit malaria medicines.
- Law enforcement in Zambia seized counterfeit shampoo containing acid.
- Body-builders and others buying steroids on the black market in Australia were sold repack-aged livestock steroids as human steroids.
- Diseased pig meat was used in counterfeit cans of pork luncheon meat in China.
- In India, counterfeit drugs were used to fight antibodies in Rh-D negative mothers.
The EC Green Paper “Combating Counterfeiting and Piracy in the Single Market” identified the following examples of counterfeiting of medicines:

- In 1998 at least 60 counterfeit drugs including several popular painkillers and antibiotics, were reported by the Brazilian Health Ministry as being distributed by Brazil’s pharmacies and hospitals;
- In Uganda the National Drug Authority discovered expired anti-bacterial drugs labeled as a quinine mixture;
- Asian Pacific markets suffer from trade in vials of injectable antibiotic, retrieved from hospital waste and refilled with low-cost streptomycin, non-sterile starch powder, talc, or other ingredients which can have serious, even fatal, consequences when injected.
- Deaths in India, Pakistan, Bangladesh and Philippines have been directly linked to talc-filled vials with clear signs of illicit recycling, plugs, plastic and aluminium blisters reassembled, and labels replaced to provide new, later, expiry dates.

The World Health Organisation reported that the use of ethylene glycol instead of glycerine, led to the deaths of more than 500 patients in Argentina, Bangladesh, India, Nigeria and Haiti. The counterfeiting of the active ingredients in anti-malarials and other substandard medicines contribute to global antibiotic resistance.\(^{10}\) In a report on counterfeit drugs in Brazil, the WHO reported that between 10% and 30% of drugs are counterfeit. It appears that non-generics are counterfeited more than generics.\(^{11}\)

Specifically, the report referred to: birth control pills made with wheat; Prostate cancer drug without the active ingredient and diet pills comprising dangerous concoctions of thyroid hormones, tranquilizers, diuretics and laxatives to ensure

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rapid weight loss, leaving users suffering from anxiety and other side effects like hepatotoxicity. A similar WHO report on counterfeit drugs in Nigeria estimated counterfeits to number 40-60% of all the drugs in the country. Counterfeit drugs include products with little or no active ingredients or products for which active ingredients have been replaced by less expensive alternatives, giving as examples: children’s deaths at Jos University Teaching Hospital, from ingestion of paracetamol syrup adulterated with diethylene glycol; the seizure of blood pressure medication containing chalk and insulin vials filled with sugar water; analgesics passed off as antimalarials and medicines that have long expired are put back in the market, relabeled with new dates.

The World Customs Organization reported: 89 people were killed in Haiti in 1995, having taken a paracetamol-based syrup contaminated with glycol diethylene (a toxic chemical used in antifreeze).

A number of cases of counterfeit pharmaceuticals have been reported in China, including:

• Deaths from Chinese-made counterfeit diet pills that were found to contain banned substances.

• The Shenzhen Evening News, reported that approximately 192000 people died in China in 2001 because of fake drugs.

• On June 7, 2001, one major drug company (Novartis) testified in a House Subcommittee that a counterfeit ring they uncovered produced millions of yellow tablets that were virtually indistinguishable from the genuine product made of boric acid, floor wax and lead based yellow paint used for road markings.”

Almost 2500 people were killed in Nigeria in 1995 through injecting a supposed anti-meningitis drug during an international vaccination campaign. A batch of this vaccine was counterfeit.

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The Anti-counterfeiting Group (ACG) UK reported finds in Nigeria of: Brake shoes and linings made from compressed grass rather than friction material and which burst into flames on testing, as well as eye drops which contained no active ingredient and made from contaminated water, which could cause blindness if put into an infected eye.

(i) Cultural Effects

Intellectual property rights hold particular relevance for the cultural sector, especially in the audiovisual sphere. The audiovisual medium is a particularly potent means for the preservation of records of music, dance, performance, ritual and other non-written folkloric forms. The lack of adequate protection of these cultural forms, would not only severely undermine the development of a major economic sector but would, above all, pose a threat to our heritage and cultural diversity. This is particularly the case where unauthorised audiovisual works ignore the cultural sensitivity which may be required in the revelation and depiction of these subjects.

This sector is particularly under threat from piracy, particularly in smaller states where there are no economies of scale. The replacement of analogue by digital media has considerably exacerbated the problem in that it has rendered copying both cheap and easy.