



ECONOMIC IMPACT OF IPR INFRINGEMENT IN GEORGIA

REPORT

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ABSTRACT

This study focuses on the economic costs of infringement of Intellectual Rights in Georgia. Whereas the country is not commonly known for counterfeiting, Georgia ranks poorly in terms of protection of IPR. The presence of counterfeit goods and, piracy over Internet, are visible in the economy.

Four dimensions of impact have been analyzed: Consumer Surplus, Producer Surplus, Government Revenue, and Externalities. The availability of counterfeit goods generates welfare for the consumer. However, to manufacturers and distributors of branded goods, the existence of trade in counterfeits and piracy causes losses. Government tax revenue is also lower when lower-priced counterfeits are traded. Externalities include such effects as there are lower investment and increased health and safety risks resulting from the consumption of lower-quality products (medicines, cosmetics, spirits, automotive spare parts).

The analysis integrates data obtained from observations in the local markets, from meetings with private sector representatives as well as the results of a Household Expenditure Survey commissioned for the purpose. The data have been used under various scenarios.

Findings confirm that the economic impact is significant in relative terms within the twenty risk categories studied, though not significant in absolute terms when related to GDP, total imports and total Government revenue. The prevalence of counterfeits and pirated material is relevant for consumer welfare; the Consumer Surplus is indeed sizeable because of the significant price difference between original branded goods and counterfeit “equivalents.”

If remaining unchecked, the issue of counterfeits is expected to become more important in the future with rising household incomes, as higher income households consume relatively more counterfeit goods – in most risk if not all risk categories -- than low income households do. The purchasing power of higher income households also means that in absolute terms, the dimension of the counterfeit market will only increase in the future.

The fact that Consumers benefit from a non-cash transfer – virtually a subsidy – through the Consumer Welfare generated by the prevalence of counterfeits and pirated material is NOT an argument *in se* to abandon efforts of combating counterfeit markets and piracy. The study concludes with a strategic approach to reduce the phenomenon.

ABBREVIATIONS

IPR	Intellectual Property Right
OECD	Organization for Economic Co-operation and Development
R&D	Research and Development
WB	World Bank
WEF	World Economic Forum

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EXECUTIVE SUMMARY

A counterfeit is a product that imitates the appearance of the product of a right holder, hence misleading the consumer. Counterfeiting is an unauthorized duplication of a product protected by one or more intellectual property rights.

Intellectual property rights cover:

- Trademarks
- Copyrights
- Patents
- Designs (the appearance of the whole or a part of a product resulting from the features of the lines, contours, colors, shape, texture and/or materials of the product and/or its ornamentation)
- Designation of geographical origin

Different types of IPR infringements often overlap; e.g., music piracy infringes copyright as well as trademark protection.

The reason why certain products intensive in intellectual property are counterfeited is tied to the fact that the genuine product has high **fixed costs** (e.g. it is expensive to develop the first copy of a video game) and low **marginal costs** of duplication. As a result, counterfeiters have an incentive to free ride on the original investment associated with the fixed costs of production by bearing only the marginal costs.

Counterfeiting is generally perceived by society as a victimless crime with counterfeits simply constituting a cheap alternative purchase. Nevertheless, counterfeiting remains **THEFT** and has to be combated in its own right.

There are also costs associated with counterfeiting:

1. Reduced sales (in the short term and in the future) and profitability for manufacturers of branded goods¹. In extreme circumstances brands withdraw from particular markets.
2. Negative impact on brand image (the product price is depressed and the value of the brand is eroded); cheap copies create the perception in the public that original products are expensive.
3. Increased marketing expenses for brand protection.
4. Reduced investment: where counterfeiting is rife, producers of reputable products may become reluctant to manufacture their products in those countries.
5. Legitimate producers cutting back on new product R&D.²

¹ Not all consumers of cheap counterfeit would, on a one-to-one basis, buy the higher-priced original/branded good were the counterfeit good to disappear from the market. Not every acquired counterfeit product is a complete substitute for the sale of an original product at **full price**. Substitution rates vary by industry in function of product quality, distribution channels and information available about the product. If a consumer is completely deceived by the counterfeit, then it is reasonable to assume that the substitution rate is high. When substitution is low, counterfeit goods are likely to fill a gap at the lower end of the income distribution for those who cannot afford the genuine product. Hence, consumption of counterfeit goods enhances consumer welfare among poorer households.

6. Increased health and safety risks associated with low-quality food and beverages, medicines, cosmetics and automotive spare parts.
7. The costs of investigation and enforcement.
8. The financing of criminal networks³.

Georgia, as a manufacturer and exporter, is not commonly known for being a country characterized by serious IPR infringement. Yet, the economy ranks poorly in terms of protection of property rights and IPR in particular. As a result, significant IPR infringement is found as regards to domestic consumption. This is essentially fuelled by imports as well as downloaded software/music/video.

Some categories of goods are more likely to be counterfeited: spirits, wines, tobacco, drugs, cosmetics, fragrances, fashion clothes and footwear, watches, jewellery, sunglasses, handbags and travel bags, wallets, scarves, DVDs (audio and video), computer games, cell and smart phones and multimedia (including accessories), computers and parts (e.g. printer cartridges) and automotive spare parts.

The aim of this study is therefore to **quantify the costs of IPR infringement**. *A priori*, the analyst will study markets for imported consumer goods – some are also purchased by Government, such as computer software – as well as markets for locally produced goods. However, the technology and manufacturing base in Georgia is narrow and the indications suggest that the prevalence of IPR infringement by local manufacturers is (as yet) marginal.

The economic impact of infringement on IPR falls into **four** categories:

1. Change in **Consumer surplus** (“willingness to pay”). When lower-priced counterfeits disappear from the market, consumers **lose** in consumer surplus, as they now have to switch to higher-priced original products (provided their purchasing power allows them to do so).
2. Change in **Producer surplus** (lost net revenues). Producers/distributors lose sales and profits because some consumers buy counterfeit products -- or illegally download copyrighted material from Internet – instead of buying the original.
3. **Externalities**: the effect of a decision by one party on others who did not have a choice and whose interests were not taken into account. In such cases, prices do not reflect the full costs or benefits in production or in consumption of a product or service. Examples are reduced investments because the country’s reputation is affected, the Balance of Payments which worsens or improves (thus impacting on the strength of the currency), the distributional impact (who are the winners and who are the losers and how do we value them?), health and safety risks associated with the consumption of sub-quality goods.
4. Change in **Net Public Revenue** (lost tax revenues from import duties, excise and VAT, and, costs of IPR enforcement)

² Some authors point at network externalities: higher counterfeiting might increase the ownership of the platforms they operate on, which in turn stimulates the demand for legitimate goods (e.g. consoles for games).

³ Mind also that the production and distribution of counterfeit products is an economic activity in itself and does provide some benefits to the overall economy of the country where it takes place.

In order to come up with an estimate of the costs of IPR infringement, we have followed a stepwise approach:

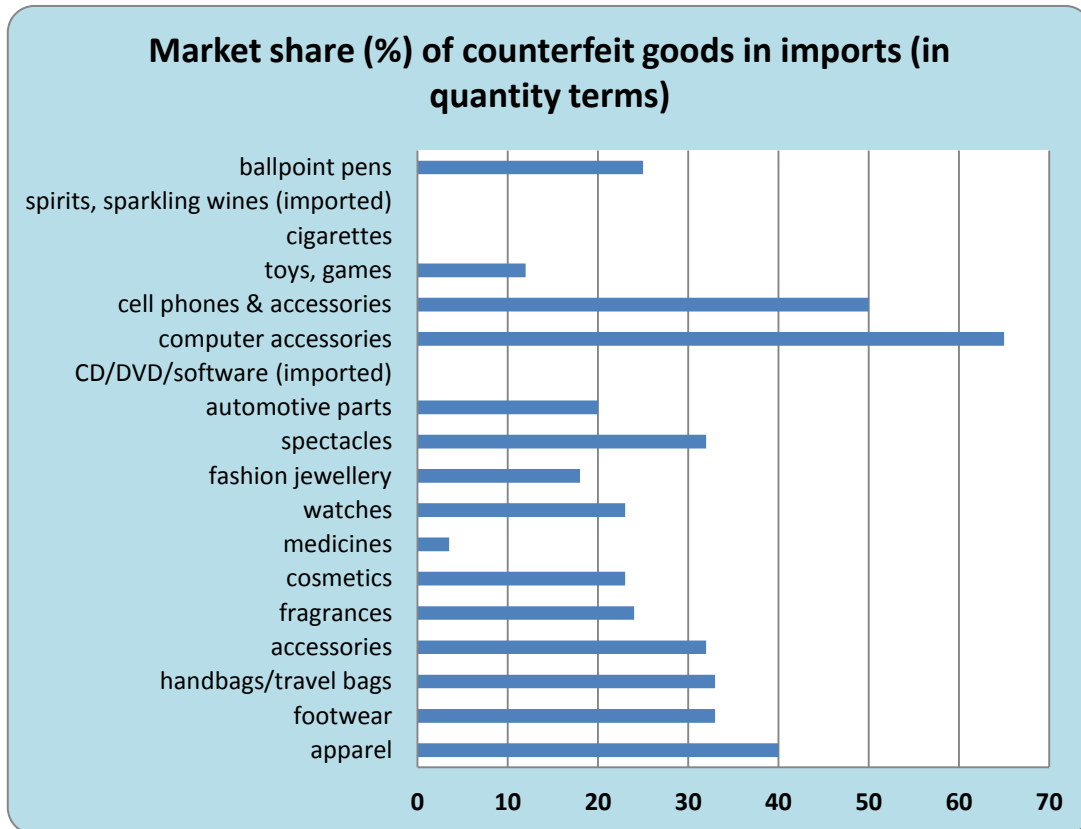
1. Identify the risk categories. Where is counterfeiting prevalent? It is required to build up a good understanding of the product/market characteristics. In all, we have studied twenty risk categories.
2. Estimate the prevalence of counterfeit goods and pirated material. What is the market share of these goods (in quantity)? A best guess is made using the results of a Survey, augmented by opinions formulated by private sector representatives in Georgia.
3. Estimate the price differential between counterfeited and original goods. At what discount are counterfeits sold? This is retrieved through observation of market prices in Georgia.
4. Estimate the market share – in value – of counterfeit and original goods.
5. Estimate the import value (at CIF prices) of the counterfeit goods being traded as well as for the original goods traded in the counterfactual scenario (if counterfeits were to be removed from the market).
6. Estimate the loss of sales margins to official dealers of original goods. For this we needed an estimate of the mark-ups applied by the Distribution sector.
7. Estimate the loss of tax revenue to the Government, associated with the prevalence of lower-priced counterfeit goods. We use for this the VAT rate, import tariffs and excise rates.
8. Estimate the Consumer Surplus for counterfeit goods. In the counterfactual scenario, where counterfeits disappear, consumers **lose** welfare!
9. Estimate the costs of IPR infringement on (lost) Foreign Direct Investment. This is methodologically difficult. It is also tricky as four of the lead “perpetrators” (China, HK, Russia and India) are also in the top-10 of receivers of FDI inflows, with smaller economies such as Turkey, Thailand, Vietnam and the UAE appearing in the sub-top (and the Philippines further down the list).

The information required has been collected through desk research, meetings, observations in the market, and, foremost through a Household (expenditure) Survey. One thousand people have been interviewed in all regions of Georgia by **ACT Research**.

Counterfeit goods and pirated material are concentrated in a few classes (of the HS nomenclature) which are equivalent to **15.1%** of total imports of Georgia. In our view, the risk categories constitute **11.8%** of total imports, with counterfeit goods being a fraction of this amount.

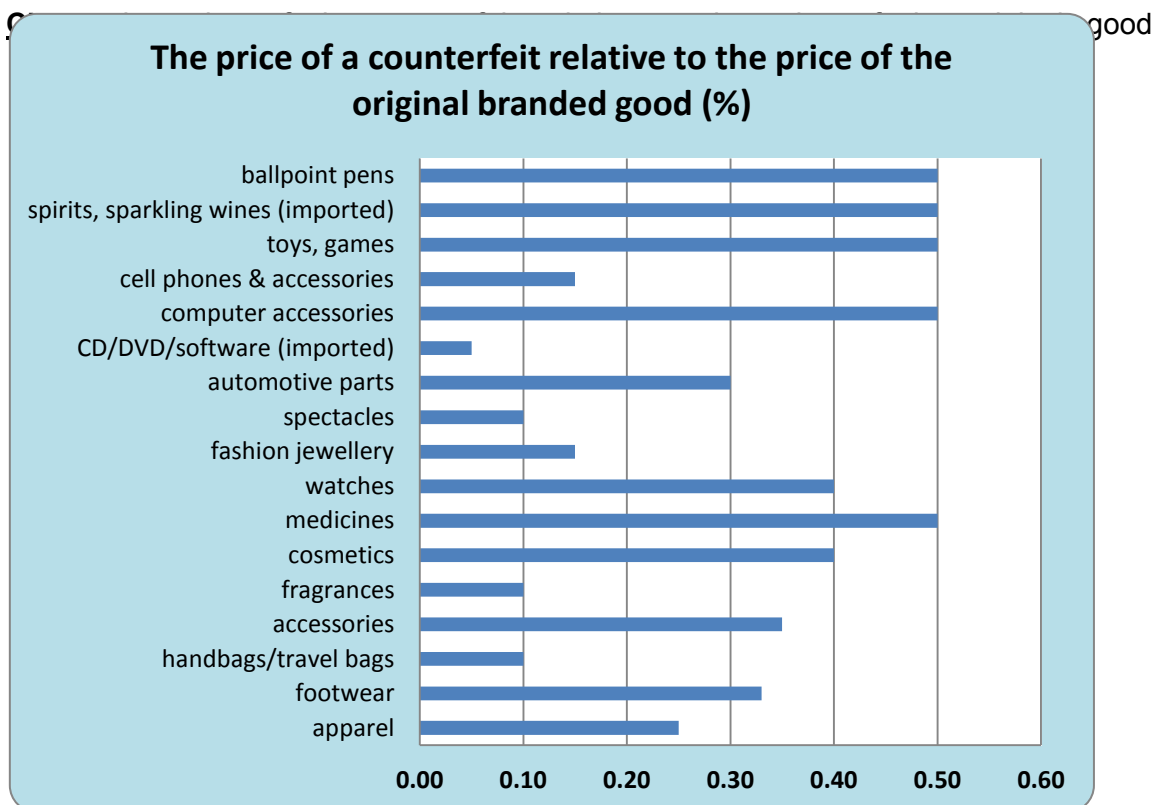
How significant are imports of counterfeits? On the basis of data gathered (primarily from the household expenditure Survey), our best guess looks as follows.

Chart: market share of counterfeit goods (in quantity terms) within the specific risk category



The market share is very significant indeed for apparel, footwear, handbags, cell phones, accessories, fragrances, and computer accessories. When using estimates from the industry the market share for automotive spare parts is closer to 40% (rather than the 20% assumed here). We have NOT found evidence of counterfeit spirits and cigarettes.

What sort of price “discount” can the consumer expect for counterfeit goods?



The price discount is 50% or larger. In the case of apparel the discount is 25%. For cell phones and handbags the discount is more than 20%. These discounts work themselves back to CIF import prices where import prices of counterfeit goods are a fraction of import prices for original goods. As a result, the market share (in value terms) of counterfeit goods is actually small, typically less than 20%.

Of course, in order to gain a complete picture of counterfeiting and piracy, we have to add locally counterfeit production and piracy. This mainly concerns music, movies, computer games and software, and perhaps also some spirits... though we have not found hard evidence of this. The consolidated market value is in an order of magnitude of **€ 27 million**. Valued at the price of the original this would amount to **€ 151.7 million**.⁴

What are the top categories of counterfeit/pirated goods, within imports and domestic production?

⁴ In calculating the impacts we have preferred to use € as the reference currency, and this for three reasons: 1) a significant number of counterfeited brands are European (exceptions are music/movies, software and computer games), 2) the EU is – among the block of high-income countries – the main strategic economic partner of Georgia (30% of Georgia's imports originate from the EU, equivalent to 59% of imports originating from OECD countries), 3) between the € and the \$ the former is the more stable currency lately.

Chart: market share of counterfeits in imports of risk categories (in value terms)

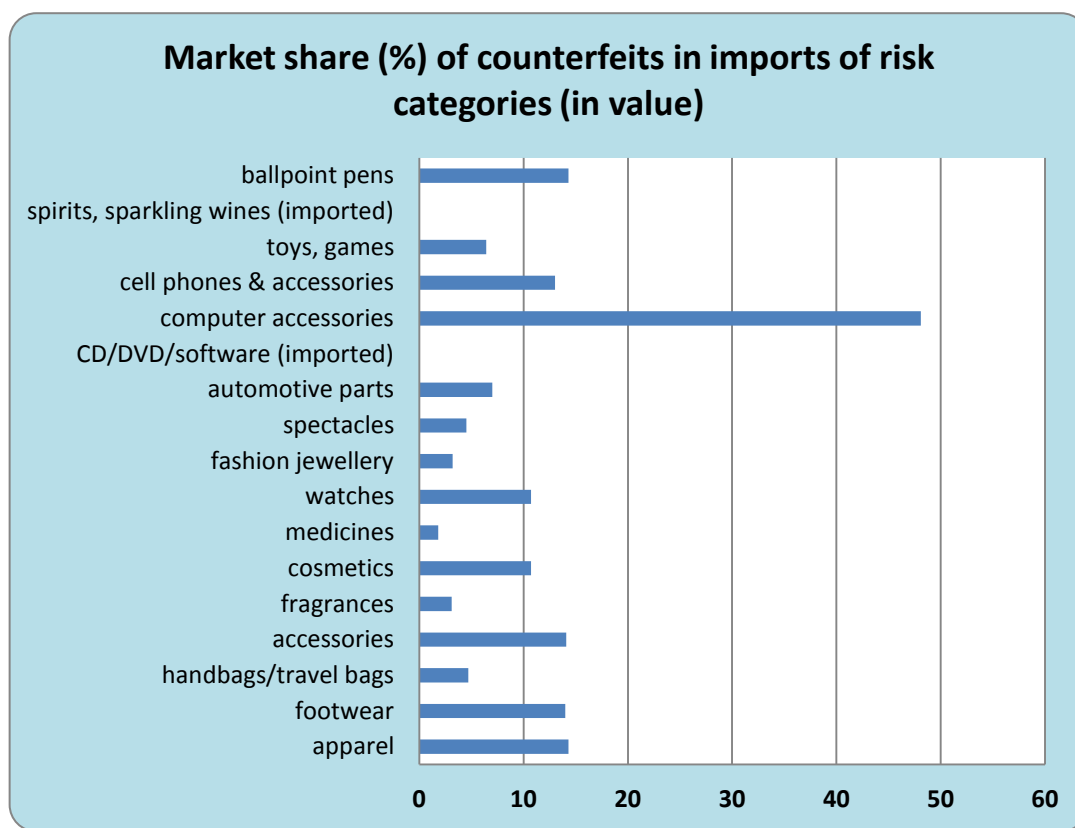


Table: breakdown of the counterfeit/pirated goods market (at actual CIF prices or equivalent)

Category	Value (€ million)	%
Cell phones	6.4	23.7%
Internet downloads	4.8	17.8%
Apparel	2.7	10.0%
Footwear	2.7	10.0%
Medicines	2.6	9.6%
Spirits	2.0	7.4%
Computer accessories	1.6	5.9%
Automotive spare parts	1.5	5.6%
CD/DVD/software	0.8	3.0%
Other goods	2.09	7.7%

Our calculation shows that the most significant IPR infringements occur in the category of cell phones, followed by internet downloads, apparel, and footwear. Medicines and spirits rank high as well, if we are to believe the results of the Household Expenditure Survey. We

could be even more conservative as we have yet to find hard evidence in the market of the prevalence of counterfeit medicine and spirits (from famous brands).

What would this consumption of counterfeit/pirated goods be worth at full price (of the original)? The table below shows the breakdown by risk category.

Table: breakdown of the counterfeit/pirated goods market (at **FULL** prices)

Category	Value (€ million)	%
Internet downloads	48.0	31.6%
Cell phones	42.5	28.0%
CD/DVD/software	16.0	10.5%
Apparel	10.7	7.1%
Footwear	8.2	5.4%
Medicines	5.3	3.5%
Spirits	4.0	2.6%
Computer accessories	3.1	2.0%
Automotive spare parts	4.8	3.2%
Other goods	9.1	6.0%

Clearly, our calculation confirms the prominence of infringement of copyrights (music, movies, computer games and software, as well as perhaps some digitized versions of books). Cell phones remain an important category. Apparel and footwear are less important because the price discount in the market is smaller.

Having so far estimated the size of the counterfeit and piracy problem, we now move to estimating its economic impact. In order not to overload the reader with data, we have summarized our findings into the following table.

Table: impacts summary using the results from the Survey (million €)

Item	Actual (estimate)	Counter-factual	Net impact (% of GDP)	Comments
Imports counterfeits (CIF price)	27.0 million	151.7 million	1.6%	Net impact = 4.0% of imports
VAT revenue	5.1 million	33.5 million	0.37%	Net impact = 1.6% of tax revenue
Mark-ups to Distribution	4.6 million	28.5 million	0.31%	
Imports counterfeits (CIF price) assuming imperfect substitution	27.0 million	52.7 million	0.33%	Net impact = 1.7% of imports
VAT revenue	5.1 million	11.3 million	0.08%	Net impact =

assuming imperfect substitution				0.35% of tax revenue
Mark-ups to Distribution assuming imperfect substitution	4.6 million	10.0 million	0.07%	
Consumer surplus lost (at full price)		87.3 million	1.1%	1.38% of HHL D consumption
Consumer surplus lost (alternative estimate)		39.0 million	0.5%	0.62% of HHL D consumption
Foreign Direct Investment lost		9.2 to 13.1 million	0.12-0.17% extra GDP growth	

Our interpretation of these results goes as follows:

1. Were counterfeited/pirated goods to be valued at full price – that is if all quantities of counterfeit/pirated material were imported as genuine products – imports would then increase by **4%**? This is equivalent to **1.6%** of GDP and constitutes a negative Balance of Payments effect.
2. Both Government and the Distribution sector – as a whole -- lose income from the prevalence of counterfeits and piracy. However, within the Distribution sector, the winners are currently the distributors of counterfeit products while losers are distributors of genuine goods. Were counterfeits to disappear from the market, then revenue for distributors of genuine goods shoots up whereas -- often smaller -- distributors of counterfeit goods lose out.
3. However, we cannot simply assume that ALL lower-priced counterfeit goods will be substituted by higher-priced genuine goods, in the case that counterfeits were to disappear from the market in Georgia as a result of strengthened enforcement. This is because the price increase (from price of the counterfeit good to price of the genuine good) will make some consumers decide to use their purchasing power on other goods than the branded ones. We call this the imperfect substitution scenario. In the realistic case of imperfect substitution the net impacts on Balance of Payments, Government revenue and revenue to the Distribution sector shall be MUCH smaller. Imports would increase by only 1.7%
4. Consumer Surplus is currently estimated to be 1.1% equivalent of GDP -- or **1.38%** of Household Consumption -- assuming that the full price of the original branded good is the reference. Relaxing this assumption and using a less-than-full price, the estimated Consumer Surplus falls to 0.62% of Household Consumption. The existence of Consumer Surplus must be interpreted as a non-cash transfer or subsidy to the consumer by the manufacturers and distributors of original goods as well as the Government (due to reduced tax revenue). Does ALL of this transfer benefit the poorer/vulnerable households in Georgia? The answer is certainly NO. All income categories buy counterfeit goods. Some counterfeit goods are consumed relatively more by lower income households (footwear, perfumes, handbags and cell phones) than by higher income households, but

the typical higher income household spends significantly more in absolute terms (that is in GEL terms).

5. Foreign Direct Investment. Protection of IPR is one -- but only one aspect -- of the enabling environment of an economy. Specifically, the protection of IPR is part of the rule-of-law criterion and a correlation is found to exist between an index of IPR protection and an indicator of Rule of Law. But, isolating improved IPR protection to explain supposedly higher FDI (at the macro level) is a very difficult undertaking, statistically and econometrically. Yet, an improved business climate in general – and improved Rule of Law – does explain higher GDP growth in virtually all studies found in literature. In one of these exercises undertaken by the author, we have simulated FDI assuming an improved business climate for Georgia and comparing it with the current situation. Not surprisingly, FDI leaps⁵. We find that the level of (annual) FDI inflow would be boosted by **18-21%** over and above the “expected” level, considering current business climate conditions. What is then the impact of the increased total investment on GDP growth? We estimate that the investment to GDP rate would increase by about **0.55%**. And, at observed investment efficiency in Georgia this extra investment would yield an extra **0.12%** in GDP growth. In the best of circumstances it could be 0.17%.

Irrespective of the estimated magnitude of the counterfeit marketing/piracy phenomenon in Georgia, the trade, and illegal downloading of copyrighted material remains a case of **THEFT**. The infringement calls for action. Although our study was not to focus on legal issues and policy, we do recommend a strategic approach. The choice of a strategy depends on two dimensions: attractiveness and costs. Attractiveness in terms of making a significant impact (the larger the problem, the more significant the expected impact) and costs in terms of effort invested in the initiative.

The recommended actions are outlined below.

Table: a strategic approach to reduce the prevalence of counterfeit goods and piracy in the Georgian market

Category	Measures
Apparel	<ul style="list-style-type: none"> • Register brand names at Customs Office. • Increase the frequency of physical inspections (at the border) and seizures. • Training an expert to investigate counterfeit cases and report to Court.
Footwear	<ul style="list-style-type: none"> • Register brand names at Customs Office. • Increase the frequency of physical inspections (at the border) and seizures. • Training an expert to investigate counterfeit cases and report to Court.
Handbags/travel bags	<ul style="list-style-type: none"> • Register brand names at Customs Office. • Increase the frequency of physical inspections (at the border) and

⁵ This is also a positive Balance of Payments effect!

Category	Measures
	seizures.
Accessories	<ul style="list-style-type: none"> • Include the brands in a general awareness campaign about IPR infringement (picturing counterfeits as “theft”).
Fragrances	<ul style="list-style-type: none"> • Carry out chemical analysis of counterfeit fragrances and build a one-time awareness campaign around the anticipated lower quality of counterfeit fragrances.
Cosmetics	<ul style="list-style-type: none"> • Carry out laboratory analysis of counterfeit cosmetics and build an awareness campaign around the eventual health risks with these counterfeit products.
Medicines	<ul style="list-style-type: none"> • Increase the drugs sampling plan (i.e. sending medicines from pharmacies, hospitals for laboratory analysis) and strengthen investigative/monitoring capacity of the Ministry of Health.
Watches	<ul style="list-style-type: none"> • Register brand names at Customs Office. • Include the brands in a general awareness campaign about IPR infringement (picturing counterfeits as “theft”).
Fashion jewellery	<ul style="list-style-type: none"> • Register brand names at Customs Office. • Include the brands in a general awareness campaign about IPR infringement (picturing counterfeits as “theft”).
Spectacles	<ul style="list-style-type: none"> • Register brand names at Customs Office. • Include the brands in a general awareness campaign about IPR infringement (picturing counterfeits as “theft”). • Take samples of imported sunglasses and test them for UV protection; seize the batches which pose a threat and destroy them under media attention.
Automotive parts	<ul style="list-style-type: none"> • Send samples of counterfeit and low-cost spare parts for lab testing in a technical centre (abroad); if the items prove to pose a threat or have a limited lifetime, then seize the future shipments while creating awareness among customers about “value for money”.
CD/DVD/software	<ul style="list-style-type: none"> • Have financial police to seize counterfeit CD/DVD/software under media attention.
Computer hardware	<ul style="list-style-type: none"> • Obtain legal advice to build a winnable case.
Cell phones & access.	<ul style="list-style-type: none"> • Register brand names at Customs Office. • Increase the frequency of physical inspections (at the border) and seizures. • Training an expert to investigate counterfeit cases and report to Court.
Toys, games	<ul style="list-style-type: none"> • Register brand names at Customs Office. • Include the brands in a general awareness campaign about IPR

Category	Measures
	infringement (picturing counterfeits as “theft”).
Cigarettes	<ul style="list-style-type: none"> • Further investigation to unearth channels, if any.
Spirits, sparkling wines	<ul style="list-style-type: none"> • Further investigation to unearth channels, if any.
Internet downloads	<ul style="list-style-type: none"> • Work with ISPs to design a tariff system for internet subscriptions that discourages the illegal downloading by physical subscribers... while keeping subscription cheapish for low-usage internet users. • Block access to websites which allow illegal downloading.
Ballpoint pens	<ul style="list-style-type: none"> • Register brand names at Customs Office. • Include the brands in a general awareness campaign about IPR infringement (picturing counterfeits as “theft”).

INTRODUCTION

Before moving into analysis mode, we consider it useful to recall a few **definitions**. Indeed, analysts tend to omit clarifying what exactly they are analyzing, hence leading to overestimation or underestimation of the impact of IPR infringement.

- Counterfeit = a product which imitates the appearance of the product of a right holder, hence misleading the consumer.
- Non-deceptive counterfeit = the consumer recognizes that the product is not authentic and so pays an adjusted price for it.
- Deceptive counterfeit = the counterfeit and the original product appear very similar to deliberately mislead the consumer about origin, authenticity, performance and effectiveness.
- Look-alikes: weaker brands and generic products, which are sufficiently similar to a strong or leading brand.
- Illicit trade = illegal diversion of genuine products or the illegal manufacture and sale of counterfeit products.
- Counterfeiting = unauthorized duplication of a product protected by one or more intellectual property rights.
- Parallel or grey imports = genuine products placed on the market in one country without the permission of the owner of the intellectual property rights for that product.
- Contraband = goods entering into the country without the payment of applicable taxes.

Intellectual property rights cover:

- Trademarks (any sign capable of distinguishing the source of goods or services, such as words, letters, numerals, figurative elements, combinations of colours)
- Copyrights (authorship of literary, musical, artistic works)
- Patents (exclusive rights granted to inventions for a fixed period of time, with respect to products or processes, provided they are new, involve an inventive step and have utility, that is are capable of industrial application)
- Designs (the appearance of the whole or a part of a product resulting from the features of the lines, contours, colours, shape, texture and/or materials of the product and/or its ornamentation; designs are not protected insofar as their appearance is wholly determined by their technical function, or by the need to interconnect with other products to perform a technical function)
- Designation of geographical origin⁶

Different types of IPR infringements often overlap; e.g., music piracy infringes copyright as well as trademark protection.

The reason why certain products intensive in intellectual property are counterfeited is tied to the fact that the genuine product has high **fixed costs** (e.g. it is expensive to develop the first copy of a video game) and low **marginal costs** of duplication. As a result, counterfeiters have an incentive to free ride on the original investment associated with the fixed costs of

⁶ For instance, wines (Champagne), cheeses (parmesan), meat products (prosciutto di Parma)

production by bearing only the marginal costs. In some situations counterfeiters are subcontractors of the original producers. In such case counterfeit goods may share the same quality of the original good.

Countries commonly mentioned as sources of counterfeits are: China, India, the United Arab Emirates⁷, Vietnam, Philippines, Thailand, Province of Taiwan, Hong Kong, Russia, and Uruguay.

As an **illegal activity**, it is difficult to obtain reliable information on the volume of counterfeit products.

Counterfeiting is generally perceived by society as a victimless crime with counterfeits simply constituting a cheap alternative purchase. However, there are clearly costs associated with counterfeiting:

1. Reduced sales (in the short term and in the future) and profitability for manufacturers of branded goods⁸. In extreme circumstances brands withdraw from particular markets.
2. Negative impact on brand image (the product price is depressed and the value of the brand is eroded); cheap copies create the perception in the public that original products are expensive.
3. Increased marketing expenses for brand protection.
4. Reduced investment: where counterfeiting is rife, producers of reputable products may become reluctant to manufacture their products in those countries.
5. Legitimate producers cutting back on new product R&D.⁹
6. Increased health and safety risks associated with low-quality food and beverages, medicines, cosmetics and automotive spare parts.
7. The costs of investigation and enforcement.
8. The financing of criminal networks¹⁰.

The situation in Georgia

Georgia, as a manufacturer and exporter, is not generally known for being a country characterized by serious IPR infringement. Yet, the economy ranks poorly in terms of protection of property rights and IPR in particular. As a result, significant IPR infringement is found as regards to domestic consumption. This is essentially fuelled by imports as well as downloaded software/music/video.

⁷ The UAE has several free zones often serving as a platform for transshipment of counterfeit products, mainly from China. The UAE self is victim of counterfeit products, in particular automotive spare parts, food and beverages and cosmetics.

⁸ Not all consumers of cheap counterfeit would, on a one-to-one basis, buy the higher-priced original/branded good were the counterfeit good to disappear from the market. Not every acquired counterfeit product is a complete substitute for the sale of an original product at **full price**. Substitution rates vary by industry in function of product quality, distribution channels and information available about the product. If a consumer is completely deceived by the counterfeit, then it is reasonable to assume that the substitution rate is high. When substitution is low, counterfeit goods are likely to fill a gap at the lower end of the income distribution for those who cannot afford the genuine product. Hence, consumption of counterfeit goods enhances consumer welfare among poorer households.

⁹ Some authors point at network externalities: higher counterfeiting might increase the ownership of the platforms they operate on, which in turn stimulates the demand for legitimate goods (e.g. consoles for games).

¹⁰ Mind also that the production and distribution of counterfeit products is an economic activity in itself and does provide some benefits to the overall economy of the country where it takes place.

Table-1: protection of property rights

Country	Protection of Property (0=inexistent; 10=excellent) <u>Source: Fraser Institute</u> (2008)	Protection of Property (1=excellent;5=poor) <u>Source: Heritage Foundation</u> (2006)	IPR protection (1=weak;7=strong) <u>Source: World Economic Forum</u> (2010)
Albania	3.7	4.0	2.8
Armenia	5.4	4.0	2.7
Austria	9.0	1.0	5.7
Azerbaijan	5.4	4.0	3.6
Belgium	7.9	1.0	5.1
BiH	3.0	5.0	2.2
Bulgaria	4.1	4.0	2.6
Czech Republic	6.2	2.0	3.9
Estonia	7.2	2.0	4.6
Georgia	4.1	4.0	2.9
Hungary	6.0	2.0	4.0
Kyrgyz Republic	3.2	4.0	2.3
Macedonia	4.7	4.0	3.1
Moldova	4.9	3.0	2.6
Poland	5.4	3.0	3.7
Romania	5.2	4.0	3.2
Russia	3.5	4.0	2.6
Slovenia	6.4	3.0	4.4
Turkey	4.8	3.0	2.6

A priori, infringement of IPR can be explained by a) gaps in the legal framework, b) weak enforcement and, c) the inefficient operation of the judiciary. The Government of Georgia is generally open to reforms but it advances cautiously with regards to IPR enforcement, reportedly for social reasons.

In June 2010, **UNDP/Georgia** released a “*Study on Counterfeiting and Piracy in Georgia.*” The study was backed up by a survey carried by Business Consulting Group, a Tbilisi-based market research and consulting company.

Among the questions fired at the people surveyed were:

Q1: For what types of goods the brand is important to you?

Q2: What kind of counterfeit product you or anyone you know have bought?

Table-2 reports selected results from a BCG presentation.

Table-2: BCG results on consumer behavior in Georgia concerning counterfeit products

Categories	Q1	Q2
Clothing	24.4%	64.7%
Alcoholic beverages, soft drinks and mineral waters		56.5%
Perfumes or cosmetics		42.4%
Pharmaceutical or medicines	74.8%	33.0%
Cigarettes		23.8%
Accessories		23.1%
Watches, jewellery		17.1%
Toys		16.4%
Auto parts or tools	0.2%	16.2%
Music or movies		15.7%
Computer software	5.3%	12.5%
Stationery		11.5%
Books		11.1%
Games		9.5%
Shoes	18.0%	
Electrical appliances	26.3%	

Whereas the results suggest a high prevalence of purchasing counterfeit clothing – which is plausible -- the declared importance to consumers of medicines brands does contradict the relatively high incidence of counterfeit medicines. Furthermore, the consumer behavior concerning cigarettes and alcoholic beverages seems to contradict opinions gathered in industry and Government¹¹. Furthermore, results suggest a low piracy rate for software, which is not realistic. In conclusion, the results are not conclusive.

¹¹ There may be confusion created by classifying as counterfeit the home-made wines sold by the litre, in plastic bottles rather than in glass bottles, at a price of 2-3 GEL.

Our study therefore aims to **quantify the costs of IPR infringement**. In principle, the analyst will study markets for imported consumer goods – some are also purchased by Government, such as computer software – as well as markets for locally produced goods. However, the technology and manufacturing base in Georgia is narrow:

- Between 2005 and 2009, patents applications by nationals have averaged only 200 per year.
- Over the same period, applications of industrial design by nationals have averaged 32 per year.
- Exports of Georgia are heavily concentrated in commodities (low-tech).
- The top three sectors targeted for foreign investment promotion are tourism, agriculture and energy, which are *a priori* not the sectors most affected by IPR infringement.
- Georgia does not yet have a free trade port operational although the company RAKIA (United Arab Emirates) was initially expected to develop a 300 ha zone next to the Poti Port¹².

Hence, the indications suggest that the prevalence of IPR infringement by local manufacturers is marginal.

¹² Free Zones can be sites where items are re-packaged in ways that violate IPR before being exported.

METHODOLOGY

Certain categories of goods are more likely to fall victim of IPR infringement, such as spirits and wines, tobacco, drugs, cosmetics, fragrances, fashion clothes and footwear, watches, jewellery, sunglasses, handbags and travel bags, wallets, scarves, DVDs (audio and video), computer games, cell and smart phones and multimedia (including accessories), computers and parts (e.g. printer cartridges), automotive spare parts.

We can approach these goods from three angles:

- Imports and local manufacturing
- Sales by retailers
- Consumption by households, industry and Government

With retail prices data collected, with the knowledge built up through literature review and face-to-face meetings we can undertake a **back-of-the-envelope** simulation of the size of the market in branded goods and their counterfeits.

In a second approach we use the results of a **Households Survey** conducted by the Georgia-based sub-contractor ACT, on behalf of USAID's EPI Project (March 2011). The questionnaire asks 1,000 respondents about their consumption behavior with regards to the risk categories.

Both approaches allow us to construct a **baseline** from where we simulate the impact of IPR enforcement.

The economic impact of infringement on IPR falls into **four** categories:

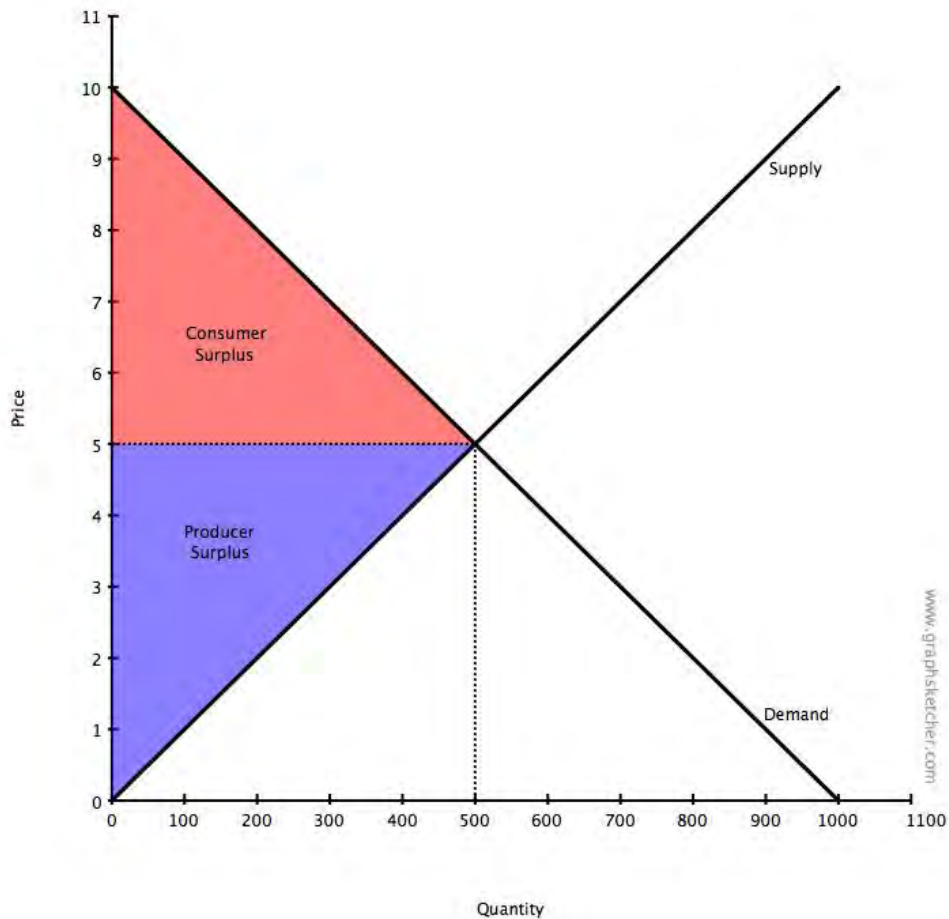
- Change in Consumer surplus ("willingness to pay")
- Change in Producer surplus (lost net revenues)
- Externalities
- Change in Net Public Revenue (lost tax revenues from import duties, excise and VAT, and, costs of IPR enforcement)

CONSUMER AND PRODUCER SURPLUS

Consumer and producer surplus are illustrated in [Chart-1](#). Mathematically, the **consumer surplus is equivalent to the triangle formed by the demand curve above the equilibrium price** (or tariff). The demand curve is derived from a consumer utility function, varying the price of the good while keeping the prices for alternative goods unchanged. The demand curve shows the quantity demanded by consumers for each price level. The market equilibrium price is the location where the demand curve intersects with the supply curve. The consumer surplus corresponds to the *ability to pay* of consumers. For any given price a number of consumers are willing to pay more but are actually paying less, hence they enjoy a welfare effect.

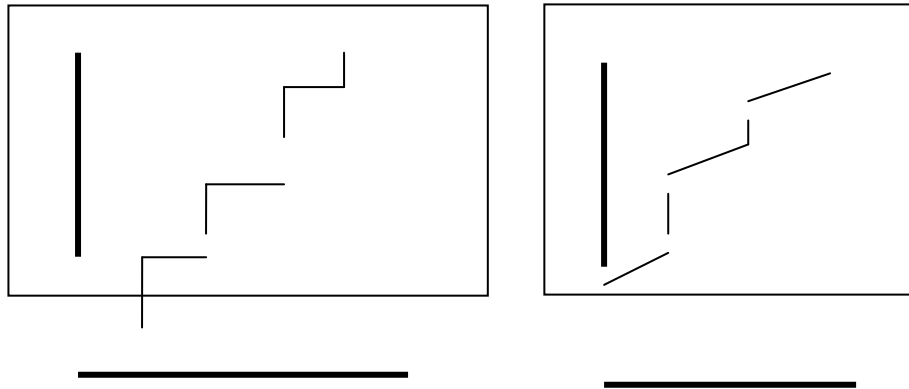
The supply curve is derived from a total cost function of the producer. For given factor prices (of labor and capital) and considering a production function (technology¹³) characterized by decreasing returns to scale, the market price determines the maximum output the producer is ready to bring to the market. The price covers his costs and a normal return on assets. **The producer surplus is the triangle formed by the supply curve below the equilibrium price** (or tariff). The producer surplus corresponds to the profits made by the producer, otherwise said revenue minus costs.

Chart-1



The supply curve can be derived in a rather straightforward manner. However, it is possible that the supply curve is not a continuous function but a step function (or a mix of both).

¹³ The technological choice is assumed to be appropriate.



We draw attention to several issues:

1. Before starting an impact assessment the geographic boundaries should be well defined, that is the area over which the impacts on the economic, social and biophysical environments are manifest.
2. It is important to correctly define the nature of the good that is sold.
3. It is important to recognize that demand may shift over time, and indeed is expectedly to do so. Drivers behind these shifts are increasing household revenue, the introduction of new goods/services (which may be substitutes or complementary).
4. The construction of a demand curve does require a market study, collecting demographic data and retrieving information on willingness to pay of the consumer population. The analyst may be able to imagine two locations on the demand curve: the maximum price where no demand exists and, the minimum price where maximum demand is achieved. Any other location between those two locations requires field investigation.
5. The relevant price/tariff that determines demand is a “tax-inclusive” price (that is sales tax or VAT is included). In addition, the corporate income tax (profits tax) is not deducted from the cash revenues of business. However, this implies that, when the social welfare of a project is calculated (including the tax revenue to the State), the analyst shall be careful NOT to double-count corporate income tax as a tax revenue to the Treasury.

In the context of the present study, the risk categories consist of both genuine products and counterfeit products. Although they may appear similar, the analyst has to treat them as separate markets. However, when the relative price of genuine products to counterfeit products changes, then some substitution in the demand for these goods does occur. The challenge is to estimate the price elasticity.

Other variables may also affect the relative demand for genuine and counterfeits:

- Household income: the higher the income, the higher the budget for fashion/branded goods
- The ownership of specific assets such as computer and vehicle; no computer, no downloads and no car, no spare parts
- The age composition of the household: younger generations and older generations have different preferences with regards to fashion/branded goods
- The gender: women have different preferences than men have
- The civil status

- The educational and professional background of consumers

Due to time constraints we shall concentrate in the first place on income (adjusted for household composition) and price effects. We shall come back later to these issues.

EXTERNALITIES

Definition of externality (or spill-over):

The effect of a decision by one party on others who did not have a choice and whose interests were not taken into account. In such cases, prices do not reflect the full costs or benefits in production or in consumption of a product or service.

Prima facie externalities associated with IPR infringement:

1. **Investment:** a country's or a sector's reputation being affected, resulting in lower investment flows, in particular foreign inward investment, and lower rate of technological innovation.
2. **Balance of Payments effects.**
3. **Distributional impact: income of retailers.** The benefits accruing to poor/vulnerable households are to be assigned a higher weight than the benefits accruing to middle-class and high-income households.
4. **Health risks:** counterfeit cosmetics and substandard drugs affect health. Ideally, the monetary value of health impacts should be determined by an individual's willingness to pay for improved health. In practice, the second best technique is employed, such as valuing earnings that are foregone through premature death, sickness or absenteeism.
5. **Safety risks:** substandard and counterfeit automotive spare parts have a lower lifetime and cause higher accident rates.

NET PUBLIC REVENUE

The Treasury receives indirect and direct taxes as the result of a private economic activity: import duties, VAT, sales tax, excise taxes, trading license fees and revenue from corporate income tax.

On the other hand, enforcement of IPR requires resources from the Customs Department, Financial Police, and authorities carrying out market surveillance.

RISK CATEGORIES OF GOODS

One can look at businesses from different angles:

- (1) The product-market characteristics;
- (2) The competitive strategies adopted;
- (3) The key manufacturing and other competencies required to develop a successful competitive strategy.

Hodgson, Li and Weston¹⁴ classify products in four categories:

- Capital Equipment;
- Consumer Durables (e.g. white goods, cars, furniture);
- “Short-life cycle” goods (e.g. fashion goods such as certain lines of clothing and footwear, perfumes, certain food products, new consumer electronics until becoming consumer durables);
- Commodities/volume products (basic chemicals, simple components, generic pharmaceuticals, many food products, many textiles in particular in developing countries).

The mix of Critical Success Factors -- engineering and management processes – varies across the four categories.

¹⁴ “Manufacturing strategies and next century enterprises”, Allan Hodgson, Guihua Li and Richard Weston, *International Journal of Business Performance Management*, Vol.1, No.1, 1998.

Table-3: Critical Success Factors

<p>Capital equipment</p> <ul style="list-style-type: none"> • Technological surveillance; Research & Development • Design/new product creation processes • Customization (incl. after-sales service) • Product performance (reliability, durability...) • Project management • Production scheduling • Supplier management 	<p>“short-life cycle” goods</p> <ul style="list-style-type: none"> • „Understanding the market’ • Fashion design; „customer wants the latest...’ • Marketing/branding • Short “time-to-market” for new products
<p>Consumer durables</p> <ul style="list-style-type: none"> • Marketing • Design/creating added features • Research (pharmaceuticals other than generics) • Lean manufacturing/flexible automation; low cost assembly • „Just-in-Time’ • Quality assurance (minimize defects; „zero defect’) • Supplier management • Customer satisfaction = „value for money’ (e.g. economy of service for domestic appliances, ease of use...) • After-sales service (e.g. white goods, automotive) • Value analysis (on materials/components) • Project management 	<p>Commodities and volume products</p> <ul style="list-style-type: none"> • Overall cost minimization (energy, logistics, overheads...) • Reaping economies of scale! • Production planning (equipment runs continuously) • Low inventory logistics • Produce according to standard SPECS (product performance is taken for granted) • Quality assurance (minimum waste of materials) • (Sometimes) heavy advertising (e.g. soft drinks) • Maintenance management

What are the competitive strategies associated with each of these categories?

- In the case of **capital equipment**, customers want the best **performance** possible from the product over its working life – initial purchase price is only a part of this consideration.¹⁵
- In the case of a **commodity**, product performance is virtually taken for granted – **price** and availability are far more important. Customers will shop around until they find what they want at the best price.
- With **consumer durables** it is all about *value for money* – if you want a low cost hi-fi you look for the best system at that price. If you want a top quality system you

¹⁵ “Manufacturing into the late 1990s”, *Department of Trade and Industry (UK) and PA Consulting Group*, July 1993.

look for the best system in a much higher price bracket – it is all about a subtle trade-off between product performance and price.

- With **fashion products**, customers want the **latest design** – sometimes at any price – but they want it now, before anyone else.

Risk categories for counterfeiting exist in all four segments:

- fashion clothes, jewellery, perfumes, recent DVDs, computer games, cellphones/smartphones, accessories are in the “short-life cycle” segment
- medicine is in the consumer durables or in the commodities segment (generics are definitely commodities)
- computers and hardware, original automotive spare parts, original toys are mostly consumer durables
- wines, spirits and cigarettes are in the commodities segment though companies can develop a strong brand when supply is constrained (e.g. champagne)

The characteristic of counterfeit products is that they pull down all goods to COMMODITIES although counterfeiters may seek to deceive the consumer into thinking that the product is genuine, and hence applying a low discount onto the listed price of the original.

In the tables below, we first shall identify and recall the risk categories. Next we shall study the risk categories, looking foremost at Product-Market characteristics and prices of counterfeits and genuine products. We cannot imagine simulating the impact of counterfeits on the economy without understanding some of the specifics of the market and of the supply channel.

Table-4 is retrieved from an EU Customs report and shows the number of cases of detentions under customs procedures. The table shows fashion goods and luxury goods as well as fast-moving goods.

Table-5 shows Georgian import values for goods in the risk categories. The data will form the basis for a back-of-the-envelope calculation of the size of counterfeits market share.

Table-6 shows UAE’s imports for HS category 851712 (cell phones). The UAE free zones are often regarded as a platform for exports of counterfeit products, primarily from China. For certain, a significant share of UAE’s own imports originates from China.

Table-7 shows Georgia’s imports of computer equipment. The industry in Georgia does not believe that imported PCs and laptops are counterfeit, contrary to accessories for printers. However, PCs and laptops are platforms for downloading software, music and movies as well as playing games.

Finally, Table-8 shows Georgia’s most important export categories. With the exception of alcoholic beverages, the bulk of exports fall in the low-risk commodities category.

Table-4: number of registered cases (detentions under customs procedures) in the EU (2009) excluding goods that were released because they were non-infringing originals or because the right holder did not react on the notification

	Sector	Number of cases	Number of articles	Articles per case
1a	Foodstuff	17	112,563	6,621
1b	Alcoholic beverages	2	12,018	6,009
1c	Other beverages	7	66,370	9,481
2a	Perfumes and cosmetics	922	1,127,728	1,223
2b	Other body care items (shampoo, deodorant, soap, razor blades)	637	2,470,275	3,878
3a	Clothing (ready to wear)	10,603	5,955,697	562
3b	Clothing accessories (belt,tie,shawl,cap,gloves)	1,393	1,644,107	1,180
4a	Sport shoes	2,441	1,954,726	801
4b	Other shoes	3,013	1,787,053	593
5a	Sunglasses and other eye-glasses	509	433,141	851
5b	Bags including wallets,purses,cigarette cases,other similar goods)	2,811	1,526,342	543
5c	Watches	3,358	305,964	91
5d	Jewellery and other accessories	707	1,435,572	2,031
6a	Mobile phones	1,852	100,116	54
6b	Parts and technical accessories for mobile phones	593	1,110,345	1,872
7a	Audio/video apparatus including technical accessories and parts	799	605,824	758
7b	Memory cards, memory sticks	409	214,629	524
7c	Ink cartridges and toners	34	83,133	2,445
7d	Computer equipment (hardware) incl. technical access. and parts	194	225,602	1,163
7e	Other equipment incl. technical access. & parts (hair iron, shaver)	566	434,450	768
8a	Recorded CD/DVD/cassettes/game cartridges	1,750	226,618	129
8b	Unrecorded CD/DVD/cassettes/game cartridges	84	5,630,599	67,031
9a	Toys	525	6,285,265	1,305
9b	Games (including electronic game consoles)	671	545,888	814
9c	Sporting articles	93	28,445	306
10a	Cigarettes	117	17,000,368	145,302
10b	Other tobacco products (cigars, cigarette paper, etc)	7	18,632,187	2,661,741
11a	Medicines and other products (e.g. condoms)	3,242	7,423,824	2,290

	Sector	Number of cases	Number of articles	Articles per case
11b	Medical ingredients	2	612	306
	TOTAL	39,022	97,610,891	

Source: European Commission/Taxation and Customs Union, Report on EU Customs Enforcement of IPR, 2009 Report (also own calculations)

Notes:

- Three quarters of registered cases concern shipments by air/postal. However, three quarters of articles involved in registered cases are shipped in by sea.
- 80% of actions at borders are triggered by application for action from rights holders with ex officio action representing 20% of cases.

Table-5: imports by Georgia of main risk categories (2010)

HS	Description	Value (million €)	Main sources of supply (value in million € and % of total)
2208	Spirits, liqueurs, other spirit beverages (sparkling wines)	7.487 5,879 tons (0.206)	Ukraine: 3.037 (40.6%) Russia: 2.391 (31.9%) France: 0.553 USA/UK: 0.418
2402	Cigars, cigarillos, cigarettes	59.468 5,352 tons	Ukraine: 50.170 (84.4%) Bulgaria: 2.659 Germany: 2.083
30 (3003 & 3004)	Medicines	163.161 (148.016) (5,313 tons)	Turkey: 29.199 (17.9%) Germany: 13.468 (8.3%) France: 11.366 (7%) Switzerland: 10.539 (6.5%) Belgium/Neth.: 10.897 (6.7%) ... India: 4.658 (2.9%) China: 1.4 (0.9%)
3303	Perfumes and toilet water	8.216 502 tons	UAE: 1.669 (20.3%) Turkey: 1.122 (13.7%) France: 1.108 (13.5%) Poland: 1.067 (13%) China: 0.296 (3.6%)
3304	Beauty, make-up and skin-care preparations, sunscreen	10.335 1,148 tons	Ukraine: 1.918 (18.6%) Turkey: 1.135 (11%) Poland: 1.61 (15.6%) UAE: 0.24 (2.3%) China: 0.101 (1%)
4202	Trunks, suit-cases, handbags of leather	6.217 871 tons	China: 2.796 (45%) Turkey: 0.557 (9%) UAE: 0.491 (7.9%)

HS	Description	Value (million €)	Main sources of supply (value in million € and % of total)
			Italy/Ger./Spain/France: 0.758 (12.2%)
420330	Belts	0.431 30 tons	China: 0.127 (29.5%) Turkey: 0.088 UAE: 0.020 Italy/France etc: 0.181 (42%)
61+62	Articles of apparel, accessories	93.389 9,307 tons	Turkey: 41.39 (44.3%) China: 20.747 (22.2%) Italy: 4.573 (4.9%) France: 5.096 (5.5%) UAE: 2.786 (3%) Azerbaijan: 3.581 (3.8%)
64	Footwear	38.858 6,324 tons	China: 16.044 (41.3%) Turkey: 7.981 (20.5%) UAE: 3.327 (8.6%) Italy/France: 3.273 (8.4%) Russia: 1.247 (3.2%)
7117	Imitation jewellery	2.086 79 tons	China: 0.469 (22.5%) Ukraine: 0.399 Switzerland: 0.292 UAE: 0.190 (9.1%) Turkey: 0.17 India: 0.086 HK: 0.027 (1.3%)
851712	Telephones for cellular networks, mobile telephones or other wireless	42.687 501 tons	UAE: 20.915 (49%) China: 13.48 (31.6%) Romania: 2.262 Hungary: 1.428 HK: 1.203 (2.8%) India 0.835 (2%)

HS	Description	Value (million €)	Main sources of supply (value in million € and % of total)
			Finland: 0.646 Singapore: 0.499
851770	Parts of telephone sets, telephones for cellular networks	6.180 77 tons	Turkey: 593.4 (8.9%) China: 454.9 (7.4%)
8524	Recorded tape, recorded for sound (category includes computer software)	2.384 (2009) 48 tons	Austria: 0.613 Sweden: 0.314
8708	Parts and accessories of motor vehicles	20.836 5,663 tons	Germ./USA/UK/Belgium: 9.006 (43.2%) Turkey: 3.019 (14.5%) UAE: 2.307 (11.1%) China: 1.779 (8.5%) Japan: 0.612 (2.9%) Russia/Ukraine: 1.055 (5.4%) Republic of Korea: 0.033 (0.2%)
9004	Spectacles (sunglasses)	1.306 (0.926) 57 tons (37 tons)	China: 0.425 (32.5%) Italy/Germany: 0.389 (29.8%) HK: 0.039 (3%) UAE: 0.036 (3%)
91 (9101 & 9102)	Clocks and watches (wrist watches)	2.714 (1.983) (96 tons)	Switzerland: 0.805 (29.7%) China: 0.734 (27%) UAE: 0.381 (14%) Turkey: 0.078 (3%)
95 (9501/02/03)	Toys, games, sports requirements	20.238 3.833 tons (12.727 in 2009) (2110 tons)	China: 8.164 (40.3%) UAE: 2.362 (11.7%) Germany: 1.766 (8.7%) Turkey: 1.33 (6.6%) HK: 0.114 (0.6%)
960810	Ballpoint pens	<u>0.813</u> <u>124 tons</u>	<u>China: 0.255 (31.4%)</u> <u>UAE: 0.179 (22%)</u>

HS	Description	Value (million €)	Main sources of supply (value in million € and % of total)
			Turkey: 0.141 (17.3%) HK: 0.021

Source: ITC (Geneva)

Table-6: UAE imports of HS category 851712 (2008)

Origin of imports	Value (million €)
Total imports	2,193.5
<i>Of which:</i>	
China	697.3
Hungary	582.2
Rep. of Korea	169.0
India	166.2

Source: ITC (Geneva)

Table-7: Georgian imports of computer equipment (2010)

Category	Description	Value (million €)
847130	Portable digital computers (<10kg)	15.142
847141	Non-portable digital EDP machines	1.047
847150	Digital processing units not sold as complete system	8.088
844399	Parts & accessories of printers, copying/facsimile machines	3.250
		(88 tons)

Source: ITC (Geneva)

Table-8: major exports from Georgia (2010)

Exports	Value (million €)
Total exports	969.952
HS72 – Iron and Steel	312.0
HS22 – beverages, spirits	87.4
<i>Of which:</i>	
<i>HS2204 wine of fresh grapes</i>	<i>27.9</i>

Exports	Value (million €)
<i>HS2208 spirits</i>	26.5
<i>HS2201 mineral water</i>	22.7
HS7108 – gold unwrought	64.6
HS26 – Ores, slags	61.2
HS08 – Edible fruit, nuts	60.9
HS3102 – nitrogenous fertilizer	54.1
HS74 – copper and articles thereof	31.4
HS2709 – Crude petroleum oils	28.9
HS97 – works of art, collectors pieces and antique	28.5
HS61 & HS62 – Articles of apparel	20.8
HS30 – Pharmaceutical products	20.3
HS88 – aircraft and parts thereof	18.7
HS2716 – electrical energy	17.1
HS86 – railway rolling stock equipment	15.9
HS84 – machinery	15.2

Source: ITC (Geneva)

Having identified the risk categories we shall now zoom in on each category.

Counterfeiting is not restricted to premium or luxury goods. However, there exist several tiers of discounts offered across counterfeit goods:

- 20-40% discount on the listed price of the genuine article: when buyers may not realize they are getting sold a fake. Examples: spirits and tobacco.
- 65-85% discount on the listed price of the genuine article: shoppers are aware that the product is counterfeit but they still hesitate about buying either the fake or the genuine products. Example: T-shirts, jeans, sunglasses, trainers.
- 90-95% discount on the listed price of the genuine article: buyers of fakes know exactly what they are getting and they are unlikely to buy the real product.

1. Product: ready-to-wear fashion clothes (jeans, shirts, T-shirts, pullover, sweaters, jackets, underwear, scarves)

Brands (examples):

Lacoste, Adidas, Diesel, Levi's, Wrangler, Lee, Gucci, Louis Vuitton, Versace, Armani, Boss, D&G, Ralph Lauren, Prada, Calvin Klein, North Face, Dockers, Guess, Laura Ashley, Quicksilver

Product-Market characteristics:

The European market for apparel includes two top segments:

- High price luxury segment (e.g. D&G); this represents **5%** of the market value
- Upper middle price segment (e.g. Hugo Boss); this represents **15%** of the market value.

These two segments target the label-seeking, fashion-conscious segments of the consumers. These consumer segments vary according to country (only 10% label-seeking, in the UK and 21% in Spain; 22% fashion conscious in UK and even 38% in France). Sporty lifestyle clothing characterizes 34-37% of consumers. Mind that these categories are not mutually exclusive!

Fashion changes fast; this actually induces some customers to buy fakes. Budget-constrained consumers do not want to spend large amounts on items which they will end up wearing on very few occasions.

Counterfeiting is concentrated in ready-to-wear clothes (which are produced in small quantities to guarantee exclusivity) and in a segment of mass market clothes such as sporty clothes (which are produced in large quantities and standard sizes, with inexpensive materials used creatively for affordable fashion).

The price range of counterfeit products is smaller than the price range of originals. Prices of counterfeit products are related to production costs. By contrast, Brands apply market segmentation strategy to maximize revenue with high-priced articles.

Counterfeits originate from Asia (mostly China, Thailand, and Turkey). Most -- if not all -- counterfeit products get through the Georgian customs. Once in the country no authority that bothers the retailers... even not in very visible shops such as "Kidobani" or the NEILO market outside Tbilisi.

How to spot counterfeit:

- Inferior design
- Materials are of inferior quality and processing is inferior (e.g. stitching) causing it to break down easily. However, this is

1. Product: ready-to-wear fashion clothes (jeans, shirts, T-shirts, pullover, sweaters, jackets, underwear, scarves)

	<p>not always the case. Counterfeits can be of comparable quality to original products.</p> <ul style="list-style-type: none"> • Health risks from hazardous dyes and chemicals used • Colour fastness not guaranteed • Labels are inferior in quality; inner labels often missing • Spelling errors on labels
<u>Price of original products (€):</u>	<p>Jeans: 42-100 (Georgia), 100-123 (Georgia)</p> <p>Shirts: 35-63 (Georgia), 94 (Georgia)</p> <p>T-shirts: 16 (Georgia)</p> <p>Pullover: 28-85 (Georgia), 98 (Georgia)</p> <p>Sweater: 20-30 (Georgia)</p> <p>Jackets: (female), 99-211 (men), 297 (leather)</p> <p>Licensed stores in Georgia sell branded goods at 15-20% discounts.</p>
<u>Prices counterfeit products (€):</u>	<p>In Georgia, counterfeit products appear to be priced 50% to 75% below the price of originals. For high-priced originals we find more heavily discounted fake “equivalents”.</p> <p>Jeans: 26-27</p> <p>Shirts: 12-16</p> <p>T-shirts (fake and replica): 7-13</p> <p>Pullover: 29-38</p> <p>Sweater (replica): 18-26</p> <p>Jackets: 30 (female), 24-28 (men)</p> <p>Underwear: 3 (men)</p>

2. Product: footwear (shoes, boots, sneakers, sports shoes)

<u>Brands (examples):</u>	Adidas, Nike, Fendi, Louis Vuitton, Timberland, D&G, Zara, Gucci
<u>Product-Market characteristics:</u>	The footwear market is polarizing into lower quality/price and higher quality/price markets. Also, a shift from formal to casual footwear is being observed, resulting from a change in lifestyle.

2. Product: footwear (shoes, boots, sneakers, sports shoes)

	<p>In the EU the sports footwear segment represents 20% of the market. Women's footwear is more influenced by fashion than men and young people are more influenced than older people. Footwear prices have been falling, but there has been growth in the luxury sector.</p> <p>The consumers most likely to turn to branded products are the following:</p> <ul style="list-style-type: none"> • Those saying it is worth paying more for items of quality • The brand follower • The stylist • The fashion follower • The individualist who wants to stand out from the crowd • The sporty type <p>The brand follower represents 11% to 22% of the consumers, the fashion follower 23% to 39%, sporty type 34% to 53%.</p> <p>Imports from low-cost countries (China, Vietnam) are not necessarily counterfeit. Imports from these countries face anti-dumping actions, for instance in the EU. Production costs typically represent 65% of the export price (FOB). Being a labor-intensive product, labor costs are almost 40% of production costs.</p> <p>It is estimated that 20% of all athletic merchandise in North America is fake.</p> <p>Georgia: we have found quantities of counterfeit footwear in the markets, alongside with simply cheapish shoes imported from China.</p>
<p><u>How to spot counterfeit:</u></p>	<ul style="list-style-type: none"> • Originals have more markers that identify it as original brand. • Some include embedded data that can only be read with a special device. • Counterfeit and low-cost footwear does not last too long because of poorer materials and finishing.
<p><u>Prices of original products (€):</u></p>	<p>Men's boots: 64-190 (Georgia)</p> <p>Spring shoes (men): 100 (Georgia)</p> <p>Sports shoes: 26-67</p>
<p><u>Prices counterfeit products (€):</u></p>	<p>Women shoes: 54</p> <p>Men's shoes: 65</p>

2. Product: footwear (shoes, boots, sneakers, sports shoes)

	Boots: 120 (female), 34 (men) Sports shoes (examples): 6-23-25-32-34-40-43
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3. Product: handbags and travel bags (including laptop cases, briefcases)

<u>Brands (examples):</u>	Armani, Gucci, D&G, Louis Vuitton, Chanel
<u>Product-Market characteristics:</u>	<p>Handbags are the largest segment in this category (over half of the market value). An estimated 40% of handbags are made of leather.</p> <p><u>Market segmentation:</u></p> <ul style="list-style-type: none"> • Fashion bags (largest segment): reflects the lifestyle of the owner • Classic bags (heavily counterfeited): sturdy, they have been selling for years without any major change to shape, colour and design • Casual bags: simply designed • Evening bags: more decorative than functional, trendy, good design, materials. <p>The trend is towards increasing importance of brand name. Some major brands (e.g. Kookai) are selling look-alikes.</p> <p>60% of handbags are sold through non-specialist outlets. Also, branded goods can now be found online at a 25% discount on the list price. Internet has further stimulated the distribution of counterfeit products.</p> <p>The quality of counterfeits has improved.</p> <p><u>Georgia:</u> we have found quantities of counterfeit bags – mostly handbags – sold in the market, alongside with low-cost China-made bags (including travel bags).</p>
<u>How to spot counterfeit:</u>	<ul style="list-style-type: none"> • Fakes don't last that long • Health risks from hazardous dyes and chemicals used
<u>Prices of original products (€):</u>	Price range for a major brand: 470-18,000 (average = 2,900; median = 1,800)
<u>Prices counterfeit products</u>	Replicas of Gucci: 134-150

3. Product: handbags and travel bags (including laptop cases, briefcases)

(€):	<p>Fake LV in Shanghai: 11</p> <p>Fakes in Georgia: 36-43</p> <p>Look-alikes: 40</p>
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4. Product: accessories (leather wallets/purses and belts, caps, bonnets, gloves, umbrellas, necktie, bath towel)

<u>Brands (examples):</u>	Armani, Gucci, D&G, Louis Vuitton, Chanel, Fendi, Hermès, Nike, Diadora
<u>Product-Market characteristics:</u>	<p>Most products are designed for their functionality (women's belts are an exception). However, the segment has gained some fashion appeal. Leather materials still reflect quality.</p> <p>Fashion changes fast; this actually induces some customers to buy fakes when they do not want to spend large amounts on items which they will end up wearing on very few occasions.</p> <p>Fashion and trends are followed by the young and the high-income consumers. Middle income consumers like fashion and classic but are price conscious.</p> <p>The quality of counterfeits has improved.</p> <p>Georgia: we have found quantities of counterfeit goods sold in the market alongside with low-cost China-made products.</p>
<u>How to spot counterfeit:</u>	<ul style="list-style-type: none"> • Labels differ from the originals • Fakes don't last that long • Health risks from hazardous dyes and chemicals used
<u>Prices of original products (€):</u>	<p>Belt: 28-63 (Georgia), 34-74 (Georgia)</p> <p>Cap: 27-29 (Georgia)</p> <p>Wallet: 360-1000 (top brand)</p> <p>Scarves: 100 (men; entry level brand), 245 (woman, top brand)</p>
<u>Prices counterfeit products (€):</u>	<p>In Georgia, counterfeit products appear to be priced 50% to 75% below the price of originals. The discount is even higher for wallets!</p> <p>Belt (replica): 14.5-30</p>

4. Product: accessories (leather wallets/purses and belts, caps, bonnets, gloves, umbrellas, necktie, bath towel)

	<p>Cap (replica): 5-8</p> <p>Bonnets: 13-15</p> <p>Wallet: 6-11 (fake), 36-65 for replicas (and as high as 116 for a top brand)</p> <p>Good replica scarves sell in China (wholesale) at 6-8€, or 20€ in silk version. Hence, discounts offered in retail markets must be in the 70-85% range.</p>
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5. Product: fragrances

<u>Brands (examples):</u>	<p>Chanel, Dior, Gucci, D&G, Kenzo, Chloé, Calvin Klein, Burberry, Giorgio Armani, Versace, Ralph Lauren, Bulgari, Paco Rabanne, Yves Rocher</p>
<u>Product-Market characteristics:</u>	<p>Perfumes are mixtures of essential (odoriferous) oils, other compounds and solvents (ethanol and water) in which the oil is diluted. The concentration by percentage/volume of perfume oil defines the different products sold in the market (Higher concentration means higher longevity):</p> <ul style="list-style-type: none"> • Eau de Parfum (EDP) has typically 15% of scented compounds, • Eau de Toilette (EDT) 10%, • and Eau de Cologne (EDC) 5%, • After-shave has even lower concentration. <p>The world market for luxury fragrances was €18.4 billion in 2008.</p> <p>Copying a fragrance is not illegal. Perfumers have traditionally relied on secrecy (formulae are not disclosed). While in theory perfumers can patent the composition of a perfume, the great majority choose not to, precisely because it would require them to reveal their formulae. Perfumers are grouped in a professional association and have published a list of all the fragrance materials used – about 3,000 entries – but that is as far as the industry is willing to go.</p> <p>A process (gas liquid chromatography) can be used to analyze the chemical composition of designer scents, from which imitation oil can be distilled.</p> <p>Fake fragrances carry health risks (inflammation of the skin). Men's fragrances are often in EDT formula, women's</p>

5. Product: fragrances	
	<p>fragrances mostly in EDP.</p> <p>Authorized dealers can offer discounts of 25% on the listed price.</p> <p>Georgia: we have found counterfeit fragrances sold in the market (e.g. NEILO market outside Tbilisi) carrying brand names such as BOSS and BULGARI alongside lookalikes and simply low-cost fragrances.</p>
<u>How to spot counterfeit:</u>	<ul style="list-style-type: none"> • Prices too good to be true. • Fakes use poorer quality ingredients. For fake fragrances the scent lasts significantly shorter than with genuine fragrances. • Packaging (bottles, stoppers, and labels) is flimsy.
<u>Prices of original products (€):</u>	<p>EDP/Women's fragrance: 40-55 (50 ml)</p> <p>EDT/Men's fragrance: 36-46 (50 ml), discounted EDT at 45-50 (100 ml)</p> <p>Lower-rated brands, sold in Georgia: 34 (EDT of 50 ml), 42 (EDT of 75 ml)</p>
<u>Prices counterfeit products (€):</u>	Copied fragrances sell at one tenth of the price for the original.

6. Product: cosmetics (face cream, powders, lipsticks, shampoos, toothpaste)	
<u>Brands (examples):</u>	Estée Lauder, L'Oréal (which owns Maybelline), Revlon, Lancôme, Dior, Clinique, Avon, Procter and Gamble, Oriflame, Coty, Shiseido, Helene Rubinstein, Mary Kay, Unilever, Wella, Beiersdorf, Henkel
<u>Product-Market characteristics:</u>	<p>The largest markets (by decreasing size) are skin care, hair care, sun protection, body care products. There is a trend towards wellness/therapeutic products with ingredients that include vitamins. This has led to increased use of new, active ingredients, including natural products.</p> <p>The market comprises original products, legitimate brand parasites or generic versions (using comparable active ingredients) and fakes. Specifically, the market for luxury cosmetics was €22.4 billion in 2008.</p> <p>It is reported that 30% of all cosmetics in Russia are fakes.</p>

6. Product: cosmetics (face cream, powders, lipsticks, shampoos, toothpaste)

	<p>Two thirds of goods seized in the EU are traced back to Asia!</p> <p>Fakes carry a health risks as they can cause allergy. Fakes use unregulated additives while also preservatives are missing (leading to infections, allergic reactions, and microbiological contamination).</p> <p>Georgia: we have indeed found counterfeit products sold in the open market (e.g. NEILO market outside Tbilisi).</p>
<u>How to spot counterfeit:</u>	<ul style="list-style-type: none"> • Differences in markings
<u>Prices of original products (€):</u>	Wide price range
<u>Prices counterfeit products (€):</u>	Non-original products are 40-50% of the price of original products.

7. Product: medicines

<u>Brands (examples):</u>	Pfizer, GlaxoSmithKline, Bristol-Myers, Sanofi-Aventis, Astra Zeneca, Johnson & Johnson, Novartis, Roche, Genentech, Eli Lilly, Solvay, Merck, Abbott Laboratories, Bayer
<u>Product-Market characteristics:</u>	<p>The market is composed of branded drugs, generics (copied of innovative products that are out of protection), substandard products and fake drugs. Medicines MUST be registered. Medicines are sold as prescription drugs or over-the-counter and self-medication drugs (sold also in stores, e.g. USA).</p> <p>The most significant <u>product areas</u> are: alimentary and metabolism, systemic anti-infectives, cardiovascular system, musculo-skeletal system, respiratory system, central nervous system.</p> <p>Products come in six dosage forms: tablets/capsules, creams/powders, injectables, inhalers, suppositories, syrups.</p> <p><u>Generics:</u></p> <p>Generics don't look very fancy; they have strange names; they don't look as high quality but they are safe. In the USA three quarters of APPROVED drugs now have generic versions. Almost all of top-selling medicines have competitors. Generics have nearly half of the pharmaceuticals market.</p>

7. Product: medicines

Substandard medicines:

Not all are counterfeit because not all of them have been deliberately and fraudulently mislabeled!

Counterfeit:

Counterfeit medicines can apply to both **branded AND generic products**. The industry estimates that 1% of sales in developed countries to 10% in developing countries are counterfeit. This can increase to over 30% in Africa (e.g. Nigeria¹⁶). A chaotic drug distribution system helps the trade in counterfeits. If counterfeits cannot be sold through pharmacies, they may yet find their way to institutions such as nursing homes/hospices and clinics where they are sold at discounts on the contractual promise not to resell the drugs on the open market. Medicines purchased over the internet from sites that conceal their physical address are counterfeit in over 50% of cases. The most important suppliers of counterfeit drugs are China and India.

In developing countries, the top counterfeit medicines are in the following categories: hypertension, asthma, analgesics, diarrhea, vitamins, anemia, schizophrenia, HIV, antibiotics, anti-malaria, obesity, Viagra.

In the pharmaceutical sector patents apply to product substances. Trademarks are less effective than patents.

Some of the imports fall under a system of Mutual Recognition: one country accepts the approvals of another country, to apply within its national context, for the marketing of a new product.

Fakes and low-cost medicines carry a health risks. They may contain high levels of impurities and contaminants, use cheap substitute ingredients, use incorrect quantities of active ingredients or omit certain ingredients altogether. This is because ingredients are by far the largest the largest cost component in manufacturing medicines (typically over two-thirds), so counterfeiters will seek to save on this cost item.

Also, substandard products are manufactured in facilities not using quality assurance (GMP).

The situation in Georgia:

- Drugs must be registered/approved (Ministry of Health)

¹⁶ The counterfeits include drugs which have expired or drugs without an expiry date or expired but re-labelled drugs (with the intention of extending their shelf life).

7. Product: medicines	
	<p>before being sold in pharmacies.</p> <ul style="list-style-type: none"> • Prices of drugs have been <u>liberalised</u>. • Georgia counts some 68 local manufacturers of medicines; few are GMP certified. • Medicines are mostly sold through three chains (Aversi, GPC and PSP). • Though there have been cases of substandard medicines sold in the market, the market share of counterfeits is not believed to be significant. We have NOT spotted counterfeit medicines in the open market! However, health insurance coverage in Georgia is far from universal and poor households (in particular the elderly) may find medicine expensive. • Also, with 400 samples annually which the inspection department (Ministry of Health) sends for testing to a private laboratory, the risk of counterfeit and inefficient drugs is far from minimized.
<u>How to spot counterfeit:</u>	<ul style="list-style-type: none"> • Basic packaging. • Counterfeit drugs are rarely efficient. • Treatment with ineffective counterfeit drugs can lead to the emergence of resistant organisms.
<u>Prices of original products (€):</u>	Generic drugs sell at a discount of 30-80% compared to the list price of the originals.
<u>Prices counterfeit products (€):</u>	Selling fake medicine is highly profitable as the production costs may be just 2-4% of the retail price.

8. Product: watches	
<u>Brands (examples):</u>	<ul style="list-style-type: none"> • Original watch manufacturers: Audemars Piguet, Balmain, Blancpain, Breitling, Chopard, Hublot, Longines, Montblanc, Omega, Orient, Philippe Patek, Rado, Raymond Weil, Rolex, Tag Heuer, Vacheron Constantin, Seiko • Fashion designers products: Bulgari, Dior, D&G, Gucci, Tiffany, Vogue, YSL, Cartier, Pierre Cardin, Boss, Tommy Hilfiger, Anne Klein, Swatch
<u>Product-Market characteristics:</u>	<p><u>Segmentation of the watches market:</u></p> <ul style="list-style-type: none"> • People who want to pay the lowest possible price for any watch that works reasonably well (23%); • People who value watches for their long life, good workmanship, good material, and good styling (46%); • People who look not only for useful product features but also for meaningful emotional qualities (31%).

8. Product: watches

	<p>We suspect that counterfeiting is likely to appear in the latter two segments.</p> <p>Luxury watches are often appreciated as jewellery rather than just as timepieces. The luxury watch market is almost 100% dominated by Swiss companies. The average export price of a Swiss watch was 563€ in 2008.</p> <p>China and Hong Kong exported 976.1 million watches at an average export price of just two dollars (2008). The next three in the league -- Switzerland, Germany and USA -- exported only 45.4 million watches. However, the export value of Switzerland was \$ 15.8 billion against \$ 9.8 billion for exports originating from China and Hong Kong.</p> <p>Counterfeited models are current or recent (not old models for which no market exists). A SEIKO or CITIZEN watch is not considered a luxury product; hence the counterfeit market is not lucrative.</p> <p>Counterfeit watches are basically overpriced disposable products (poor value for money!). Counterfeit products vary from lookalike watches to exact reproductions of genuine watches (with logo, serial numbers and other markings). Replica watches may have only 2-3 years life span.</p> <p>Counterfeit models are bought from street vendors, flea markets, less reputable shops and through internet.</p> <p>Counterfeit products infringe on the name brands, they don't really hurt sales of luxury products; manufacturers don't have a financial incentive to aggressively pursue counterfeiters.</p> <p>Georgia: 40% of wrist watches imports (in value) originate from China, UAE and Turkey (2010). We have indeed found hard evidence of counterfeit watches sold in the market (Kidobani market in Tbilisi).</p>
<p><u>How to spot counterfeit:</u></p>	<ul style="list-style-type: none"> • A real luxury brand will be sold through well known dealers! • Too low priced to be good!
<p><u>Prices of original products (€):</u></p>	<p>Designer fashion brands: 50-130</p> <p>Mid-range models: 130-300</p> <p>Luxury/top models: 300-2,100</p>
<p><u>Prices counterfeit products</u></p>	<p>Models of designer fashion brands: 30-50</p>

8. Product: watches	
(€):	<p>Models of top specialist brands: 68-110</p> <p>Made in China replica watches: up to 90</p> <p>Top Swiss watch replicas may fetch 140-360</p>

9. Product: fashion jewellery (necklaces, bracelets, chains, pendants, rings, earrings, brooches)	
<u>Brands (examples):</u>	Gucci, Tiffany, Juicy, Bulgari, Cartier
<u>Product-Market characteristics:</u>	<p>The consumer wears fashion jewellery as ornamentation to complement a garment.</p> <p>Fashion jewellery is made out of (less valuable) materials which do NOT include gold and gems. Authentic fashion jewellery uses quality materials and is handmade. Non-authentic jewellery is machine made. The market is nevertheless divided into three segments: high-end (dominated by fashion designers, and, labeled), medium-range, low-end (very short life cycles).</p> <p>In replicas, gems are replaced by zirconia (zirconia can be hued to a different color to imitate emerald, sapphire, turquoise). Stainless steel is good for replica in that it shines just as bright as silver.</p> <p>The market size is in excess of € 120 billion.</p> <p>Replica jewellery typically costs one tenth – or even less – than the real thing (entry level signed jewellery).</p> <p>Georgia: we have found lots of cheapish fashion jewellery sold in the market, but they are essentially low-cost items, not reminding of any brand.</p>
<u>How to spot counterfeit:</u>	<ul style="list-style-type: none"> • Signed jewellery comes with a stamped hallmark.
<u>Prices of original products (€):</u>	<ul style="list-style-type: none"> • Necklace (signed jewellery): starts at 200 (silver); by contrast, a <u>golden</u> necklace starts in the 4-digits prices, 4-digits price for <u>sapphire</u> jewellery, 4-digits to 6-digits for <u>ruby</u> jewellery, 5 digits-price for <u>diamond</u> jewellery • Necklace (non-premium brand): 19-72 • Bracelet (non-premium brand): 35-72 • Pearl necklaces: 3-4 digits prices
<u>Prices counterfeit products</u>	<ul style="list-style-type: none"> • Replica bracelets: 10-27; 33-58 (metal+leather) • Replica rings: 9-13

9. Product: fashion jewellery (necklaces, bracelets, chains, pendants, rings, earrings, brooches)

(€):

- Replica necklace: 32-38
- „Faux’ pearl necklace: 20-33

10. Product: sunglasses

Brands (examples):

Vogue, Tiffany, YSL, Gucci, D&G, Dior, Bulgari, Ray Ban, Porsche

Product-Market characteristics:

Sunglasses drive the eyewear market, with the premium-price segment growing faster than the rest of the market. The market for non-prescription sunglasses is influenced by fashion. Fashion contributes to shorter replacement cycles as styles change.

Counterfeits may not provide the proper protection against UV rays and may not be impact resistant (hence exposure to eye injuries).

China is the major manufacturer of counterfeit and replicas.

Georgia: we have found quantities of counterfeit sunglasses sold in the market, alongside low-cost sunglasses and replicas.

How to spot counterfeit:

- Poor packaging. Low and mid-range counterfeit does NOT come with a box.
- Location and quality of the logo.
- Lower quality materials/components used in counterfeits, hence counterfeits have a shorter lifetime.
- Originals feel heavier than the counterfeits.

Prices of original products (€):

Entry market models: 50-125

Mid-range: up to 325

Top range: up to 780 (there exist models with a +2000 € price tag)

Georgia: 20 for designer sunglasses and 50-250 price range for well-known brands.

Prices counterfeit products (€):

Fakes are sold as cheap as 2€ (Shanghai)

Replicas are sold through internet at 1-2€ a piece.

Georgia: lowest quality is sold at 4-8€/piece, mid-range at 17-30, highest quality is sold 50-77.

10. Product: sunglasses

Hence, in Georgia, counterfeits are sold at **one tenth** (or less) of the price of the authentic model.

11. Product: automotive spare parts (brake systems, suspension parts, filters, spark plugs, distributor caps, alternators, valves, rubber rings/belts, wipers, car interior accessories, antifreeze, transmission fluids, air conditioner condensers)

Brands (examples):

Valeo, Faurecia, Bosch, Champion, Cummins, Delco, Lucas Industries, Delphi

Product-Market characteristics:

The market for parts and components can be divided into two segments: the supply to the “original equipment manufacturer”, known as the OEM market, and the after-market. Sales in the after-market are dependent on the total car park, age and durability of cars. The increased average age of cars offers increased opportunities for the after-market sales of spare parts.

The after-market consists of three segments:

- Original equipment replacement parts
- Free sector of non-original parts (independent after-market)
- Accessories (allowing to customise the car)

In the USA, a significant re-manufacturing industry exists: goods that are entirely or partially composed of components recovered from end-of-life products.

In Europe, the OEM market of parts accounts for 70% of the market. Car manufacturers are trying to get a grip on the after-market, in order to increase profitability by selling more OEM products in this segment. However, the share of official dealerships in vehicle servicing is going down (in favor of independent garages), in spite of an increasing share of electronic content in the vehicles.

The industry estimates that 6-9% of world trade is in fakes. In the Middle East the number soars to 30%, in India and Algeria (50%) significantly higher.

Fakes and low-cost products use substandard materials (e.g. metals) and counterfeiters conduct no – or limited -- product testing. As a result:

- Low-cost parts have a shorter life expectancy (half).
- Safety concerns exist with counterfeit products, in particular brake and suspension parts.

11. Product: automotive spare parts (brake systems, suspension parts, filters, spark plugs, distributor caps, alternators, valves, rubber rings/belts, wipers, car interior accessories, antifreeze, transmission fluids, air conditioner condensers)

	<p><u>Georgia:</u></p> <ul style="list-style-type: none"> • Non-genuine parts are believed to have 40-45% market share whereas genuine parts recovered from dismantled imported second-hand cars would account for another 40-45% market share. • Insurance companies in Georgia require owners of new cars to use maintenance services from official shops for at least the first 2 years. • Approved car dealers in Georgia complain that Customs do not systematically inspect and halt imported shipments of fake spare parts.
<p><u>How to spot counterfeit:</u></p>	<ul style="list-style-type: none"> • Spelling mistakes and altered logos • Variations in packaging (graphics and colours) • Installation problems • Absence of warranty on the counterfeit parts
<p><u>Prices of original products (€):</u></p>	<p>There exists a wide variety of prices, even for the same genuine part, depending on the import channel used. Retail prices can vary 30%.</p>
<p><u>Prices counterfeit products (€):</u></p>	<p>Generally, the retail price of counterfeit parts is said to be less than half the price for original parts.</p> <p><u>Georgia:</u></p> <ul style="list-style-type: none"> • Used car parts are sold (by breakers) at a 70% discount on the price of new. • According to evidence gathered in Georgia, low-cost parts cost one third to one fifth of originals.

12. Product: DVDs and CDs recorded with audio and video

<p><u>Brands (examples):</u></p>	<p>Sony, EMI, Warner, Universal which have 70% world music market share.</p> <p>Movie market: Sony (Columbia), Walt Disney, NBC Universal, Fox Entertainment, Paramount, Warner Bros, Lions Gate, Dreamworks, MGM (in which Sony has a stake), CBS, United Artists</p>
<p><u>Product-Market</u></p>	<p>DVD-Audio is a digital format for delivering high-fidelity audio</p>

12. Product: DVDs and CDs recorded with audio and video

<p><u>characteristics:</u></p>	<p>content (not intended to be a video delivery format) and is not the same as video DVDs containing films or music videos.</p> <p>DVD-Audio discs may employ a copy protection mechanism designed to prevent users from extracting audio to computers and portable media players.</p> <p>The DVD-video's content-scrambling system was quickly broken.</p> <p>Piracy in Georgia is rife. It is harder to find licensed products than pirated products!</p>
<p><u>How to spot counterfeit:</u></p>	<ul style="list-style-type: none"> • Poor packaging • Altered logos
<p><u>Prices of original products (€):</u></p>	<p>Originals sell for 7-25€.</p>
<p><u>Prices counterfeit products (€):</u></p>	<p>Pirated versions of popular audio and video are sold for 1-2€ in the open market, so typically less than 10% of the original's price. Supermarkets in Georgia also sell higher-quality copies for 4-6€.</p>

13. Product: computer software

<p><u>Brands (examples):</u></p>	<p>Microsoft, IBM, Oracle, SAP, Norton, Adobe, Sage, Apple, SAS, Sun Microsystems, Kaspersky, McAfee</p> <p>Popular Operating Systems: Microsoft, UNIX, Mac OS, IBM (OS/2), GNU/Linux, BSD</p>
<p><u>Product-Market characteristics:</u></p>	<p>The software market comprises two segments (of about equal market share in the EU):</p> <ul style="list-style-type: none"> • Operating systems: software that manages computer hardware and acts as an intermediary between application programmes and the computer. • Applications: consumer, commercial, industrial and technical software that helps the user to perform specific tasks (examples: Office tasks, graphics, management/accounting, entertainment, educational) <p>Microsoft's share in global software revenue is more than 20% (though the market is not solely for computers but also gaming</p>

13. Product: computer software

consoles). The top-5 computer software companies have a market share over 45% in the global software market.

Windows is believed to have 87% market share in Operating Systems for desktop computers, with Mac OS 7% and Linux 1%. IBM has OS has an overwhelming share (+90%) of Operating Systems for mainframe computers... and LINUX for supercomputers, over 90%.

Forms of counterfeiting (and intellectual property theft):

- Hard-disk loading: when computer systems and re-sellers pre-install illegal copies of software onto PCs prior to sale. Dealers use one legally acquired copy but install it on many machines.
- Formal duplication: creation of compilation CDs that contain pirated versions of a number of software programmes.
- Downloading copyrighted software from the internet.

Counterfeit software is organized in three levels of quality: high-grade, mid-grade, low-grade according to the attempt to include piracy prevention features and to appear as being genuine.

By some estimates, over 40% of software used in the USA is illegally copied or pirated. Piracy levels are estimated to be between 38% (Ireland) and 62% (Greece) in EU countries. It is closer to 70% in Eastern Europe. In some countries 80-95% of the software in use is pirated.

Georgia:

Piracy is somehow correlated with the stock of computers in a country. Whereas the number of computers was estimated between 192K and 206K five/six years ago, the current stock is estimated to be in the 350K-400K range. Computers are imported in whole or in parts, to be assembled locally. On the basis of internet subscription revenues data (Source: Ministry of Economy) we estimate that at least 320K computers are connected to internet whereas the number of internet users is estimated to be a multiple (1.2 million).

- The counterfeit market is low-grade.
- The piracy rate is said to be 90%. Furthermore, the industry says that many computers – even in Government -- are sold with pirated Applications Software even though banks have started to buy licensed copies.
- Even so, we have not seen much pirated computer software sold in the open market. In other countries pirated software is commonly sold alongside music, movies and computer games.

13. Product: computer software

<p><u>How to spot counterfeit:</u></p>	<ul style="list-style-type: none"> • Spelling mistakes and altered logos. • Absence of proof of authenticity (such as hologram), License Terms, manuals, recovery media. • Unlicensed/pirated software does not carry the warranties associated with legal software and cannot offer updates. • Pirated software can crash your computer and may contain “spyware”. Criminals use counterfeit software to distribute viruses and Trojan Horses! • Pirated/counterfeit software is normally not sold in major retail shops.
<p><u>Prices of original products (€):</u></p>	<ul style="list-style-type: none"> • Home editions of Windows Operating Systems cost 60-90€. • Application software is priced in a range going from 2-digits to 4 digits. An ERP software price tag can be in the 5-digits. • An application software such as Microsoft Office 2007 (Home edition) costs around 100€, with a Professional Edition at least three times more. • Latest internet security packages cost 21-37€ (basic version) with a multiple paid for advanced versions.
<p><u>Prices counterfeit products (€):</u></p>	<p>Pirated versions of popular software is sold 1-2€ in the market, typically less than 10% of the price of the original.</p>

14. Product: computer games

<p><u>Brands (examples):</u></p>	<p>NINTENDO, Sony, Microsoft, Sega...</p>
<p><u>Product-Market characteristics:</u></p>	<p>Computer games are produced in versions for PC and consoles such as XBOX (owned by Microsoft), PlayStation (owned by Sony) and Wii. The next-generation consoles sold so far globally number around 75 million. By contrast about 1 billion PCs are in operation of which an estimated 20% are equipped with graphics cards allowing it to play the latest titles of computer games.</p> <p>Piracy of console version of games is less widespread: to successfully play a pirated game on a console, one needs to modify the console in some way which the user may not consider worthwhile to do.</p> <p>Manufacturers of games have used DRM technologies (digital rights management) which control access; computer games sometimes use DRM to limit the number of systems the game can be installed on (by requiring authentication with an online server).</p>

14. Product: computer games

	<p>Manufacturers can also apply embedded digital watermarks; this helps provide prosecution evidence for purely legal avenues of rights management.</p> <ul style="list-style-type: none"> • A computer game is typically a fashion product: a new title commands a high price upon release. For instance, FIFA11 price on release is around 43€ (PC version); the price of FIFA10 is 15€ and FIFA06 only 7€. • The console version of the game is 20% more expensive than the PC version. Prices for genuine products also vary across countries with US prices significantly lower than in Australia for instance. <p>However, some games have a 90% <u>piracy rate</u>. Pirated versions of computer games are downloaded from popular piracy-specific websites, almost immediately upon release. Up to half of all internet traffic can consist of illegally shared files at any time (70% being audio and video files).</p> <p>Because of availability of pirated versions for PC, the console versions outsell the PC versions (by a factor of 8 to 1 for Call of Duty 4, and by a factor of 5 to 1 for Fallout 3).</p> <p>Also because of the Free Rider Problem with PC versions of games, the official release of these versions follow the release of the console version by 6 months or more. Piracy is basically killing the PC version!</p> <p>Escalating piracy creates a vicious circle: illegitimate sales mean prices typically start high and remain high, with less scope for discounts, which in turn makes it more likely that a game will be pirated (under the excuse that games are too expensive).</p> <p>It is found that the more popular/desired games are also pirated more heavily than less popular games.</p> <p>Georgia: only one store seems to sell licensed computer games! Pirated games are sold in the open market.</p>
<p><u>How to spot counterfeit:</u></p>	<ul style="list-style-type: none"> • Spelling mistakes and altered logos (DVD versions) • Unlicensed/pirated software does not carry the warranties associated with legal software • Poorly cracked pirated copies may crash at certain points in the game because the leak version has a deliberate bug.
<p><u>Prices of original products (€):</u></p>	<p>“Call of Duty Black Ops” is priced 45€ upon release. Call of Duty2 is priced as low as 16€.</p>
<p><u>Prices counterfeit products</u></p>	<p>A pirated game for PC sells for around 1.5€ in the street</p>

14. Product: computer games

(€):

(Georgia).

The price for a pirated console game (in Shanghai) is 0.6-1.1€ only.

15. Product: computers and hardware (laptops, computer chips, keyboards, monitors, memory sticks, flash drives, integrated circuits, printers, printer cartridges)

Brands (examples):

For computers: HP, Dell, ACER, Samsung, Apple, Toshiba, Fujitsu, Sony

Printer cartridges: HP, Canon, Epson, Lexmark, Konica-Minolta, Ricoh, Xerox

Product-Market characteristics:

Computers:

Fake computers have gained little market acceptance.

High street prices in the US market are some 30% below prices in the EU!

Printer cartridges:

Used cartridges are remanufactured and sold at 50-60% discount.

Fake printer cartridges (from China) are flooding a high-growth market; in the USA an estimated 1 in 20 cartridges are fakes, elsewhere half the market is bogus.

The fakes severely damage to the reputation of brands (e.g. HP).

The industry complains that Customs do not systematically investigate imports.

Georgia: the industry estimates that only 10-15% of cartridges are original, with some 25% generic cartridges and the remainder being counterfeit. Among the latter we would find re-filled cartridges which we are not sure could be regarded an infringement of IPR.

How to spot counterfeit:

- Computers: originals have certified security tags; fake computers either do not work or performance is sub-standard.
- Batteries: not working.
- Cartridges: leaking, poor quality printouts, potential damage to printers, reduced number of printed copies per cartridge.

15. Product: computers and hardware (laptops, computer chips, keyboards, monitors, memory sticks, flash drives, integrated circuits, printers, printer cartridges)

Prices of original products (€):

Computers: netbooks (start at 140 to 320), laptops (start at 325 to 3,100)

Prices counterfeit products (€):

Computers: 36-110 (too good to be true!), 250 for a fake Sony Vaio, 202 for a fake MacBook. Fakes are priced at something like **25%-40%** of the price of originals.

Cartridges: counterfeiters of cartridges have no incentive to sell at prices that undercut the recycled cartridges (which cost typically 20-50-80% of the price for an original). They will try to deceive consumers.

16. Product: cell phones/smart phones, tablets, MP3 players, accessories (plugs, sockets, fuses, cables, chargers...)

Brands (examples):

Apple, Nokia, Motorola, Samsung, HP, HTC, LG, RIM (the Canadian manufacturer of the Blackberry)

Product-Market characteristics:

Cell phones are primarily known for voice mail while smartphones for their capability to send/receive internet e-mail through a mobile network or WiFi connectivity.

Mobile phones are sold locked (you are bound to a carrier) or unlocked (you are not bound to a carrier). Obviously, counterfeit and lookalike phones are unlocked versions.

Manufacturers of off-brand phones made in China purchase a pre-made case mould and then use their own electronics and components inside. The operating system (OS) of off-brand phones is not unique.

Counterfeiters do not apply quality control. Counterfeiters do not advertise and have no brand management.

The industry estimates that the counterfeit phones and other electronics market is now a \$100 billion worldwide problem. More than 10% of cell phones sold globally are Chinese made counterfeits with a higher percentage at the higher end of the market.

Georgia: according to official dealer, the problem with fake cell phones escalated three ago with plunging purchasing power. Fakes took a 70-80% market share (in volume). Today the market share is closer to 50%. The cell phone market in Georgia is estimated at 800,000 units of which half would be

16. Product: cell phones/smart phones, tablets, MP3 players, accessories (plugs, sockets, fuses, cables, chargers...)

	<p>fakes (of which again 70% are NOKIA fakes, 10-15% Samsung, 10% iPhone). The industry asserts that Customs applies only random investigations of cell phone shipments originating from China.</p> <p>For sure, when visiting shops in Tbilisi, half the shelf space is occupied by counterfeit products!</p>
<p><u>How to spot counterfeit:</u></p>	<ul style="list-style-type: none"> • Counterfeit models come without warranty and after-sales service. • Counterfeit models may miss certain functions while adding others that are not available with the original. • Fakes operate with a lower processing rate and lower resolution of the screens. • Cheap batteries used which could explode.
<p><u>Prices of original products (€):</u></p>	<p>Smartphones: 188-340-800; Apple iPhone 4 (32 GB): 800 (sites on-line advertise originals at a 10% discount)</p> <p>IPad 32GB Wifi/TV: 473</p> <p>Nokia N8: 379 (Belgium)</p> <p><u>Georgia:</u></p> <p>Nokia N8: 409</p> <p>Nokia 5800:220</p> <p>Cell phones: 32-55</p> <p>Smartphones (prices for models available in Georgia): 232-540</p> <p><u>Battery</u> for best selling cell phone is sold in Georgia for 23-26</p>
<p><u>Prices counterfeit products (€):</u></p>	<p>Typically, counterfeits are priced one fifth of the originals, some high end models at 10% only. Fake cell phone batteries are sold at 15-50% of the original model.</p> <p><u>Georgia:</u></p> <p>Nokia N8: 50-100</p> <p>Nokia 5800: 47</p> <p>IPad 32GB WiFi/TV is priced 80</p> <p>Cell phones: the cheapest models are sold for as little as 15 to 30</p>

16. Product: cell phones/smart phones, tablets, MP3 players, accessories (plugs, sockets, fuses, cables, chargers...)

	<p>Smart phones: 50-130</p> <p>Cell phone battery: 6.4 €, equivalent to a 75% discount over the authentic product.</p>
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17. Product: toys (traditional toys excluding video games)

<u>Brands (examples):</u>	<p>Mattel (Barbie), Fisher-Price, Disney, Lego, Hasbro, Chicco, Tyco, Playmobil, Playskool, MB, Mega Bloks, Hot Wheels, Franklin, Matchbox, Ravensburger</p>
<u>Product-Market characteristics:</u>	<p>The <u>segments</u> in the traditional toys market are: electronic toys, technical toys, educational toys and puzzles, wooden toys, dolls and puppets, playhouses</p> <p>Traditional toys constitute about 70% of the toys market (including consoles and video games).</p> <p>Per child expenditure on toys in high income markets are 10 to 30 larger than in low-income/middle-income countries. Expenditures in Africa are only 1/50 of the average level in Europe.</p> <p>China, a low-cost producer, is the leading extra-EU supplier of traditional toys in the EU market with 89% of extra-EU imports (2009), easily capturing half of EU consumption. As a result, few buyers of counterfeit toys believe or suspect to have bought a counterfeit.</p> <p>The products most counterfeited are action figures (e.g. Batman), figures from TV, Barbie dolls and playsets, electronic games, Disney toys. Barbie dolls are the most counterfeited toy in the USA. It often happens that the design of the product is copied and sold under a similar – but not identical – trademark.</p> <p>Counterfeits originate from China, Korea, HK and Taiwan Province.</p> <p>The industry believes that counterfeit toys represent 12% of the European toy market.</p> <p><u>Georgia:</u> low-priced toys, imported from China, are sold in the open market. A Barbie lookalike doll is sold for as low as € 2.1!</p>
<u>How to spot counterfeit:</u>	<ul style="list-style-type: none"> • Some counterfeits cannot do things that originals do. • Counterfeit products may contain small parts, toxic substances and hazardous materials, which contravene

17. Product: toys (traditional toys excluding video games)	
	safety standards.
<u>Prices of original products (€):</u>	Originals prices vary significantly from very cheap to expensive. However, the models most subject to counterfeiting are popular higher-priced toys.
<u>Prices counterfeit products (€):</u>	Counterfeits are priced half of the originals.

18. Product: manufactured tobacco products (cigarettes, cigars...)	
<u>Brands (examples):</u>	Marlboro, Benson & Hedges, Camel
<u>Product-Market characteristics:</u>	In middle-income countries 20% of products may be counterfeit against 10% or less in Europe and USA. <u>Georgia:</u> although the UNDP-Georgia study suggests a high incidence of counterfeit cigarettes, this opinion is not widely shared. The problem used to be contraband (from Russia), not counterfeit. Ourselves we have NOT found hard evidence of counterfeit tobacco products being sold in the open market. And ALL products seem to carry the Excise label.
<u>How to spot counterfeit:</u>	<ul style="list-style-type: none"> • Labels: spelling mistakes and altered logos • Absence of safety warnings or health warnings • Unusual or unexpected taste; tobacco may be mixed with worthless leaves from non-tobacco plants • Higher nicotine levels, unhealthy mix of cancer-causing chemicals
<u>Prices of original products (€):</u>	Cigarettes: 24 € (10 packs or 200 cigarettes)
<u>Prices counterfeit products (€):</u>	-

19. Product: spirits, sparkling wines (Champagne)	
<u>Brands (examples):</u>	Johnnie Walker, Teacher's, Chivas, Jack Daniel's, Glenmorangie, Remy Martin, Courvoisier, Absolut, Laurent-

19. Product: spirits, sparkling wines (Champagne)	
	Perrier
<u>Product-Market characteristics:</u>	<p>Famous brand-name <u>spirits</u> are the most counterfeited forms of alcohol. In middle-income countries, 20% of products may be counterfeit against 10% or less in Europe and USA. High import duties and excise taxes tend to spur contraband as well as trade in counterfeit products.</p> <p><u>Champagne</u>: production is supply-constrained (demand outstrips what the region can produce). Counterfeit Champagne bottles may contain simple sparkling wine (sparkling wine is a carbonated wine – with carbon dioxide added during the second fermentation stage of the grapes).</p> <p>Within the spirits category, <u>Georgia</u> overwhelmingly imports vodka, followed by whisky. Sparkling wine (€0.205) million accounts for half of wine imports. We have not found hard evidence, in Georgia, of counterfeit products of famous brands! We do not rule out the possibility of tax evasion cases (which is not an IPR infringement issue) but.</p>
<u>How to spot counterfeit:</u>	<ul style="list-style-type: none"> • Spelling mistakes and altered logos. • Absence of safety warnings or health warnings. • Unusual or unexpected taste; alcohol may be watered down. • Counterfeit spirits can contain high levels of methanol (causes liver damage, breathing difficulties, coma and even death).
<u>Prices of original products (€):</u>	<p>Scotch Whisky: 14-38 (duty-free) for 1 litre (cheaper whisky is a blend whereas expensive whisky is single malt)</p> <p>Cognac: 32-40 for 1 litre</p> <p>Vodka: 13-17 for 1 litre</p> <p>Champagne: 28 for 0.75 litre (leading brand)</p> <p><u>Prices recorded in Georgia (tax-included):</u></p> <p>Chivas 12 yrs: 36 for 0.75 litre</p> <p>Johnnie Walker Red Label: 18 for 0.75 litre</p> <p>Cognac Remy Martin: 65 for 1 litre</p> <p>Vodka: 18-21 for 1 litre</p>
<u>Prices counterfeit products (€):</u>	<p>Typically, the price of counterfeit spirits is half to a third of the normal retail price. If the copy is near perfect, then the price tag to consumers could be very close to the legitimate one.</p>

19. Product: spirits, sparkling wines (Champagne)

	Georgia: the industry considers that the market for counterfeit spirits from well-known brands is <i>small</i> .
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20. Product: Georgian wines

<u>Brands (examples):</u>	Georgian wines
<u>Product-Market characteristics:</u>	<p>Red and white wine, sparkling wine. Georgian wines have a distinctive fruit taste.</p> <p>Wine grapes have been cultivated since 7,000 BC making the Georgian territory the oldest wine-producing area known.</p> <p>Georgian wine is well-known in the CIS. It once controlled a significant share of the Russian market and accounted for 80% of Georgian exports (2006).</p> <p>The FAO believes that 90% of wine sold abroad as Georgian wine is counterfeit: cheap Bulgarian/Turkish wine with sugar added and bottled with Georgian label. The Ministry of Agriculture claims that NO fake wine is exported from Georgia. The trade is said to be controlled by mafia.</p> <p>The counterfeit wine causes severe brand damage to Georgia. Losses to the industry are substantial. The authorities seek geographic recognition for wines of 18 geographic locations.</p> <p>With direct exports to Russia closed, authentic Georgian wine seeks expansion in other markets. Currently the wineries purchase only 100,000 ton of grapes against a production of 265,000 ton (in a good harvest year).</p>
<u>How to spot counterfeit:</u>	<ul style="list-style-type: none"> • The taste is different. • Sometimes the label offers clues. • Corks are different. • Bottle numbering can be applied to premium vintages
<u>Prices of original products (€):</u>	<p>In Georgia, authentic Georgian wine sells in the 6-13€ retail price range... not in the prime/fine wines price range.</p> <p>But in the USA, Georgian wine sells in the 10-18€ range.</p>
<u>Prices counterfeit products (€):</u>	<p>Forgery generally occurs with supply-constrained fine/premium wines (experts say that no more than 1% of rare vintages sold are counterfeit).</p> <p>The profit potential is huge for forgeries of a 1,000 \$ bottle but</p>

20. Product: Georgian wines

not for 50-80 \$ bottles. However, the “Georgian” wines case is exceptional but it is still attractive for counterfeiters because of the volume involved. **Counterfeiters have NO interest to sell counterfeit wine at discount prices** which would indicate to the consumer that the vintage may be a fake.

PROFILING THE CONSUMER

What research has revealed?

In high-income countries:

- One in eight -- to one in five -- consumers knowingly buy counterfeit products.
- One in two consumers buys look-alikes (which do not carry the same stigma as fakes).
- Brands are of lesser importance to lower-income consumers for clothes, fragrances, beverages... but more important in the case of footwear and tobacco products.
- Brands are of more importance to the younger generation (18-24 years old) than to the older generation (55-64 years old) for clothes and computers but less important in the case of footwear, cell phones, food.
- Purchases of counterfeit products are concentrated in the middle class.
- Buyers of counterfeits are **also** consumers of luxury products. In fact, they are more likely to buy genuine products.
- Counterfeits are likely to be purchased in locations which not – or are less – regulated, even though visible.
- The motivations behind buying counterfeits are (by decreasing order of importance): lower price of counterfeits (e.g. 29% of consumers reported in Spain), the ability to follow fashion (buying counterfeits allows one to own more fashion goods than when we buy the genuine product only), the personal satisfaction with the products (derived from acceptable quality, e.g. garments) and their usefulness.
- The willingness to buy counterfeit increases with an escalating price discount of the fake product over the price of the original: a study shows that 38% of Australian consumers knowingly purchase the counterfeit toys if they were priced at least 75% cheaper to the original. This propensity falls to 18% if the price of the counterfeit is only 25% cheaper¹⁷.

In developing countries:

- Low price is the key factor for buying counterfeit products. **The price is three times more a determining factor than it is in high-income countries.** If the product looks a good imitation and the price is right, the consumer will buy it!
- In Georgia, people also consider the lower price of counterfeit goods as the prime reason for purchasing them. For clothing cheap prices is the motivation of 61.7% of respondents while for cell phones, DVDs, computer games, software, toys this criterion is mentioned by between 24% and 35% of respondents. [Source: UNDP-Georgia, 2010]
- People will stop buying counterfeits if they bring harm (e.g. medicines, electrical goods).
- Buying fakes does not carry so much a stigma.

¹⁷ In a study on computer games, 41% of people surveyed would knowingly acquire counterfeited games when these are sold at 75% discount. This falls to 19% if the price discount is only 25%.

IMPACT ASSESSMENT: PRODUCERS/ DISTRIBUTORS, CONSUMERS, GOVERNMENT

A BACK-OF-THE-ENVELOPE CALCULATION

In this chapter we shall be calculating the market share of counterfeit products (within Georgia's imports), augmented with a notional value of domestically produced counterfeit recorded DVDs and CDs of music, movies and computer games as well as a notional value for the downloaded software, music and video. The value of counterfeit goods is given at estimated CIF import prices.

Our **back-of-the-envelope** method also provides a basis for calculating losses to rights holders under the (unrealistic) assumption that all counterfeit goods are substituted by genuine goods, at full price.

Finally, the method provides a basis for calculating revenues to wholesalers/retailers from margins applied in the Georgian market, as well tax revenue. To allow us computing revenues from distribution and tax revenue to Government, one has to gain an understanding of how the retail price is derived from the CIF import price. We shall take a real-life example and – in a first instance – replicate this case to all goods under consideration. The example chosen is the one of cell phones (genuine and counterfeit).

Specifically, we have gone into the retail market to observe retail prices and we have liaised with a reputable dealer to understand invoice prices (at the border). This information, recouped with the VAT rate allows us to compute the distribution mark-ups. Furthermore, we have calculated the FOB price for the products concerned.

The simulation is illustrated in **Table-9**. Important is the observation that the price of the imported counterfeit product is only a fraction of the price for the genuine product. This price difference works through the distribution channel and VAT taxation. As a result, the retail price for the counterfeit is also only a fraction of the retail price for the genuine product. We recognize that the wholesaler and retailer mark-ups differ across market segments, but we have not gone further to investigate the segment-specific mark-ups.

In order to calculate the market share of counterfeited goods in Georgia's imports, we first need the following information:

- Value of total imports by broad product category. (Source: ITC)
- Assessment of the value of the risk category within the broad product category (the risk category is often less than 100% because some products are not counterfeited or some goods imported, even from China, are simply low-cost). We have made a best guess based on our understanding of the market segments. In the absence of specific information, we shall consider that the entire import category is a risk category.
- The price differential between genuine and counterfeit goods. This information can be derived from observations in the market.
- The quantity of counterfeit articles traded (in each category) relative to the quantity of genuine articles traded. We have made a best guess based on a)

discussions with industry representatives, b) the UNDP-report, c) experiences in other countries.¹⁸

Regarding Internet downloads we start from the estimated number of internet subscriptions (320,000). Each internet connection is used on average by FOUR users. Almost half of the internet users are downloaders of music and **78%** of these are frequent downloaders (of music)¹⁹. If each one downloads the equivalent of somewhat more than 6 complete music albums per year, this then yields 3.2 million albums, each one valued at a notional price (not the full price).

Integrating all of these assumptions, the resulting simulation is illustrated in Table-10, Table-11 and Table-12.

Table-9: Export price calculation (GEL)

Processes	Genuine cell phone	Counterfeit cell phone
Total production cost per unit		
+ Profit		
= Value of product to the company	620	42-57
+ Domestic banking fees		
+ Packing costs		
+ Documentation fees		
+ Inspection fees		
= EXW price (Ex Works)		
+ Inland transportation		
= FAS price (Free Alongside Ship)		
+ Terminal handling charges		
= FOB price (Free on Board)	653	44
+ Agent's mark-up (0%)		
= Agent's selling price		
+ Ocean freight charges	8%	8%
+ Insurance		
= CIF price (Cost, Insurance, Freight)	705	52

¹⁸ Note that this estimate is to be re-assessed with the help of our Household Survey results.

¹⁹ Of course, internet users can download a mix of music, software, games and movies!

Processes	Genuine cell phone	Counterfeit cell phone
+ Terminal handling charges		
+ Import duties (0%)		
= Landed cost		
+ Transportation to importer/wholesaler		
= Landed cost at delivery point	720	55
+ Importer's/wholesalers mark up	5.8%	162%-207% mark up in distribution
= Importer's/wholesalers selling price	762	
+ Retailer's mark up	6.8%-11.2%-28%	
= Net selling price	814-847-975	144-169
+ VAT	18%	18%
= Final consumer or retail price	960-1000-1150	170-200

Note: in accordance with the rationale of VAT taxation -- that VAT applies to the final consumer -- we have calculated a VAT at the final selling point only, even though in reality VAT is applied at each step (while input VAT is then recovered).

Table-10: estimating the € value of the risk categories

Code	Products	Imports	of which:	Value local	Value risk	Quantity	CIF price
		Total value (million €)	Risk (%)	production (€)	categories (million €)	counterfeit (in imports)	counterfeit /price real
		a	b	b	d=a*b+c	%	%
1	Apparel	93.389	20%		18.7	65%	25%
2	Footwear	38.858	50%		19.4	20%	33%
3	Handbags/travel bags	6.217	40-50%		2.8	85%	10%
4	Accessories	0.431	50%		0.2	40%	35%
5	Fragrances	8.216	100%		8.2	35%	10%
6	Cosmetics	10.335	15%		1.6	8-10%	40%
7	Medicines	148.016	100%		148.0	1-5%	50%
8	Watches	1.983	77%		1.5	25%	40%

Code	Products	Imports	of which:	Value local	Value risk	Quantity	CIF price
		Total value (million €)	Risk (%)	production (€)	categories (million €)	counterfeit (in imports)	counterfeit /price real
		a	b	b	d=a*b+c	%	%
9	Fashion jewellery	2.086	100%		2.1	20%	15%
10	Spectacles	1.306	71%		0.9	25%	10%
11	Automotive parts	20.836	100%		20.8	40%	30%
12/13/14	CD/DVD/software	2.384	100%	400,000 x 2	3.2	0%	5-10%
15	Computer hardware	3.250	100%		3.3	65%	50%
16	Cell phones & access.	48.867	100%		48.9	50%	15% ²⁰
17	Toys, games	12.727	100%		12.7	12%	50%
18	Cigarettes	59.468	100%		59.5	0%	n.a.
19	Spirits, sparkling wines	7.487	100%		7.5	0%	50%
	Internet downloads	0	-	3,200,000x1.5	4.8		
	Ballpoint pens	0.813	100%		0.8	25%	50%
TOTAL		466.7			364.9		

Source: author's calculations

In accordance with the Table-10 simulation, we estimate that the value of risk categories in Georgia amounts to € **364.9 million**. This amount includes a notional value allocated to pirated DVDs/CDs and illegal downloads (software, games, movies, music). We conservatively estimate that 400,000 DVDs/CDs are sold annually and that each computer connected to internet illegally downloads the equivalent of only ten DVDs/CDs (movies, music, games, software)^{21 22}. The notional price allocated to pirated DVDs/CDs and downloaded applications is respectively € 2 and € 1.5. Of course, this choice is open for discussion.

²⁰ We have taken a lower discount than in the example of Table-10. This example is a new top-of-the-range model wherefore the wholesaler/retailer is able to command a higher margin.

²¹ <http://top.ge> informs about the most popular websites in Georgia. The top-3 websites allow downloading. 7 of the top 20 most popular websites are for downloading.

²² This may be conservative. A survey in the UK among the 14-24 year olds revealed that the average number of songs on the hard disk was 8,159. Some were downloaded outright through Internet and some were shared between friends. If an album contains 12-20 songs, then this amounts to 40-70 albums downloaded or shared per year, without the beneficiaries having paid for it. Of course, the downloading/file-sharing activity is lower for other age categories.

The second step brings us to an estimate of the market share of counterfeit, respectively genuine goods, in the imports of risk categories. Multiplied with the import value for each risk category this yields an estimate of the € amount of genuine imports (at CIF price) and counterfeit imports (augmented with a notional value of domestic “production” of pirated goods). The CIF price of counterfeits is a meager **€28.7 million**.

In a third step, we calculate the CIF value of counterfeit products at full price of the genuine product. We call this the counterfactual scenario. Doing so assumes that consumers are willing to fully substitute counterfeit products with genuine products were the counterfeits to disappear from the market. We estimate the amount at **€168.4 million**.

Hence, the Balance of Payment effect – equal to the increase in imports – is **€ 139.7 million**.

Table-11: estimating the € value of counterfeit imports

Code	Products	Market share counterfeits in imports	Market share genuine in imports	Value counterfeit imports (million €)	Value counterfeits Imports + Domestic Production (million €)	Counterfeits valued at full price of genuine goods (€)
1	Apparel	31.7%	68.3%	5.9	5.9	23.7
2	Footwear	7.6%	92.4%	1.5	1.5	4.5
3	Handbags/travel bags	36.2%	63.8%	1.0	1.0	10.1
4	Accessories	18.9%	81.1%	0.041	0.041	0.1
5	Fragrances	5.1%	94.9%	0.4	0.4	4.2
6	Cosmetics	4.3%	95.7%	0.1	0.1	0.2
7	Medicines	0.5%	99.5%	0.7	0.7	1.5
8	Watches	11.8%	88.2%	0.2	0.2	0.4
9	Fashion jewellery	3.6%	96.4%	0.1	0.1	0.5
10	Spectacles	3.2%	96.8%	0.0	0.03	0.3
11	Automotive parts	16.7%	83.3%	3.5	3.5	11.6
12/13/14	CD/DVD/software	0.0%	100.0%	0	0.8	16.0
15	Computer hardware	48.1%	51.9%	1.6	1.6	3.1
16	Cell phones & access.	13.0%	87.0%	6.4	6.4	42.5
17	Toys, games	6.4%	93.6%	0.8	0.8	1.6
18	Cigarettes	0.0%	100.0%	0.0	0.0	0.0
19	Spirits, sparkling	0.0%	100.0%	0.0	0.0	0.0

Code	Products	Market share counterfeits in imports	Market share genuine in imports	Value counterfeit imports (million €)	Value counterfeits Imports + Domestic Production (million €)	Counterfeits valued at full price of genuine goods (€)
	wines					
	Internet downloads				4.8	48.0
	Ballpoint pens	22.1%	77.9%	0.1	0.1	0.2
	TOTAL				27.9	168.6

Source: author's calculations

In a fourth and final step, we estimate the revenue accruing to **distributors** (wholesale and retail) and to **Government** (VAT solely as the import duties on industrial goods are 0%²³). Results are reported in Table-12.

The back-of-the-envelope simulation tells us that

- Distribution (wholesale and retailers) will see its revenue from mark-ups multiplied by a factor 7.1 in the counterfactual scenario (counterfeits are substituted with genuine products at full price);
- Government will see tax revenue multiplied by a factor 7.47 in the counterfactual scenario.

Obviously, the assumption of full substitution is *heroic*. The assumption must and shall be relaxed in a next section.

Table-12: Mark-ups to Distribution, AND, Government revenue

Code	Products	VAT revenue (base case) € million	Mark-ups Distribution (base case) € million	VAT revenue (counterfactual) € million	Mark-ups Distribution (counterfactual) € million
1	Apparel	1.285	1.066	5.140	4.264
2	Footwear	0.321	0.267	0.974	0.808
3	Handbags/travel bags	0.220	0.182	2.196	1.821
4	Accessories	0.009	0.007	0.025	0.021
5	Fragrances	0.091	0.076	0.911	0.756

²³ We assume that VAT on medicines is 0%. Conveniently also, excise revenue on cigarettes and spirits is *nil* because we assume that there exist no counterfeit cigarettes and spirits. However, was this assumption relaxed then we would still be able to calculate excise revenue for Government. Furthermore, under the counterfactual scenario we assume that illegal downloads are converted into official copies of software, music, movies and games.

Code	Products	VAT revenue (base case) € million	Mark-ups Distribution (base case) € million	VAT revenue (counterfactual) € million	Mark-ups Distribution (counterfactual) € million
6	Cosmetics	0.014	0.012	0.036	0.030
7	Medicines	0.000	0.295	0.000	0.591
8	Watches	0.039	0.032	0.097	0.081
9	Fashion jewellery	0.016	0.014	0.109	0.090
10	Spectacles	0.006	0.005	0.065	0.054
11	Automotive parts	0.754	0.625	2.512	2.084
12/13/14	CD/DVD/software	0.174	0.144	3.472	2.880
15	Computer hardware	0.340	0.282	0.679	0.563
16	Cell phones & access.	1.383	1.147	9.221	7.649
17	Toys, games	0.176	0.146	0.353	0.292
18	Cigarettes	0.000	0.000	0.000	0.000
19	Spirits, sparkling wines	0.000	0.000	0.000	0.000
	Internet downloads	0.000	0.000	8.640	8.640
	Ballpoint pens	0.025	0.021	0.050	0.042
	TOTAL	4.853	4.321	36.256	30.665

Source: author's calculations

CONSUMER SURPLUS

In the **Methodology Chapter**, we have introduced the concept of consumer surplus and producer surplus. We have also seen above that full substitution of counterfeits with genuine products at full price will significantly increase the import value. This increase flows to a large extent to **exporters**. On the domestic front, the substitution would significantly increase the mark-ups to the Distribution sector.

However, there probably exist **winners and losers** in the distribution chain. Winners shall be the official/licensed dealers. Losers are likely to be the retailers of counterfeit products, which retailers are primarily relatively small shop owners.

On the consumers' side, the current buyers of counterfeit products will lose the **consumer surplus**. With a much-simplified demand function the consumer surplus is equivalent to **half** of the value of the rectangle contained, on the price axis, by the price of the counterfeit and the price of the genuine product, and, on the quantity axis, by the quantity of counterfeits currently sold and the quantity of counterfeits sold in the counterfactual scenario (that is nil).

Mathematically,

$$\text{Consumer Surplus} = (P_c - P_g) \times (Q_c - 0) / 2$$

Where:

P_c = price counterfeit

P_g = price genuine product

Q_c = quantity of counterfeits sold

The estimate of the Consumer Surplus (lost) -- flowing out of our back-of-the-envelope simulation -- is reported in Table-13. It amounts to **€ 98.44 million**, which is indeed sizeable.

However, we do not feel comfortable with this estimate, which implicitly assumes that the demand for counterfeits evaporates at the full price for the genuine products. This seems unrealistic considering that counterfeits feature LOWER quality than genuine products. In fact, we believe that demand for counterfeits would evaporate at significantly lower-than-full prices (for genuine products). Hence, we simulate Consumer Surplus assuming that demand for counterfeits evaporates when the price of the counterfeit reaches 75% of the price of the genuine products. For some products we even reckon that the demand for counterfeits will evaporate at a 50% price discount. Hence, our alternative – more realistic – estimate of the Consumer Surplus is **€ 47.67 million**. This amount is (somewhat) larger than the current total retail value of the counterfeit products sold.

Table-13: Consumer Surplus lost if counterfeits were removed from the market

Code	Products	Consumer Surplus lost € million	Consumer Surplus lost € million (variant estimate)
1	Apparel	11.37	7.17
2	Footwear	1.82	1.03
3	Handbags/travel bags	6.25	4.46
4	Accessories	0.05	0.02
5	Fragrances	2.59	1.10
6	Cosmetics	0.06	0.00
7	Medicines	0.37	0.11
8	Watches	0.15	0.07
9	Fashion jewellery	0.29	0.20
10	Spectacles	0.18	0.08
11	Automotive parts	5.02	2.15

Code	Products	Consumer Surplus lost € million	Consumer Surplus lost € million (variant estimate)
12/13/14	CD/DVD/software	10.62	4.94
15	Computer hardware	0.78	0.00
16	Cell phones & access.	24.31	9.22
17	Toys, games	0.41	0.00
18	Cigarettes	0.00	0.00
19	Spirits, sparkling wines	0.00	0.00
	Internet downloads	34.08	17.04
	Ballpoint pens	0.07	0.07
	TOTAL	98.44	47.67

Source: author's calculations

USING THE SURVEY RESULTS TO COME UP WITH A VARIANT ESTIMATE

The ACT Survey has yielded a wealth of information. We have integrated some of our findings, in particular the market share of counterfeits, to develop an alternative estimate of impacts. If anything, the new estimate revises downwards the market share of counterfeits, though only marginally so. The most significant downward revision – though perhaps exaggerated²⁴ -- is for apparel. On the other hand, an upward revision is applied for footwear and spirits (though we may question the validity of the latter).

The results are reported in [Table-14](#) and [Table-15](#).

Table-14: estimating the € value of counterfeit imports

Code	Products	Market share counterfeits in imports	Market share genuine in imports	Value counterfeits Imports + Domestic Production (million €)	Counterfeits valued at full price of genuine goods (€)
1	Apparel	14.3%	85.7%	2.7	10.7
2	Footwear	14.0%	86.0%	2.7	8.2

²⁴ Respondents in the Survey may have been thinking about the apparel category in its totality rather than the fashion clothes segment specifically. The percentage of counterfeits in the fashion segment is obviously much larger than the percentage of counterfeits in the total apparel market.

Code	Products	Market share counterfeits in imports	Market share genuine in imports	Value counterfeits Imports + Domestic Production (million €)	Counterfeits valued at full price of genuine goods (€)
3	Handbags/travel bags	4.7%	95.3%	0.3	2.9
4	Accessories	14.1%	85.9%	0.030	0.1
5	Fragrances	3.1%	96.9%	0.3	2.5
6	Cosmetics	10.7%	89.3%	0.2	0.4
7	Medicines	1.8%	98.2%	2.6	5.3
8	Watches	10.7%	89.3%	0.2	0.4
9	Fashion jewellery	3.2%	96.8%	0.1	0.4
10	Spectacles	4.5%	95.5%	0.042	0.4
11	Automotive parts	7.0%	93.0%	1.5	4.8
12/13/14	CD/DVD/software	0.0%	100.0%	0.8	16.0
15	Computer hardware	48.1%	51.9%	1.6	3.1
16	Cell phones & access.	13.0%	87.0%	6.4	42.5
17	Toys, games	6.4%	93.6%	0.8	1.6
18	Cigarettes	0.0%	100.0%	0.0	0.0
19	Spirits, sparkling wines	0.0%	100.0%	2.0	4.0
	Internet downloads			4.8	48.0
	Ballpoint pens	22.1%	77.9%	0.116	0.232
	TOTAL			27.0	151.7

Source: author's calculations

Note: the market share for cell phones and accessories is kept unchanged even though the results from the Household Survey suggest a lower market share. The industry believes that half the quantity sold is counterfeit whereas the Survey indicates only 15-17% of the quantity would be counterfeit²⁵.

²⁵ In fact, about **25% of the respondents admitted having bought counterfeit cell phones**, but some of them also bought genuine versions. Of those who bought genuine cell phones, some 16% admitted they would consider buying a counterfeit cell phone. Of those respondents who are diehard buyers of counterfeit cell phones, HALF expect to buy them if only the price discount is 75%. Counterfeits would still find 50% buyers if the price of the counterfeit is at least 50% cheaper than the price of the original.

Table-15: Mark-ups to Distribution, AND, Government revenue

Code	Products	VAT revenue (base case) € million	Mark-ups Distribution (base case) € million	VAT revenue (counterfactual) € million	Mark-ups Distribution (counterfactual) € million
1	Apparel	0.579	0.480	2.316	1.921
2	Footwear	0.589	0.489	1.786	1.482
3	Handbags/travel bags	0.063	0.053	0.633	0.525
4	Accessories	0.007	0.005	0.019	0.016
5	Fragrances	0.055	0.045	0.546	0.453
6	Cosmetics	0.036	0.030	0.090	0.074
7	Medicines	0.000	1.047	0.000	2.093
8	Watches	0.035	0.029	0.088	0.073
9	Fashion jewellery	0.014	0.012	0.096	0.080
10	Spectacles	0.009	0.008	0.090	0.075
11	Automotive parts	0.315	0.262	1.051	0.872
12/13/14	CD/DVD/software	0.174	0.144	3.472	2.880
15	Computer hardware	0.340	0.282	0.679	0.563
16	Cell phones & access.	1.383	1.147	9.221	7.649
17	Toys, games	0.176	0.146	0.353	0.292
18	Cigarettes	0.000	0.000	0.000	0.000
19	Spirits, sparkling wines	1.300	0.360	2.600	0.720
	Internet downloads	0.000	0.000	10.416	8.640
	Ballpoint pens	0.025	0.021	0.050	0.042
	TOTAL	5.100	4.560	33.507	28.451

Source: author's calculations

Note: on cigarettes and spirits the Government earns excise AND VAT! The excise rate for spirits is 5€ per liter (meaning that excise is relatively higher for lower-priced spirits than for premium brands).

Finally, in Table-16 we re-calculate the Consumer Surplus (variant estimation).

All consolidated impacts are reported further down.

Table-16: Consumer Surplus lost if the counterfeits were removed from the market

Code	Products	Consumer Surplus lost € million	Consumer Surplus lost € million (variant estimate)
1	Apparel	5.12	3.23
2	Footwear	3.35	1.36
3	Handbags/travel bags	1.80	1.29
4	Accessories	0.03	0.02
5	Fragrances	1.55	0.66
6	Cosmetics	0.14	0.02
7	Medicines	1.32	0.38
8	Watches	0.14	0.07
9	Fashion jewellery	0.25	0.17
10	Spectacles	0.26	0.11
11	Automotive parts	2.10	0.90
12/13/14	CD/DVD/software	10.62	4.94
15	Computer hardware	0.78	0.00
16	Cell phones & access.	24.31	9.22
17	Toys, games	0.41	0.00
18	Cigarettes	0.00	0.00
19	Spirits, sparkling wines	1.00	0.29
	Internet downloads	34.08	17.04
	Ballpoint pens	0.00	0.00
	TOTAL	87.34	39.02

Source: author's calculations

WHY DOES PRICE ELASTICITY MATTER?

So far, we have simulated the impact of removing counterfeits from the market on the Balance of Payments, Government Revenue, and Distribution margins assuming that each counterfeit item is fully replaced by a genuine product. This assumption is highly unrealistic. Within the portfolio of goods analyzed there exist two sub-groups:

- The broad categories of cigarettes, wines/spirits, medicines, cosmetics and automotive spare parts can be considered as **necessities**, although to a varying degree so. The implication is that the own price elasticity is between 0 and -1. Products that are necessities are more insensitive to price changes because consumers would continue buying these products despite price increases.
- Fashion clothes/shoes, DVDs, perfumes, brand-name watches, designer jewellery/sunglasses/ handbags/wallets, computers (but printer cartridges less so) and sophisticated cell phones/smart phones are **luxury goods**. The own price elasticity is -1 or lower. This means that a price increase for a luxury good will deter more consumers because the opportunity cost of buying the product will become too high.

The price elasticity of a good depends on the availability of substitutes. Typically, counterfeit goods are substitutes to the branded goods, though imperfect ones²⁶. Counterfeit goods are sold at a sometimes hefty discount over the price of the original good. If the price of a counterfeit were to increase and approaching a “limit” price, the demand for the counterfeit would vanish. In other words, if the price discount is not sufficient, then demand for the counterfeit disappears. A fraction of that demand vanished is translated into higher demand for the original good.²⁷

The price discount tells us something about how the consumer rates the counterfeit good (on performance and appearance). We would say that the smaller the discount required in order to enticing the consumer into buying a counterfeit, the more the counterfeit is regarded as a good substitute and hence the higher the cross price elasticity (i.e. the impact of a price change of the counterfeit on the demand of the original good).

Within the time allocated for the present assignment, the author has not been able to estimate meaningful own price and cross price elasticities. Instead, we have started from a realistic own- price elasticity of the original good and *downscaled* (by a factor which is a function of the “limit” – or minimum -- price discount expected by the consumer). This -- admittedly imperfect -- procedure yields an estimate of the quantity of (previously) counterfeit goods which are transformed into a demand for original goods (valued at the price of the original good, of course).

The results (values are at CIF prices) are reproduced in Table-17 which, furthermore, simulates the implied tax revenue (VAT plus excise) and revenue from mark-ups flowing to the domestic distribution sector.

²⁶ But the counterfeit is not the only substitute. Take the example of a smart phone. If the price of the counterfeit smart phone increases significantly, it will increase to some degree the demand of original smart phones, but also of original lower-prices – thus more affordable – simple voice phones.

²⁷ How much is transferred to the demand for the original good depends on a) the cross-price demand elasticity, and b) the income elasticity of demand. We can imagine that when the price of an original item is small relative to the consumer's income, then transfer of demand (from counterfeit to original) shall be significant. But, as in the case of a smart phone, when the price of the smart phone is high relative to the consumer's income, then the consumer may not allocate any additional budget to finance an original smart phone, instead preferring to spend all the money on other items.

Table-17: impacts assuming imperfect substitution (what happens if counterfeits and piracy are removed from the market)

Item	Category of good	Additional demand for branded goods € million	VAT revenue (imperfect substitution) € million	Mark-ups Distribution (imperfect substitution) € million
Apparel	Luxury	3.7	0.811	0.672
Footwear	Luxury	3.2	0.704	0.584
Handbags/travel bags	Luxury	0.4	0.077	0.064
Accessories	Luxury	0.04	0.008	0.007
Fragrances	Luxury	0.9	0.205	0.170
Cosmetics	Necessity	0.1	0.031	0.026
Medicines	Necessity	2.4	0.000	0.957
Watches	Luxury	0.4	0.077	0.064
Fashion jewellery	Luxury	0.2	0.043	0.035
Spectacles	Luxury	0.1	0.011	0.009
Automotive parts	Necessity	2.7	0.578	0.480
CD/DVD/software	Luxury	3.0	0.651	0.540
Computer hardware	Luxury	1.4	0.303	0.251
Cell phones & access.	Luxury	13.6	2.951	2.448
Toys, games	Luxury	0.7	0.147	0.122
Cigarettes	Necessity	0.0	0.000	0.000
Spirits, sparkling wines	Necessity	1.0	0.659	0.187
Internet downloads	Luxury	18.6	4.036	3.348
Ballpoint pens	Luxury	0.2	0.044	0.037
TOTAL		52.7	11.3	10.0

Source: author's calculation

Notes:

- Luxury and Necessity: the distinction is made solely based on the value of the own price elasticity of demand; the own price elasticity of a Necessity is between 0 and -1.
- **CD/DVD/software:** the price elasticity is high. Hence, we assume that with a significant price increase facing the consumer (when counterfeits disappear from

the market) only a fraction of locally manufactured counterfeits is substituted (i.e. translating into a demand for originals). This is realistic because most consumers of counterfeit CD/DVDs/software will simply turn to internet downloads (file-shared or not).

- **Cell phones:** we assume that ALL cell phones are substituted. Some counterfeit business/multimedia models will be substituted with equivalent genuine models. However, we assume that most counterfeit business/multimedia models will be substituted with lower-priced genuine economic/casual models.
- **Internet downloads:** in Georgia, the revenue from internet subscription totals GEL 94,824,961 (equivalent to approximately € 40 million). From a calculation earlier in the chapter we find that, at full price, the pirated downloads would be worth € 48 million (an amount therefore in the same order of magnitude). Most of the internet usage – in Gb terms – is linked to illegal downloading activity, which takes place from 18:00 hours until well into the morning the day after. What would happen if the Internet Service Providers (ISP) were to increase the subscription rate (and pay a royalty to intellectual rights holders)?²⁸ If the rate increase is TOO large, then the extra revenue generated will be nil because all illegal downloaders are deterred to the point that the rights holders do not received any extra revenue.²⁹ Too small, the price increase will not yield much revenue and will not deter illegal downloaders from doing what they are good at. Thus, there exists, somewhere in between, an “optimal” rate increase (assumably well targeted) which maximizes revenue generation.³⁰

SUMMING IT ALL UP

In the previous sections we have calculated the € value for the various impacts on the Consumer, Producer/Distribution and Government. In Table-18 we now set these figures into a perspective.

Table-18: impacts summary using the **back-of-the-envelope calculation** (million €)

Item	Actual (estimate)	Counterfactual	Net impact (% of GDP)	Comments
Imports counterfeits (CIF price)	27.9 million	168.6 million	1.8%	Net impact = 4.56% of imports
VAT revenue	4.9 million	36.3 million	0.4%	Net impact = 1.8% of tax revenue
Mark-ups to Distribution	4.3 million	30.7 million	0.34%	
Consumer surplus lost (at full price)		98.4 million	1.3%	1.55% of HHLD consumption

²⁸ We actually assume that the increase would not affect the basic fee paid to link up to Internet service, but would rather be correlated with the usage rate. The rate increase will be designed so that Intensive individual users will pay more for the Gb downloaded.

²⁹ We assume an own price elasticity of -0.43.

³⁰ A crude back-of-the-envelope calculation yields an optimal increase of 60%. This will result in € 18.6 million extra revenue, equivalent to 38.8% of the full price value of pirated material.

Item	Actual (estimate)	Counterfactual	Net impact (% of GDP)	Comments
Consumer surplus lost (alternative estimate)		47.7 million	0.6%	0.75% of HHLD consumption
Foreign Direct Investment lost ³¹		9.2 to 13.1 million	0.12-0.17% extra GDP growth	

Notes:

- GDP (2009) = € 7,703 million
- Household consumption (2009) = € 6,341 million ³²
- Net National Disposable Income (2009) = € 7,595 million
- Imports of goods (2009) = € 3,080 million
- Consolidated Government Revenue from Taxes (2009) = € 1,786 million
- Exchange Rate (2009) = 1 €/2.33 GEL (average)

Source: GEOSTAT and author's calculations

The value of counterfeits (and pirated goods), at the full retail price (including CIF, mark-ups and VAT) -- would amount to € 235.2 million. This is equivalent to 2.5% of GDP or 3.7% of Household consumption.

Table-19 yields the impact summary following the integration of the Survey result into our analysis.

Table-19: impacts summary using the results from the Survey (million €)

Item	Actual (estimate)	Counter-factual	Net impact (% of GDP)	Comments
Imports counterfeits (CIF price)	27.0 million	151.7 million	1.6%	Net impact = 4.0% of imports
VAT revenue	5.1 million	33.5 million	0.37%	Net impact = 1.6% of tax revenue
Mark-ups to Distribution	4.6 million	28.5 million	0.31%	
Imports counterfeits (CIF price) assuming imperfect substitution	27.0 million	52.7 million	0.33%	Net impact = 1.7% of imports

³¹ See Chapter-6 for calculations.

³² We notice that Household Consumption represents a high 82.3% of GDP (2009).

Item	Actual (estimate)	Counter-factual	Net impact (% of GDP)	Comments
VAT revenue assuming imperfect substitution	5.1 million	11.3 million	0.08%	Net impact = 0.35% of tax revenue
Mark-ups to Distribution assuming imperfect substitution	4.6 million	10.0 million	0.07%	
Consumer surplus lost (at full price)		87.3 million	1.1%	1.38% of HHLD consumption
Consumer surplus lost (alternative estimate)		39.0 million	0.5%	0.62% of HHLD consumption
Foreign Direct Investment lost ³³		9.2 to 13.1 million	0.12-0.17% extra GDP growth	

Notes:

- GDP (2009) = € 7,703 million
- Household consumption (2009) = € 6,341 million ³⁴
- Net National Disposable Income (2009) = € 7,595 million
- Imports of goods (2009) = € 3,080 million
- Consolidated Government Revenue from Taxes (2009) = € 1,786 million
- Exchange Rate (2009) = 1 €/2.33 GEL (average)
- Imperfect substitution: assuming that some fraction of the demand for counterfeits will be replaced by demand for originals (at full price), in the event that counterfeits were to vanish from the market

Source: GEOSTAT and author's calculations

In both simulations, the very first impact of removing counterfeits is the increase of imports for branded goods. This negative Balance of Payments effect is to be explained by the absence of local production of branded goods. Of course, IF the cross price elasticity of genuine goods is extremely high, then we might imagine no increase at all in the demand of branded goods while the entire budget previously allocated to counterfeit goods would be re-directed to demand for other goods, local or imported. Georgia is a very open economy and hence, in the short term, we suspect that demand would essentially be re-directed to imported goods anyway.

³³ See Chapter-6 for calculations.

³⁴ We notice that Household Consumption represents a high 82.3% of GDP (2009).

Should we be surprised that the impact on Household consumption – the Consumer Surplus -- is only about 1%? Not really:

- The categories for which we observe HIGH household consumption expenditure (budget shares) in Georgia are exactly those where we find little evidence of counterfeit buying (food, beverages, tobacco, health care).
- We do find high propensity of counterfeit consumption in clothing and footwear and household goods; however, in Georgia, we observe a low budget share for these categories.
- Counterfeit automotive spare parts are a fact in Georgian life; however, again the budget share of spare parts in the total expenditure for Transport is small.
- There is some consumption of counterfeit goods in the category “*other consumption expenditure*,” but it certainly does not constitute a major budget share.
- Income per capita in Georgia is comparatively low – Georgia ranks among the lower middle-income income countries – and consumption expenditure of the lower income households is heavily tilted towards consumption of essentials, not towards fashion/luxury goods.

Looking at household consumption in Georgia (Table-20), we can infer that the budget share of risk categories does not exceed 10%. A fraction of this is captured by counterfeit goods.

Table-20: average monthly consumption expenditure per capita (GEL) in 2008 (quintiles for 2009)

Category	GEL Average household	% (2008)	1 st quintile	2 nd quintile	3 rd quintile	4 th quintile	5 th quintile
Food, beverages, tobacco	48.4	37.6%	44.2%	41.2%	38.2%	36.8%	30.9%
Clothes, footwear	4.8	3.7%	2.9%	3.2%	3.3%	3.6%	3.8%
Household goods	3.8	3.0%	1.9%	2.1%	2.2%	2.6%	3.6%
Healthcare	10.4	7.9%	6.9%	7.3%	7.9%	8.5%	13.3%
Fuel and electricity	12.7	9.9%	11.5%	10.7%	10.1%	10.0%	9.3%
Transport	10.8	8.4%	5.0%	5.5%	6.4%	7.5%	11.5%
Education, culture, recreation	3.7	2.9%	0.8%	1.3%	2.1%	3.1%	5.5%
Other consumption expenditure	10.7	8.3%	5.8%	6.7%	6.9%	8.1%	9.8%
Non-cash expenditure	23.6	18.3%	21.0%	22.1%	22.8%	19.7%	12.3%
Total consumption expenditure	128.8	100%	100%	100%	100%	100%	100%

Source: GEOSTAT and author’s calculation

Whether we consider the incidence of counterfeits as significant in the Georgian economy is a matter of personal interpretation. The consumption of counterfeits and pirated goods is visible though.

Considering that these goods are sold -- or are available -- at a fraction of the full price of the genuine products, we may say that the distribution of counterfeits is a *de facto* subsidy to households. However, we also know that the higher income households are more likely to buy goods from the risk categories and, indeed, they are more willing to buy counterfeit goods. In that sense, the subsidy is ineffective in reaching the poorer households.

EXTERNALITIES

FOREIGN INVESTMENT

Table-21 below illustrates the significance of FDI across a range of countries, on a per capita basis and relative to GDP and gross investment (GFCF). The table also suggests that the *prima facie* correlation between FDI and IPR protection is not particularly high. This shall be investigated further.

Table-21: FDI indicators (for selected countries and period)

Country	FDIcap \$	FDI/ GDP %	GFCF/GDP %	FDI/GFCF %	Doing Business ranking 2005	IPR protection Index (WEF)
Estonia	612.4	10.15	30.2	33.6	17	4.6
Czech Republic	395.8	6.76	26.4	25.6	50	4
Croatia	358.3	5.61	23.2	24.2	134	3.5
Slovak Republic	310.2	7.47	26.3	28.4	34	3.7
Bulgaria	293.9	12.23	21.5	56.9	59	2.6
Slovenia	278.3	2.58	25.3	10.2	56	4.5
Latvia	244.6	4.54	27.7	16.4	31	3.6
Lithuania	188.3	3.92	22.3	17.6	15	3.8
Poland	186.9	4.00	19.9	20.1	74	3.6
Hungary	158.7	9.72	22.4	43.4	60	3.9
Romania	138.0	5.08	23.0	22.1	71	3.4
BiH	137.7	5.83	23.4	24.9	91	2
Georgia (97-08) [Georgia 2007]	118.6 [401.6]	8.55	26.3	32.5	112	2.8
Russia (2000-07)	112.6	2.0	18.5	10.8	97	2.7
Macedonia	109.8	4.87	17.2	28.3	94	3.1
Albania	70.0	3.89	36.7	10.6	115	2.5

Country	FDIcap \$	FDI/ GDP %	GFCF/GDP %	FDI/GFCF %	Doing Business ranking 2005	IPR protection Index (WEF)
Armenia	65.6	5.63	25.7	21.9	37	2.7
Ukraine	51.0	3.65	22.0	16.6	132	2.6
Belarus	37.7	1.37	25.8	5.3	124	n.a.
Moldova	34.2	7.36	21.9	33.6	88	n.a.
Kyrgyzstan	18.7	3.02	18.1	16.7	104	2.4
Thailand	77.4	3.71	25.1	14.8	19	3.3
Chile	333.0	6.22	20.6	30.2	24	3.6
Malaysia	185.0	3.17	22.5	14.1	25	4.5
South Africa	49.5	1.76	16.8	10.5	28	5.2
Mexico	136.2	2.85	20.1	14.2	62	3.2
Tunisia	82.6	4.04	24.2	16.7	77	4
Bangladesh	1.8	0.71	23.8	3.0	81	2.4
Turkey	69.8	1.36	19.4	7.0	84	2.7
Argentina	164.8	2.36	17.0	13.9	93	2.5
Vietnam	23.8	4.50	32.4	13.9	98	3
China	36.3	3.26	38.3	8.5	108	4
Morocco	27.3	3.32	26.8	12.4	117	3.1
Brazil	82.9	2.85	16.4	17.4	122	3
India	5.9	1.09	28.6	3.8	138	3.6

Sources: own calculations, World Economic Forum (WEF) for IPR protection, WB for Doing Business data

In Georgia, the share of FDI in total investment has been large, almost one third. In 2007, net Foreign Direct Investment inflows to Georgia reached \$1,750.2 million – equivalent to four hundred US dollars per capita -- falling to \$656.3 million in 2009.

Table-22: Foreign Investment in Georgia (net)

Year	Net FDI inflow (million \$)	Population (million)	Net FDI inflow per capita (\$)
1994	4.0	5.157	0.8

Year	Net FDI inflow (million \$)	Population (million)	Net FDI inflow per capita (\$)
1995	6.0	5.069	1.2
1996	54.0	4.992	10.8
1997	242.5	4.924	49.2
1998	265.3	4.862	54.6
1999	82.3	4.804	17.1
2000	131.1	4.745	27.6
2001	109.8	4.685	23.4
2002	160.2	4.629	34.6
2003	224.7	4.573	49.1
2004	492.3	4.519	108.9
2005	452.3	4.465	101.3
2006	1170.1	4.411	265.3
2007	1750.2	4.358	401.6
2008	1564.0	4.307	363.1
2009	656.3	4.260	154.1
2010	571.3	[4.230]	135.1

Sources:

- FDI: World Development Indicators (World Bank) and National Bank of Georgia
- Population: United Nations

How significant is this FDI? How does this compare globally? Moreover, can Georgia expect an even better performance?

As Table-23 shows, FDI inflows average 10-20% of gross investment in various regions; inflows are somewhat higher in transition countries experiencing a catching up process.

Table-23: FDI in the world

Region	FDI as % of GFCF	GFCF as % of GDP
Africa	15.8%	21.8%
China	8.5%	38.5%
Other developing countries	15.5%	21.0%
Eastern Europe & CIS (excl. Russia)	24.9%	24.3%
Russia	10.8%	18.5%
USA	7.9%	18.8%
Other High-Income countries	21.9%	21.8%

Notes:

GFCF=Gross Fixed Capital Formation

Period=2000-2008

Sources: author's calculations on the basis of UN/UNCTAD databases

Georgia's investment rate was **21.5%** (2008), equivalent to \$ 2,778.4 million of investment. Assuming a highish FDI share of 30%, this translates into about **\$189** per capita and per year. We would say that this amount is a plausible **cap** to FDI inflow.

However, "*terms and conditions*" apply to generate such a high level of FDI inflow. In order to measure the Business Climate conditions on attracting FDI we have estimated (econometrically) a **model** „explaining' FDI.³⁵

FDI per capita=f(GDP per capita, trade performance, share of exports in ores and fuels, quality of infrastructure and education, business climate indicators, insecurity in case of internal conflict)

Where:

- Trade performance is proxied by Openness of economy to Trade (X+M/GDP, where X=exports and M=imports).
- Quality of infrastructure and the education system are indicators retrieved from the World Economic Forum database.
- Business climate indicators are retrieved from the Fraser Institute database.
- The share of exports in ores and fuels as a percentage of total exports. This variable is included as resource-rich countries attract specific foreign investment, even when the business climate is not favorable.

³⁵ We have borrowed this econometric exercise from the author's previous mission in Kosovo (2010-2011).

- Dummy variables are included to represent specific conditions, such as a country going through a period of internal conflict, or being a transition country.

We estimate our model for 73 economies, over the period 2000-2008. In a next step, we have simulated FDI per capita under various conditions of business climate (actual situation in Georgia, and, business conditions of Estonia transplanted). In other words, this simulation ([Table-24](#)) tells us how much FDI per capita we normally expect to see, considering Georgia's – or alternative -- business conditions.

Table-24: simulations

GDP per capita (\$)	Business Climate	FDI per capita (\$)
2,314 (2007)	Actual Georgia	83.2
2,937 (2008)	Actual Georgia	106.0
2.450 (2009)	Actual Georgia	88.0
2,314 (2007)	Estonia	101.0
2,937 (2008)	Estonia	128.7
2.450 (2009)	Estonia	107.1

Considering that during the last 5 years, Georgia's average FDI per capita has exceeded \$128 we should conclude that Georgia's performance in attracting FDI is **ALREADY** better-than-expected. In fact, Georgia has managed to attract -- in selected years -- an FDI inflow, on a per capita basis, similar to the performance of countries in the Slovenia-Czech Republic league.

Therefore, the real question is not whether Georgia can attract MORE FDI, but whether Georgia can CONTINUE to attract a high level of FDI, as recorded in some recent years? In our view, the condition for continued FDI inflows is that Georgia achieves export-led growth.

However, our study focuses on IPR infringement and its economic impact. The question is thus: "Can a macroeconomic model tell us specifically what the impact will be of improved IPR protection on the level of FDI?" We tend to answer: NO.

Protection of IPR is part of the enabling business environment. However, to isolate IPR protection as an independent variable in an econometric model trying to explain overall FDI inflows is too heroic a task, for reasons of insufficient degrees of freedom.

IPR protection – as part of the Rule of Law -- is correlated (see [Table-25](#)) with the enabling nature of a business environment. Advancing IPR protection improves the overall business environment, but increasing IPR protection without advances in other areas of reform – such as regulatory reform -- will not yield additional FDI.

Table-25: rank correlation coefficients (business environment indicators)

	IPR protection (WEF)
Doing Business ranking	0.45
WEF country scores for business environment	0.71

Index of Economic Freedom (Fraser Institute)	0.35
Index of Economic Freedom (Heritage Foundation)	0.35

Source: author's calculation

Notes:

- WEF: World Economic Forum
- All correlation coefficients should be understood as indicating a positive relationship between specifically IPR protection and the enabling nature of the business environment

Our econometric model already did confirm the positive impact of an enabling business environment on FDI inflows. Table-26 hereafter sheds further light on this relationship: we find relatively good correlations between enabling business environment and FDI per capita, AND, the FDI relative to GDP. Significant also – but to a lesser extent -- is the impact of IPR protection on FDI inflows. Conclusion: IPR protection does contribute to an enabling business environment, hence to FDI inflows, but the factor is neither necessary, nor even sufficient.

Table-26: rank correlation coefficients

	FDI/GDP	GFCF/GDP	FDI/GFCF	FDIcap
Doing Business Country Score	-0.358	-0.240	-0.297	-0.636
IPR protection (WEF)	0.240	0.266	0.195	0.369
WEF Country Score	0.230	0.202	0.187	0.634
Protection of Property (Fraser)	0.161	0.290	0.093	0.335
Fraser Country Score	0.515	0.306	0.475	0.609
Protection of Property (Heritage)	0.030 *	-0.026	-0.014	-0.170
Heritage Country Score	-0.458	-0.101	-0.480	-0.698

Notes:

- Doing Business: the higher the country rank, the worse the business environment
- IPR protection (WEF): the higher the score, the better the protection
- WEF Country Score: the higher the score, the better the environment
- Protection of Property (Fraser): the higher the score, the better the protection
- Fraser Country Score: the higher the score, the better the environment
- Protection of Property (Heritage Foundation): the lower the index, the better the protection
- Heritage Foundation Country Score: the lower the index, the better the environment

* = wrong sign!

Notwithstanding our *caveat*, we have simulated the impact of improved Rule of Law – to which IPR protection belongs – on FDI inflows. How much more FDI inflow would Georgia generate if Georgia’s Rule of Law performance reaches the level of virtually best-in-class Denmark? We find that the level of FDI inflow would be boosted by **18-21%** over and above the “**expected**” level, considering current business climate conditions.

What is then the impact of the increased total investment on GDP growth? We estimate that the investment to GDP rate would be boosted by about **0.55%**³⁶. At observed investment efficiency in Georgia, this extra investment would yield an extra **0.12%** in GDP growth. In the best of circumstances, it could be 0.17%. The reader may consider these figures as being non-significant. However, in the long term -- and when combined with other growth-contributing factors -- the impacts do add up.

³⁶ If, for some reason, Georgia’s FDI inflow is to continue the excellent performance of the last 5 years – financial crisis or not – then we might as well say that the “expected” level of FDI is actually located at a higher level, and that the 20% boost in FDI resulting from improved Rule of Law applies to this higher level. In this case, the implied investment rate is also higher, hence yielding higher GDP growth: between **0.24%** and **0.34%**. However, the assumption that Georgia will consistently exceed the “expected” rate of FDI inflow remains risky. Not impossible, but how plausible is this?

HEALTH AND SAFETY

Counterfeit medicines, counterfeit spirits, and substandard automotive parts carry specific health and safety risks. Our investigation suggests that the consumption of counterfeit medicines and spirits is not prevalent in Georgia. However, lower-quality automotive spare parts are commonly bought in Georgia.

Table-27 situates Georgia globally in terms of motor vehicles ownership and life expectancy at birth. Life expectancy in Georgia matches average life expectancy of lower middle-income countries. However, the statistics confirm that road fatalities (per 1,000 of population) are very high in Georgia, in particular considering that motor vehicles ownership is rather low.

Georgia records 1.45 fatalities per 1,000 motor vehicles. By contrast, The Netherlands counts 0.08 fatalities per 1,000 motor vehicles and the comparable figure in the USA is 0.15.

In themselves, these figures are not proof of the link between car accidents and the poor quality of spare parts. Other factors are at play: the conditions of roads, the average age, and condition of vehicles, driving behavior of Georgians. However, the high fatality rate (and probably accident rate) is justification for further analysis and vigilance.

Table-27: Road fatalities

Country	Motor vehicles per 1,000 population (2008)	Road fatalities (2008)	Road fatalities per 1,000 population	Life expectancy at birth in years (2008)
Albania	102	315 (2004)	0.100	76.6
Armenia	104	224 (2009)	0.073	75.5
Bangladesh	2.6	3,765	0.024	66.1
Belarus	282	1,471	0.152	70.6
Belgium	539	944	0.088	80.1
BiH	170	n.a.	n.a.	75.1
Bulgaria	295	943 (2004)	0.121	73.3
China	32	107,077 (2004)	0.083	73.1
Czech Republic	470	1,076	0.103	77.2
Estonia	444	170 (2004)	0.126	74.0
France	600	4,275	0.068	81.5
Georgia	116	867	0.198	71.5
Germany	623	4,477	0.055	80.1
Greece	112	1,553	0.138	80.0
Hungary	384	996	0.099	74.0
Italy	677	4,725	0.079	81.9
Japan	595	6,023	0.047	82.6
Republic of Korea	338	5,870	0.121	79.8
Lithuania	479	499	0.149	71.8
Macedonia	136	155 (2004)	0.076	74.2
Netherlands	502	677	0.041	80.4
Poland	451	5,437	0.143	75.5
Russia	245	34,506 (2004)	0.240	67.8
Serbia	223	953 (2004)	0.128	73.6
Slovak Republic	282	608 (2004)	0.113	74.8
Slovenia	547	214	0.106	79.0

Country	Motor vehicles per 1,000 population (2008)	Road fatalities (2008)	Road fatalities per 1,000 population	Life expectancy at birth in years (2008)
South Africa	159	5,664 (2006)	0.119	51.5
Spain	600	3,100	0.068	81.1
Switzerland	569	357	0.048	82.2
Turkey	131	4,428 (2004)	0.063	71.9
Ukraine	140	6,966 (2004)	0.147	68.3
United Kingdom	527	2,645	0.043	79.9
USA	820	37,423	0.123	78.4

Sources: WDI (World Bank), OECD for road fatalities an own calculations

Note: fatalities in Georgia fell to 741 in 2009 (equivalent to 169 fatalities per 1,000 of population)

POLICY IMPLICATIONS

Our analysis has demonstrated that the incidence of counterfeiting and piracy is most significant in the categories:

- Internet downloads,
- Recorded CD/DVDs,
- Apparel and footwear
- Cell phones.

There may also be some consumption of counterfeit spirits and medicines, but we have not found hard evidence, nor have we received confirmation by the industry.

We have found impact of IPR infringement on imports – and thus the Balance of Payments – on Consumer Welfare, on Government tax revenue and on revenue to the Distribution sector (through the mark-ups applied).

Whether or not the impacts are sizeable is a matter of interpretation. However, when remaining unchecked, the impact will only keep increasing as Georgia moves up the development ladder in the league of middle-income countries.

Counterfeiting combat efforts are a mixture of a) technological innovation (by rights holders), b) legal and regulatory reform, c) enforcement, and, d) awareness creation among consumers and retailers.

Technology:

- Use of “creative” enforcement tools (designed to detect, deter, respond)

Legal and regulatory reform:

- Lobbying for reform (as well as for enforcement measures)

Enforcement:

- Company-led activities (training of customs officials in visual and materials analysis)
- Risk assessment system for customs installed
- Mandatory pre-shipment information to be provided by all importers, before arrival of medicines
- Organizing seizures and raids
- Shorten the time required to action legal cases and reduce bureaucratic barriers
- Establish specialized IP tribunals to handle civil and criminal cases
- Plans to increase penalties and introduce imprisonment charges
- Recover costs of investigation, detection and destruction of counterfeit products from perpetrators

Awareness:

- Educating the consumers on the poor quality of fakes

- Reward distributors for detecting/refusing counterfeit goods

The authors of the UNDP-Georgia report (on counterfeiting and piracy) consider the Georgian legislation to be largely coherent with Directive 2004/48/EC and that the Law on Border Measures Relating to IP is in line with internationally accepted good practices.

However, the following weaknesses are reported:

- The Customs office does not initiate investigations for rights holders unless that right holder is registered in a Customs register (which is free of charge). Once the registration process accomplished, the office is obliged to cease unauthorized imports/exports of objects registered, if and only if an application for action has been lodged by the right holder or his/her legal representative. According to the Law, goods may be detained or suspended from release for a period of no more than ten business days, which may be prolonged for another ten days.³⁷
- Currently only some 110 trademarks are registered with Customs as rights holders do not seem to be aware of the importance of their cooperation with the Customs Office.
- The scope of action by Customs does not extend to patent and industrial design.
- The percentage of shipments physically inspected has gone down to 5% (out of some 300,000 declarations annually, of which 54,000 concern transit). Only a handful of shipments have actually been destructed over the last three years.
- Customs possess only three scanners, of which two are mobile.
- Customs do not systematically inform rights holders when a shipment is arriving from an origin deemed to be a risk. Ultimately, very few “suspensions” of imports are activated. Not even 50/year according to our source.
- Customs do not take ex officio action and does not initiate a criminal case.
- Customs do not seem to apply systematic risk management to identify counterfeit goods.
- The security required for the rights holders who wish to have the counterfeited goods stopped and the infringers sued is perceived to be too high.
- There is no ex officio power for in-land action.
- Courts act swiftly, judges deliver quick rulings but they have no experts in the field that can differentiate counterfeit from genuine goods, whereas the Court decision must be based on experts’ investigation. Without expert advice, judges cannot make decisions.
- Some judges have been trained in IPR. However, they are not specifically called upon to lead the IPR cases.

While this study’s focus is on calculating the impact of IPR infringement on the economy -- not on the specifics of combating IPR infringement -- we can formulate a strategic approach of initiatives that can be taken in the Georgian context.

³⁷ After the suspension of goods, the right holder is allowed to check the shipment. If, as a result of this checking, the right holder decides to file a lawsuit against the importer, he is also required to submit to the Revenue Service a decision of the Court on adoption of provisional measures. The Revenue Service also requires from the right holder to submit a bank guarantee or deposit for protection in the warehouse. If the right holder is convinced that the suspended goods are counterfeit, he may apply to Court and request compensation and destruction of the goods. When the owner of suspended goods declines his goods, these shall be destroyed at the expense of the right holder

Table-28: a strategic approach to reduce the prevalence of counterfeit goods and piracy in the Georgian market

Category	Measures
Apparel	<ul style="list-style-type: none"> • Register brand names at Customs Office. • Increase the frequency of physical inspections (at the border) and seizures. • Training an expert to investigate counterfeit cases and report to Court.
Footwear	<ul style="list-style-type: none"> • Register brand names at Customs Office. • Increase the frequency of physical inspections (at the border) and seizures. • Training an expert to investigate counterfeit cases and report to Court.
Handbags/travel bags	<ul style="list-style-type: none"> • Register brand names at Customs Office. • Increase the frequency of physical inspections (at the border) and seizures.
Accessories	<ul style="list-style-type: none"> • Include the brands in a general awareness campaign about IPR infringement (picturing counterfeits as “theft”).
Fragrances	<ul style="list-style-type: none"> • Carry out chemical analysis of counterfeit fragrances and build a one-time awareness campaign around the anticipated lower quality of counterfeit fragrances.
Cosmetics	<ul style="list-style-type: none"> • Carry out laboratory analysis of counterfeit cosmetics and build an awareness campaign around the eventual health risks with these counterfeit products.
Medicines	<ul style="list-style-type: none"> • Increase the drugs sampling plan (i.e. sending medicines from pharmacies, hospitals for laboratory analysis) and strengthen investigative/monitoring capacity of the Ministry of Health.
Watches	<ul style="list-style-type: none"> • Register brand names at Customs Office. • Include the brands in a general awareness campaign about IPR infringement (picturing counterfeits as “theft”).
Fashion jewellery	<ul style="list-style-type: none"> • Register brand names at Customs Office. • Include the brands in a general awareness campaign about IPR infringement (picturing counterfeits as “theft”).
Spectacles	<ul style="list-style-type: none"> • Register brand names at Customs Office. • Include the brands in a general awareness campaign about IPR infringement (picturing counterfeits as “theft”). • Take samples of imported sunglasses and test them for UV protection; seize the batches that pose a threat and destroy them under media attention.

Category	Measures
Automotive parts	<ul style="list-style-type: none"> • Send samples of counterfeit and low-cost spare parts for lab testing in a technical centre (abroad); if the items prove to pose a threat or have a limited lifetime, then seize the future shipments while creating awareness among customers about “value for money”.
CD/DVD/software	<ul style="list-style-type: none"> • Have financial police to seize counterfeit CD/DVD/software under media attention.
Computer hardware	<ul style="list-style-type: none"> • Obtain legal advice to build a winnable case.
Cell phones & access.	<ul style="list-style-type: none"> • Register brand names at Customs Office. • Increase the frequency of physical inspections (at the border) and seizures. • Training an expert to investigate counterfeit cases and report to Court.
Toys, games	<ul style="list-style-type: none"> • Register brand names at Customs Office. • Include the brands in a general awareness campaign about IPR infringement (picturing counterfeits as “theft”).
Cigarettes	<ul style="list-style-type: none"> • Further investigation to unearth channels, if any.
Spirits, sparkling wines	<ul style="list-style-type: none"> • Further investigation to unearth channels, if any.
Internet downloads	<ul style="list-style-type: none"> • Work with ISPs to design a tariff system for internet subscriptions that discourages the illegal downloading by physical subscribers... while keeping subscription cheapish for low-usage internet users. • Block access to websites that allow illegal downloading.
Ballpoint pens	<ul style="list-style-type: none"> • Register brand names at Customs Office. • Include the brands in a general awareness campaign about IPR infringement (picturing counterfeits as “theft”).

ANNEX A

RESULTS FROM THE HOUSEHOLD SURVEY

The ACT survey was carried out among 1,000 households in eleven regions of Georgia. Below we report the most salient results. Key findings were also used to simulate the impact of counterfeits on the Georgian economy.

QUESTION D2: The average age of the respondent is **45.6 years**.

QUESTION D4: The respondent's civil status is as follows:

Table-29

Civil status	All (%)	Male (%)	Female (%)
Single	17.0%	14.4%	24.2%
Married	67.5%	66.8%	69.4%
Divorced	3.2%	3.9%	1.1%
Widowed	12.3%	2.6%	5.3%
Total	100%	100%	100%

QUESTION D7: The average number of adults per household is **3.05** (the median is 3). The average number of children under 18 years of age is **0.96** (the median is 1).

The average number of children in the household, by age category is:

Table-30

Age category	Number of children
18-19	1.15
20-29	0.95
30-39	1.49
40-64	0.88
+65	0.57

QUESTION D8: The population counts **1,578 income earners**, which is equivalent to 52% of the adults and **1.58 income earners per household**. How the income earners are distributed according to civil status is shown in the following table:

Table-31

Civil status	Income earners per household
Single	1.68
Married	1.58

Divorced	1.65
Widowed	1.45

QUESTIONS A1 to A11 and B1: the buying frequency

Table-32

Item	Answer: YES (%) QUESTIONS A1-A11	Respondent bought this item over the last 12 months (%) QUESTION B1
Respondent bought this item over the last 30 days:		
Bottled wine	3.9%	4.9%
Spirits	10.8%	13.3%
Cigarettes	50.1%	50.7%
Cosmetics	21.1%	29.1%
Fashion clothes	7.8%	20.7%
DVD movies	2.5%	3.3%
DVD music	1.7%	3.5%
Computer software	0.2%	0.6%
Computer games	1.0%	1.4%
Medicines	82.8%	88.0%
Respondent bought this item over the last 12 months:		
Perfumes	32.1%	31.2%
Shoes	49.2%	49.4%
Watches	3.6%	4.1%
Jewellery	8.5%	8.6%
Sunglasses	6.0%	6.1%
Handbags	12.9%	13.0%
Wallets	7.2%	7.3%
Cell phone	10.0%	10.2%
Computer	4.3%	4.4%
Automotive spare parts	9.4%	10.3%

On a monthly basis, the foremost bought items are medicines and cigarettes, followed by cosmetics. On an annual basis, the foremost items bought are shoes and perfumes.

Asked to recall purchases over the last 12 months for ALL items, the items bought with the highest frequency (by decreasing order) are medicines, cigarettes, shoes, perfumes and fashion clothes.

QUESTION C2: ownership of assets

Table-33

Item	Respondent owns this asset (% of total respondents)
House/apartment	93.9%
Car	25.4%
TV	97.3%
Computer	31.1%
DVD player	23.9%

Conclusion: ownership of a house or apartment is very high, as well as for TVs. Ownership of computers and DVD players is also high. This will have an impact on the acquisition of counterfeit software and music/movies as well as illegal downloads. We also find that only 8.7% of respondents had travelled abroad within the last 12 months. (**QUESTION C3**)

QUESTION B1: number of counterfeits bought (among respondents who bought items from this category)

Table-34

Item	NONE	Less than 50%	More than 50%	Almost all	TOTAL
Bottled wine	80.0%	16.3%	2.0%	2.0%	100%
Spirits	74.4%	12.0%	9.8%	3.8%	100%
Cigarettes	72.0%	14.6%	7.1%	6.3%	100%
Cosmetics	63.2%	21.0%	12.4%	3.4%	100%
Fashion clothes	43.0%	18.4%	21.3%	17.4%	100%
DVD movies	54.5%	30.3%	12.1%	3.0%	100%
DVD music	54.3%	31.4%	8.6%	5.7%	100%
Computer software	66.6%	16.7%	0%	16.7%	100%
Computer games	57.1%	28.6%	14.3%	0%	100%
Medicines	90.7%	6.6%	2.2%	0.6%	100%
Perfumes	58.3%	23.7%	10.9%	7.1%	100%
Shoes	46.2%	22.5%	17.8%	13.6%	100%

Item	NONE	Less than 50%	More than 50%	Almost all	TOTAL
Watches	63.4%	14.6%	12.2%	9.8%	100%
Jewellery	69.8%	14.0%	10.5%	5.8%	100%
Sunglasses	49.2%	14.8%	18.0%	18.0%	100%
Handbags	47.7%	20.8%	16.9%	14.6%	100%
Wallets	45.2%	17.8%	15.1%	21.9%	100%
Cell phone	75.5%	7.8%	7.8%	8.8%	100%
Computer	90.9%	0%	4.5%	4.5%	100%
Automotive spare parts	63.1%	16.5%	11.7%	8.7%	100%

Table-34 tells us that:

- Counterfeits are most likely to be bought in the categories of fashion clothes, shoes, wallets, handbags, sunglasses, perfumes. DVDs, cosmetics, automotive spare parts;
- Counterfeits are LEAST likely to be bought in the categories: computers, medicines, bottled wine, cell phones, spirits, and cigarettes. We are some surprised by the outcome for cell phones, unless lookalikes are confounded with non-counterfeits.

QUESTION B2: Would the respondent buy counterfeit/pirated goods and – if so – in which case would he be more likely to buy counterfeit/pirated goods if it/they were 10% cheaper, 25% cheaper, 50% cheaper, or 75% cheaper than the original good?

Table-35

Item	YES	NO	10% cheaper	25% cheaper	50% cheaper	75% cheaper
Bottled wine	7.8%	92.2%	21.8%	30.8%	26.9%	20.5%
Spirits	7.8%	92.2%	17.9%	30.8%	30.8%	19.2%
Cigarettes	17.4%	82.6%	20.1%	27.0%	37.4%	15.5%
Cosmetics	24.7%	75.3%	17.4%	18.2%	41.7%	22.3%
Fashion clothes	58.6%	41.4%	8.9%	13.8%	39.8%	37.4%
DVD movies	22.1%	77.9%	12.7%	18.2%	40.0%	29.1%
DVD music	22.3%	77.7%	14.9%	19.4%	40.1%	25.7%
Computer software	17.0%	83.0%	14.1%	19.4%	37.1%	29.4%
Computer games	18.4%	81.6%	14.7%	19.0%	35.3%	29.9%
Medicines	2.4%	97.6%	29.2%	25.0%	12.5%	33.3%
Perfumes	31.7%	68.3%	14.2%	16.1%	47.3%	22.4%
Shoes	60.9%	39.1%	8.7%	17.4%	40.1%	33.7%

Item	YES	NO	10% cheaper	25% cheaper	50% cheaper	75% cheaper
Watches	36.9%	63.1%	9.2%	17.9%	43.1%	29.8%
Jewellery	35.8%	64.2%	10.4%	18.8%	41.5%	29.4%
Sunglasses	36.9%	63.1%	11.7%	15.4%	43.4%	29.5%
Handbags	43.9%	56.1%	10.2%	16.2%	42.6%	31.2%
Wallets	41.0%	59.0%	10.2%	14.6%	40.7%	34.4%
Cell phone	19.2%	80.8%	12.0%	14.6%	39.1%	34.4%
Computer	8.7%	91.3%	9.2%	13.8%	40.2%	36.8%
Automotive spare parts	10.4%	89.6%	14.4%	14.4%	42.3%	28.8%

Table-35 tells us that consumers have **HIGH** resistance to the idea of buying of counterfeit medicines, bottled wine, spirits, and computers. Consumers have **LOW** resistance to the idea of buying counterfeit shoes, fashion clothes, handbags, wallets (accessories), watches, sunglasses, jewellery, and perfumes.

When resistance to the idea of buying counterfeits is low, the consumer expects that the price of counterfeit goods is heavily “discounted” compared to the price of the genuine good. For instance, in the case of **fashion clothes**, **77.2%** of the consumers want a discount of no less than 50% over the price of the genuine good. In the case of shoes, 73.8% of the consumers want no less than 50% discount (73.5% for cell phones, 71.1% for automotive spare parts). For bottled wine, spirits, and medicines, less than half the consumers expect to see a discount of less than 50%. In the case of computers, few consumers would buy counterfeit, and, among those who would consider, 77% expect a price discount of no less than 50%. For cell phones, 73.5% of the consumers want to see a discount of no less than 50%.

Considering that,

- one quarter of the respondents own a car, 40% of the car-owners would buy counterfeit automotive spare parts;
- 31.1% of the respondents own a computer, 54% of them would buy counterfeit software;
- 23.9% of the respondents own a DVD player, 92% of them would buy counterfeit DVD movies.

QUESTION D3: the gender issue

Are women more likely to buy counterfeits and to pirate music (download from internet)?

Table-36

Item	FEMALE respondents buying counterfeit/ downloading music	MALE respondents buying counterfeit/ downloading music
Cosmetics	26.4%	20.1%
Fashion clothes	57.8%	60.6%

Perfumes	34.1%	25.0%
Shoes	61.4%	59.5%
Jewellery	38.8%	27.3%
Handbags	46.9%	36.0%
Cell phones	18.2%	22.0%
Music downloading	45.7%	54.8%

Table-36 indicates that women are more likely – than men – to buy counterfeit cosmetics, perfumes, jewellery, handbags (men buy *handbags!*). However, men are more likely to download music from the internet though quite some women are pirating as well.

QUESTIONS B3, B4, and B5: Internet

On the question whether the respondent uses Internet at home/work/Internet café or any other place, **27.2%** of the respondents confirm using Internet. More than half of the younger generation – 18 to 29 years old – uses Internet. Extrapolating our survey’s findings by age class, we estimate that approximately 1.354 million Georgians somehow use Internet. This figure is at least **THREE** times the number of computers in use, and **FOUR** times the number of internet subscriptions.³⁸

What is the correlation between ownership of a computer and internet use?

Table-37

	Owns computer	Does not own computer
Uses internet	23.1% (74%)	4.1% (6%)
Does not use internet	8.0% (26%)	64.8% (94%)
Total	(100%)	(100%)

Almost three quarters of owners of computers use internet. Six percent of respondents who do not own a computer still use internet elsewhere.

Of those respondents that use Internet, 48% have downloaded music from the Internet within the last 30 days.

Of those respondents who have downloaded music from Internet, **78% are frequent downloaders** (having downloaded three or more times within the last 30 days).

PROFILING

³⁸ The Ministry of Economy comes up with an estimate of 1.2 million! Thus very similar.

With [Table-38](#) and [Table-39](#), we profile the likely buyers of counterfeit goods, looking at the age distribution, education, and location.

QUESTION: would you buy counterfeit...? (YES/NO) Percentages indicate respondents who answer YES! We **highlight** the differences that are significant.

Table-38

Criterion	Wine	Spirits	Cigarettes	Medicines	Cosmetics	Fashion clothes	DVD movies
Age:							
18-19	10.0%	5.0%	15.0%	5.0%	25.0%	55.0%	20.0%
20-29	8.8%	7.6%	18.1%	3.5%	30.8%	63.7%	28.0%
30-39	7.1%	5.9%	17.1%	2.4%	22.4%	60.0%	22.4%
40-64	7.5%	8.7%	18.7%	2.0%	24.9%	59.0%	21.2%
65+	8.3%	7.6%	13.1%	2.1%	20.0%	49.7%	17.9%
Education:							
Incomplete secondary	13.5%	13.5%	29.8%	5.4%	24.3%	62.0%	22.2%
Secondary	8.2%	8.8%	19.3%	1.7%	21.0%	59.1%	19.3%
Technical	6.9%	7.8%	17.3%	3.5%	22.5%	61.0%	22.1%
Incomplete higher	0.0%	0.0%	13.2%	2.6%	28.9%	47.4%	27.8%
Higher	8.4%	7.2%	15.0%	2.1%	30.0%	60.7%	24.9%
Postgraduate	0.0%	0.0%	0.0%	0.0%	14.3%	42.9%	0.0%
Location:							
Tbilisi	6.4%	6.8%	15.6%	2.0%	41.6%	68.8%	34.0%
Other regions	8.3%	8.1%	18.0%	2.5%	19.1%	55.1%	18.1%

Criterion	DVD music	Computer software	Computer games	Perfumes	Shoes	Watches	Jewellery
Age:							
18-19	23.5%	10.0%	10.0%	30.0%	45.0%	25.0%	30.0%
20-29	28.7%	22.2%	24.6%	36.8%	63.2%	42.1%	42.1%
30-39	25.6%	14.1%	18.9%	29.4%	64.1%	37.6%	36.5%
40-64	27.1%	16.7%	17.3%	31.6%	61.1%	31.0%	35.3%
65+	18.6%	16.6%	17.2%	29.0%	55.9%	30.3%	29.7%
Education:							
Incomplete secondary	22.2%	22.2%	22.2%	29.7%	59.5%	35.1%	29.7%

Criterion	DVD music	Computer software	Computer games	Perfumes	Shoes	Watches	Jewellery
Secondary	19.0%	14.4%	15.3%	30.7%	60.9%	35.3%	34.0%
Technical	21.2%	16.9%	18.4%	30.3%	60.2%	32.5%	35.1%
Incomplete higher	15.8%	7.9%	7.9%	28.9%	44.7%	31.6%	36.8%
Higher	27.6%	20.7%	22.5%	34.5%	64.0%	43.2%	38.7%
Postgraduate	0.0%	0.0%	14.3%	14.3%	28.6%	14.3%	28.6%
Location:							
Tbilisi	35.1%	24.8%	27.2%	48.0%	68.0%	56.4%	54.8%
Other regions	18.1%	14.5%	15.2%	26.3%	58.5%	26.4%	29.4%

Criterion	Sunglasses	Handbags	Wallets	Cell phone	Computer	Automotive spare parts
Age:						
18-19	45.0%	40.0%	30.0%	15.0%	10.0%	10.0%
20-29	42.7%	53.8%	49.7%	19.9%	5.8%	9.4%
30-39	36.4%	47.6%	45.3%	21.1%	7.6%	8.8%
40-64	37.7%	43.4%	40.6%	19.7%	10.4%	12.0%
65+	26.9%	30.3%	29.0%	15.2%	8.3%	8.3%
Education:						
Incomplete secondary	37.8%	35.1%	35.1%	16.2%	16.2%	13.5%
Secondary	36.3%	40.8%	37.7%	24.5%	9.9%	9.7%
Technical	33.8%	42.9%	39.4%	18.6%	9.1%	10.4%
Incomplete higher	28.9%	34.2%	31.6%	18.4%	2.6%	5.3%
Higher	40.5%	50.5%	47.4%	21.6%	7.5%	11.1%
Postgraduate	42.9%	28.6%	42.9%	28.6%	0.0%	0.0%
Location:						
Tbilisi	54.4%	66.0%	66.8%	25.6%	9.2%	9.2%
Other regions	31.1%	36.9%	32.4%	17.1%	8.5%	10.8%

Table-39: internet use among strata

Criterion	Internet use	Downloaded music	Downloaded music 3 times or more
Age:			
18-19	65.0%	38.5%	100.0%
20-29	55.0%	64.9%	78.7%
30-39	35.9%	42.6%	80.8%
40-64	20.2%	38.0%	71.1%
65+	2.8%	25.0%	100.0%
Education:			
Incomplete secondary	2.7%	0.0%	-
Secondary	14.4%	46.2%	70.8%
Technical	17.3%	42.5%	52.9%
Incomplete higher	57.9%	54.5%	91.7%
Higher	45.8%	51.0%	83.3%
Postgraduate	71.4%	0.0%	-
Location:			
Tbilisi	50.8%	59.8%	82.9%
Other regions	19.3%	37.9%	70.9%

The tables above indicate that there exist relatively few differences across age and education strata. Exceptions are that adults in their twenties are more willing to buy counterfeit fashion clothes, computer software, computer games, perfumes, cosmetics, watches, jewellery, sunglasses, handbags, wallets.

The younger generation is also much more likely to use internet: over half. Adults in their twenties are more often downloading music from internet.

However, the biggest *divide* we read from the data is regional: citizens of the Tbilisi regions are significantly more willing to buy counterfeit goods in all categories BUT wines, spirits, cigarettes, medicines, cell phones, computer, and automotive spare parts.

CONSUMER PATTERN ACROSS INCOME STRATA

In this section, we study consumer attitudes towards counterfeit goods by income classes.

The Questionnaire asks the respondents about the household's monthly income. We also ask them about the number of members in the household (both adults and children). Combining this information allows us to compute **household income per capita**. Finally, we partition the households in four quartiles according to increasing (monthly) income per capita. However, we have eliminated households with an extremely low – and unrealistically so -- income per capita. These household have very low demand overall – in particular for our risk categories of goods.

We do acknowledge that the data gathered on household CASH income is approximate... and underreporting income, in particular when it comes to income from independents (e.g. farmers) and income received from abroad (remittances).³⁹

The main purpose of this section is to find evidence that attitude towards counterfeit goods varies according to the per capita income class (quartiles).

Table-40: respondent would buy counterfeit/pirated goods (answer = YES)

Item	1 st quartile	2 nd quartile	3 rd quartile	4 th quartile
Bottled wine	7.5%	8.5%	7.0%	7.9%
Spirits	6.1%	7.5%	7.0%	9.3%
Cigarettes	19.2%	16.9%	16.4%	15.4%
Cosmetics	21.5%	26.8%	24.4%	27.9%
Fashion clothes	57.5%	58.2%	55.9%	61.9%
DVD movies	17.8%	21.1%	21.6%	29.3%
DVD music	16.8%	21.6%	22.5%	30.7%
Computer software	14.0%	16.0%	18.3%	21.9%
Computer games	15.4%	16.4%	19.7%	23.7%
Medicines	1.4%	3.3%	3.3%	1.9%
Perfumes	33.6%	29.6%	30.5%	34.9%
Shoes	58.9%	62.0%	57.8%	62.8%
Watches	28.0%	39.0%	36.2%	45.6%
Jewellery	27.6%	35.7%	37.1%	43.3%
Sunglasses	29.4%	39.4%	35.2%	43.3%
Handbags	36.5%	44.6%	43.2%	53.5%
Wallets	31.3%	43.2%	40.4%	50.2%
Cell phone	15.4%	20.7%	20.7%	22.8%
Computer	8.4%	8.0%	10.8%	6.1%
Automotive spare parts	10.8%	12.2%	8.9%	8.8%

³⁹ We are able to assert this on the basis of GEOSTAT data on household expenditure.

Reading Table-40, in general we do NOT observe a significantly different attitude across the first three quartiles. However, if anything, the **fourth quartile** (the top 25% households in terms of income per capita) is markedly different from the previous three. The fourth quartile is MORE willing to buy counterfeit/pirated DVDs, software, computer games, perfumes, watches, jewellery, sunglasses, handbags, and wallets (accessories). In other words, the rich may be buying, in absolute terms, not only more genuine goods, but also more counterfeit goods.

On the balance however, WHEN and IF the rich buy goods from the risk categories, they end up buying relatively more genuine products than lower-income households do. Furthermore, the rich are taking fewer chances when buying computers, cell phones, automotive spare parts (fakes may all crash!), and medicines (fake drugs may harm the body!).

Table-41: how much counterfeits does the respondent buy, when/if buying the following goods?

Item	1 st quartile				2 nd quartile			
	0%	<50%	>50%	100%	0%	<50%	>50%	100%
Bottled wine	100%	0%	0%	0%	80%	10%	10%	0%
Spirits	88%	0%	12%	0%	60%	10%	20%	10%
Cigarettes	60%	18%	10%	12%	70%	11%	11%	8%
Cosmetics	72%	24%	4%	0%	62%	19%	9%	10%
Fashion clothes	45%	29%	16%	10%	29%	18%	24%	29%
DVD movies	67%	33%	0%	0%	83%	0%	0%	17%
DVD music	33%	67%	0%	0%	86%	0%	0%	14%
Computer software	0%	100%	0%	0%	100%	0%	0%	0%
Computer games	33%	67%	0%	0%	50%	0%	50%	0%
Medicines	91%	7%	1%	1%	89%	8%	2.5%	0.5%
Perfumes	45%	25%	22%	8%	45%	35%	14%	6%
Shoes	36%	28%	19%	17%	43%	24%	19%	17%
Watches	0%	0%	100%	0%	44%	22%	12%	22%
Jewellery	93%	0%	7%	0%	79%	14%	7%	0%
Sunglasses	50%	25%	25%	0%	12%	33%	33%	22%
Handbags	34%	44%	11%	11%	52%	18%	18%	12%
Wallets	67%	22%	0%	21%	29%	21%	21%	29%
Cell phone	82%	0%	0%	18%	78%	11%	0%	11%
Computer	100%	0%	0%	0%	100%	0%	0%	0%
Automotive spare parts	38%	38%	8%	16%	45%	27%	18%	9%

Table-42: how much counterfeits does the respondent buy, when/if buying the following goods?

Item	3 rd quartile				4 th quartile			
	0%	<50%	>50%	100%	0%	<50%	>50%	100%
Bottled wine	93%	7%	0%	0%	93%	7%	0%	0%
Spirits	81%	8%	11%	0%	25%	44%	19%	13%
Cigarettes	72%	16%	7%	5%	82%	13%	2%	3%
Cosmetics	66%	21%	12%	1%	63%	20%	14%	3%
Fashion clothes	44%	15%	21%	20%	44%	16%	26%	14%
DVD movies	0%	100%	0%	0%	70%	15%	10%	5%
DVD music	28%	63%	0%	9%	50%	36%	0%	14%
Computer software	50%	0%	0%	50%	100%	0%	0%	0%
Computer games	0%	100%	0%	0%	100%	0%	0%	0%
Medicines	93%	6%	0.5%	0.5%	93%	5%	1.5%	0.5%
Perfumes	62%	17%	14%	7%	61%	18%	14%	7%
Shoes	51%	21%	18%	10%	52%	15%	19%	14%
Watches	72%	14%	14%	0%	73%	9%	9%	9%
Jewellery	42%	26%	21%	11%	77%	9%	7%	7%
Sunglasses	47%	16%	21%	26%	67%	7%	11%	15%
Handbags	43%	17%	26%	13%	53%	19%	11%	17%
Wallets	36%	21%	36%	7%	50%	16%	8%	26%
Cell phone	70%	15%	10%	5%	78%	6%	10%	6%
Computer	88%	0%	0%	12%	95%	0%	0%	5%
Automotive spare parts	68%	5%	14%	13%	76%	12%	7%	5%

PRICE ELASTICITY

With Table-43, we cast light on the issue of **price elasticity**. Are consumers in the high-income household category characterized by higher or lower price elasticities? The data gathered do not provide a direct answer to that question.

Counterfeit goods are often very significantly “discounted” compared to similar genuine goods. When the discount offered by the retailer is small-to-medium, few consumers may be enticed into buying the counterfeit. However, when the discount reaches a certain threshold – which varies from one good category to another”, the consumer may *all the sudden* be

switching to the counterfeit good, provided of course he/she had the budget to buy the genuine good in the first place. In other words, there are non-linearities at play.

However, if/when a consumer requires only a small price discount (for the counterfeit relative to the price of genuine good), before agreeing to switch away from the genuine towards the consumption of the counterfeit, then we can infer a higher own price elasticity for the genuine good over the spectrum of usual prices for the genuine good.

A relatively small increase in the price of a counterfeit good could also result traders of counterfeits in losing significant market share, when the consumers decide to switch to the genuine product. But, *a priori*, we would expect that the price elasticity is lower when the counterfeit good is already heavily discounted. A 10 GEL price increase on a 100 GEL-priced fake cell phone is indeed equivalent to a 10% increase, but it is equivalent to only 1% of the price of the genuine product (1,000 GEL). If he sticks to the fake, he loses 10 GEL in his pocket, but if he switches to the genuine product he loses 890 GEL more than the alternative. Whether he shall switch depends on his perception of the quality gap between the two products.

Careful reading of the data reveals that for most – if not all goods categories – the lower income households require a HIGHER price discount before buying counterfeits -- and buying more of them -- compared to higher income households. In other words, higher income households are more likely to be enticed into buying counterfeits when the discount is small/medium whereas, for the same good, the lower income household will switch only when the premium is heftier. This is not surprising because, *ceteris paribus*, a large price discount increases -- more significantly -- the purchasing power of the poor household, assuming that this household is indeed a consumer of risk category goods.

Table-43: in which case would the respondent be more likely to buy the counterfeit/pirated good if it/they were ... % cheaper than the original good?

Item	1 st quartile				2 nd quartile			
	10% cheaper	25% cheaper	50% cheaper	75% cheaper	10% cheaper	25% cheaper	50% cheaper	75% cheaper
Bottled wine	20%	20%	47%	13%	11%	56%	17%	17%
Spirits	17%	17%	58%	8%	6%	50%	25%	17%
Cigarettes	20%	32%	41%	7%	22%	19%	42%	17%
Cosmetics	18%	16%	53%	13%	19%	18%	22%	40%
Fashion clothes	7%	8%	46%	39%	8%	15%	38%	40%
DVD movies	8%	13%	53%	26%	9%	24%	33%	33%
DVD music	6%	22%	47%	25%	11%	19%	36%	32%
Computer software	10%	30%	37%	23%	15%	21%	29%	35%
Computer games	6%	27%	39%	27%	14%	17%	29%	40%
Medicines	50%	0%	0%	50%	29%	43%	14%	14%
Perfumes	7%	18%	43%	32%	17%	13%	48%	22%
Shoes	6%	16%	42%	36%	9%	20%	35%	36%
Watches	5%	15%	53%	27%	10%	17%	41%	33%
Jewellery	5%	19%	54%	21%	12%	24%	24%	31%
Sunglasses	5%	8%	59%	29%	15%	15%	40%	29%
Handbags	5%	18%	45%	32%	12%	17%	40%	32%
Wallets	4%	12%	51%	33%	12%	16%	41%	30%
Cell phone	3%	12%	48%	36%	18%	11%	32%	39%
Computer	0%	11%	56%	33%	12%	0%	29%	59%
Automotive spare parts	23%	12%	42%	23%	5%	16%	37%	42%

Item	3 rd quartile				4 th quartile			
	10% cheaper	25% cheaper	50% cheaper	75% cheaper	10% cheaper	25% cheaper	50% cheaper	75% cheaper
Bottled wine	33%	13%	26%	27%	40%	12%	24%	24%
Spirits	20%	20%	33%	27%	40%	15%	25%	20%
Cigarettes	26%	17%	34%	23%	21%	36%	24%	18%

Item	3 rd quartile				4 th quartile			
	10% cheaper	25% cheaper	50% cheaper	75% cheaper	10% cheaper	25% cheaper	50% cheaper	75% cheaper
Cosmetics	15%	12%	44%	29%	18%	20%	40%	22%
Fashion clothes	13%	14%	40%	33%	11%	17%	35%	37%
DVD movies	11%	17%	37%	35%	19%	13%	41%	27%
DVD music	15%	17%	38%	31%	20%	15%	39%	26%
Computer software	18%	8%	41%	33%	15%	11%	40%	34%
Computer games	17%	14%	33%	36%	20%	14%	37%	29%
Medicines	29%	14%	14%	43%	50%	25%	0%	25%
Perfumes	22%	18%	40%	20%	19%	13%	51%	17%
Shoes	12%	20%	33%	35%	12%	17%	39%	32%
Watches	13%	12%	40%	35%	10%	18%	40%	32%
Jewellery	19%	16%	34%	30%	9%	17%	41%	33%
Sunglasses	17%	16%	36%	31%	13%	16%	38%	33%
Handbags	17%	11%	39%	33%	9%	16%	42%	34%
Wallets	17%	10%	36%	36%	8%	38%	39%	38%
Cell phone	16%	11%	39%	34%	14%	14%	37%	35%
Computer	9%	17%	35%	39%	23%	8%	23%	46%
Automotive spare parts	5%	16%	37%	42%	26%	5%	42%	26%

Finally, Table-44 analyzes internet use and assets ownership.

Table-44: Internet use, assets ownership, travelled abroad

Item	1 st quartile	2 nd quartile	3 rd quartile	4 th quartile
Internet	8.4%	22.1%	27.2%	54.0%
House/apartment	92.0%	93.0%	95.3%	95.8%
Car	15.0%	24.9%	26.3%	40.0%
TV	95.0%	97.2%	98.1%	99.5%
Computer	12.0%	26.3%	28.2%	62.3%
DVD player	16.4%	20.2%	24.4%	39.5%
Travelled abroad	3.7%	8.9%	8.5%	12.6%

As expected, assets ownership increases with income (except housing). Therefore, does internet use (very significant increase)? The rich also travel abroad more frequently.

ANNEX B

SUPPLEMENTARY DATA

Table-45: composition of the Georgian population (2010) by age class (x1,000)

Age class	Number	%
0 – 4	260.3	5.9%
5 – 9	228.7	5.2%
10 – 14	268.5	6.1%
15 – 19	341.4	7.7%
20 – 29	706.3	15.9%
30 – 39	625.3	14.1%
40 – 64	1385.0	31.2%
65+	620.9	14.0%
TOTAL	4,436.4	100%

Source: GEOSTAT

Table-46: import duties and excise tax on risk categories of goods

HS code	Description	Rate
220410	Wine and sparkling wine	1.5 €/liter
220421	Other wine	0.5 €/liter
2205	Vermouth	0.5 €/liter
2208	Spirits, liqueurs	5 €/liter
2402	Cigars/cigarettes	12%
30	Pharmaceuticals	0%
33	Essential oils, resinoids, perfumes, cosmetic or toilet preparations	0%
42	Articles of leather (travel goods, handbags)	0%
60-61-62-63-64	Apparel, textiles, footwear	0%
85	Sound recorders and reproducers, TV image and sound recorders and reproducers	0%
87	Vehicles and parts & accessories	0%
91	Clocks/watches	0%
95	Toys, games	0%
96	Miscellaneous manufactured goods	0%

Source: Ministry of Finance

Table-47: tax revenue (2010) according to budget (million GEL)

Category	Amount	%
Income tax	1,165	26.6
Profit tax	535	12.2
VAT	2,039	46.5
Excise	538	12.3
Customs Duty	74	1.7
Other taxes	31	0.7
Taxes	4,382	100

Source: Ministry of Finance

Table-48: VAT rates in Georgia

General rate	18%
(Certain) medicines	0%

Note: a taxpayer must register for VAT if the total amount of VAT taxable transactions carried out in any continuous period of 12 calendar months exceeds GEL 100,000. Input VAT can then not be recovered. The effect is that VAT is not calculated on the specific margin applied by the small business.

Table-49: Budgetary current expenditure by Ministry of Finance, excluding donor-funded projects (million GEL)

Spending authority/budget line	Actual 2009	Budget 2011
<u>Ministry:</u> number of employees	4,468	4,475
Total Expenses	114.614	92.961
<i>Of which</i>		
Salaries	67.101	61.259
Goods and services	44.124	29.487
Other	3.388	2.215
<u>Of which:</u> Revenue Service (employees)	3,349	3,429
Total Expenses	60.766	55.760
<i>Of which</i>		
Salaries	54.588	40.777
Goods and services	5.539	13.653
Other	0.639	1.330

Table-50: prices for counterfeit product recorded in Tbilisi NEILO market (March 2011)

Item	Price (GEL)
CK men's underwear	2
PUMA training (trouser)	12
ADIDAS training (trouser and top)	40
Perfume BOSS (100 ml)	5
Perfume KENZO (flower bottle; 50 ml)	6
Perfume BULGARI (100 ml)	12
Doll Barbie-like	5
Football (FC Barcelona)	12
Sunglasses Ray Ban (cheap model)	10
Wallet with outer Chelsea etc logo (men)	8
PRADO purse (women)	12
LV purse (women)	20
Other wallets with a logo (basic models)	6-10
Key holder MERCEDES	5
PRADA-Hermès-Chloé handbags (women)	40-50-60
Hilfiger-Diesel jeans	66
Levi's jeans	50-60
D&G shirt (cotton; good quality)	20
VERSAC(C)E shirt (poor quality)	7
Hermès scarf (woman)	15
Sunglasses Mont Blanc, Armani, Ray Ban	15-50

Table-51: prices for counterfeit product recorded in Tbilisi KIDOBANI market (March 2011)

Item	Price (GEL)
Branded quality belts (men)	25-50-60-80
RADO watches	40-160-200-250
FERRARI watch	180
Watches with brand names	75-100
Cell phone NOKIA N8	170-190-200
Sports shoes D&G	95
Sports shoes Gucci	60

Item	Price (GEL)
Sports shoes ADIDAS	57-75
Sunglasses (Ray Ban, D&G)	40-70
Sunglasses Porsche	160-180
Wrangler jeans	45
NIKE sports bag	35
Handbags Hermès-Gucci-LV (women)	85-95-100

Table-52: per capita household expenditure in **Belgium** for an average household (2008)

Item	percentage
Food	12.1%
Alcoholic beverages	1.5%
Tobacco	0.7%
Clothing	3.5%
Footwear	0.9%
Pharmaceutical products	1.5%
Automotive spare parts	0.3%
Computers	0.3%
Toys	0.6%
CDs (bought and rented)	0.25%
Jewellery and watches	0.17%
Leatherwear and personal products	0.23%
Other categories (not elsewhere specified) ⁴⁰	1.3%

Notes: household expenditure in Belgium is very high in the categories Rents, Transport, Recreation, Energy

Table-53: estimated percentage breakdown of genuine and counterfeit goods (quantities sold in the market) by Quartiles of per capita income

Item	Genuine				Counterfeit				Counterfeit
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	WEIGHTED AVERAGE
Bottled wine	100%	90%	97.6%	97.6%	0%	10%	2.4%	2.4%	3.3%
Spirits	92%	73.2%	89.9%	60.3%	8%	26.8%	10.1%	39.7%	28.8%

⁴⁰ Including cosmetics.

Item	Genuine				Counterfeit				Counterfeit
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	WEIGHTED AVERAGE
Cigarettes	75.3%	80.9%	84.9%	91.3%	24.7%	19.1%	15.1%	8.7%	12.8%
Cosmetics	89.1%	87.5%	84%	80.8%	10.9%	12.5%	16%	29.2%	22.5%
Fashion clothes	69.4%	48.8%	61%	63.2%	30.6%	51.2%	39%	36.8%	38.9%
DVD movies	89%	83%	66%	83.3%	11%	17%	34%	16.7%	20.3%
DVD music	77.2%	86%	69.6%	74%	22.8%	14%	30.4%	26%	25.1%
Computer software	66%	100%	50%	100%	34%	0%	50%	0%	14.1%
Computer games	77.2%	66.5%	66%	100%	22.8%	33.5%	34%	0%	14.2%
Medicines	95.9%	95.1%	97%	96.8%	4.1%	4.9%	3%	3.2%	3.5%
Perfumes	68.8%	72.7%	77.8%	77.6%	31.2%	27.3%	22.2%	22.4%	23.6%
Shoes	60.8%	65.3%	71%	68.3%	49.2%	34.7%	29%	31.7%	32.7%
Watches	33%	62.5%	85.8%	82%	67%	37.5%	14.2%	18%	23.2%
Jewellery	95.3%	90.5%	66.2%	85.3%	4.7%	9.5%	33.8%	14.7%	17.7%
Sunglasses	74.8%	45%	64.6%	75.2%	25.2%	55%	35.4%	24.8%	31.5%
Handbags	62.6%	70%	62.8%	69.1%	37.4%	30%	37.2%	30.9%	32.7%
Wallets	81.5%	50%	62%	63.2%	18.5%	50%	38%	26.8%	32.0%
Cell phone	82%	85.3%	83.3%	85.3%	18%	14.7%	16.7%	14.7%	15.4%
Computer	100%	100%	88%	95%	0%	0%	12%	5%	5.6%
Automotive spare parts	65.7%	68.7%	75.9%	86.3%	34.3%	31.3%	24.1%	13.7%	20.0%

Note: We have estimated this breakdown based on data from the ACT household survey; the estimate is of course approximate; in the calculation of the overall average share, we have attributed a higher weight to consumption decisions of higher-income households! Weights allocated to each quartile are Q1=7.18%, Q2=13.79%, Q3=23.22%, Q4=55.81%.

Table-54: buying cell phones

Characteristic	Buyers of a genuine cell phone	Buyers of a presumably counterfeit cell phone
Average price	175 GEL	94 GEL
Range in price	25-800 GEL	30-200 GEL
Average age	38 years	38 years
% with higher education	45%	48%

Notes:

- The only variable that significantly distinguishes both groups of buyers is income per capita; buyers of genuine goods come from households with average per capita income 25% higher. But, it also confirms that higher income households also buy counterfeits.
- Both groups expect the counterfeit product to be some 50% cheaper than the original product.

Table-55: limit -- or minimum -- “discount” expected by the consumer for the counterfeit good below which the average respondent (who is willing to buy a counterfeit but did NOT buy it) would NOT buy a counterfeit good

Item	Limit “discount”
Bottled wine	37%
Spirits	25%
Cigarettes	38%
Cosmetics	43%
Fashion clothes	53%
DVD movies	53%
DVD music	47%
Computer software	46%
Computer games	45%
Medicines	38%
Perfumes	46%
Shoes	51%
Watches	49%
Jewellery	48%
Sunglasses	48%
Handbags	49%
Wallets	50%
Cell phone	49%
Computer	52%
Automotive spare parts	45%

Source: author’s calculation

Note: the interpretation is that the actual discount will have to be larger than the limit before the respondent shall buy the counterfeit

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