

## **Preventing Counterfeiting: A Risk Management Model**

Alberto Pezzi\* and Francesca Faggioni\*\*

*Market globalization, process modularization and knowledge codification are giving imitation a more central role in strategic thinking. The growth of emerging markets has also increased the flow of counterfeit goods that is not restricted to local markets, but has become transnational. Considering this, firms need to improve their approach to risk management in terms of preventing and mitigating counterfeiting and imitation risks. The study highlights the role of long term view to protect goods covered by intellectual property rights. We develop a conceptual framework to define how managerial perception of risk of intellectual property rights can affect firms' decisions. The results of this study will help managers and researchers to understand how it is possible to manage imitation/counterfeiting risks in order to formulate new, effective and implementable innovation strategies.*

**JEL Codes:** G11,L50 and M16

### **1. Introduction**

Over the last few decades, counterfeiting has become a phenomenon that afflicts manufacturers around the world. The European Commission (2009) highlighted that since 2000 the number of cases of detentions by customs of counterfeit products has increased seven fold. Several studies analyzed this tendency, recognizing the negative counterfeiting effects on social and economic trends in different countries (e.g. OECD 2008) or focusing on legal aspects of counterfeiting. Few studies have reported how firms can manage counterfeiting risk; particularly when firms operate in multiple countries. A basic question is: Does the firm actually have adequate counterfeiting risk model in the present dynamic environment? In this study, we develop a counterfeiting risk management model that could function to formulate local strategic actions against counterfeiting. Different case studies, reported in the paper, valorize our thesis that firms may think global and act local. The remainder of the article is organized as follows. Firstly, it explores differences between imitation, illegal imitation and counterfeiting. Secondly, the study identifies risks linked to counterfeiting in terms of countries' enforcement, legal protection of property rights and consumer awareness in buying counterfeit products. This analysis has an influence on the measurement of perceived country's risk and affects firms' decisions in terms of production and/or commercialization in a foreign country. Finally, we develop a risk management process and provide possible solutions to manage counterfeiting risk.

### **2. Literature Review and Terminology**

Following the resource based view, the competitive advantage depends on the firm's tangible and intangible resources (Barney 1991; Grant 1991). The combination of different resources, skills and capabilities allows the company to achieve a sustainable competitive advantage. To maintain over time superior performance the resource must have the characteristics of value, scarcity, innovation and imperfect imitation (Collins & Montgomery

---

\* Dr Alberto Pezzi -Department of Business and Law, University of Roma Tre, Italy. Email pezzi@uniroma3.it

\*\* Dr. Francesca Faggioni, Department of Business and Law, University of Roma Tre, Italy. Email ffaggioni@uniroma3.it

## Pezzi & Faggioni

1995; Levitt 1960). It's difficult to maintain a perpetual state of value, scarcity, innovation and inimitability because they must be nurtured over time. According to the resource based view, sustainable competitive advantage depends on: the imperfect mobility of strategic resources; the mechanisms of isolation (Lippman & Rumelt 1982).

The imperfect mobility of resources relies on the strategic high specificity of these resources and the inability to create the same value in different contexts from those in which they were created and accumulated (Dierickx & Cool 1989). For this reason, when resources became available on the market, they lose their ability to achieve a sustainable competitive advantage. Technological innovation and transferring of human, tangible and intangible resources allow a firm to reach a temporary competitive advantage.

Isolating mechanisms are processes or variables that limit or prevent the imitation of the resource by competing firms. A strategic resource used by a company can produce superior results as part of a given context. The complexity involved in the generative process (Reed & De Fillippo 1990) and the presence of causal ambiguity (Rumelt 1984; Dierickx & Cool 1989) are barriers to imitation that are difficult to overcome. Sometimes, it is difficult to understand what determinants of the same company are the reason for competitive success (ie the links between cause and effect). Other isolation mechanisms come from the presence of asymmetric information, the complementary assets and the difficulty of transferring tacit knowledge.

The competitive advantage pay-offs can more easily be maintained in a non dynamic environment where monopoly pay-offs are more relevant. This assumption can be used to reproduce the condition of pay-offs resulting from goods whose special characteristics are protected by intellectual property rights (trademark, patents, and copyrights). These pay-offs are temporary and limited because of the imitation processes and innovation diffusion diminish innovation's value. From this perspective, it is necessary to distinguish legal imitation from illegal imitation and counterfeiting.

*Imitation could be a competitive strategy based on reverse engineering.* This would lead to the creation of new devices or solutions to be applied to the same product of the innovator, or to increase product functionalities. In this case, imitation is fair and it is also good for the genesis and the diffusion of innovation through the economic systems (Freeman 1987). Pavel and Pavitt (1995) state that reverse engineering is the main method of learning from competitors' product technologies. This genuine reverse engineering and imitation, although unauthorized, is a necessary activity to ensure competition and innovation; key attributes of a free market system (Freeman 1995; Pavitt 1991; Rothwell 1994). Schnaars (1994) espouses imitation as a major strategic tool to better business by distributing a product of identical or superior quality at lower prices. The Author states that another benefit is that imitators may also "leapfrog" the innovator with features that genuinely improve the original product. Then imitations are acceptable only if they add value to the original product that can be readily assessed by the customer. All these authors stress their attention on product innovation, and pay no attention to the existence of trademarks.

*Imitation could be a lesser form of counterfeiting.* Imitation could be the trading of a product that is a mere copy of the original. In this case this is not sufficiently similar to constitute a counterfeit. Imitation doesn't add extra value for the customer. Brand imitation –or "passing off", "knock off", or "look alike"– is based on similarities and the consumer may be deceived even if there is no appropriation of the brand name. The most striking case was the one held by Ferrero in China against Mengtesha Company. The Mengtesha

## Pezzi & Faggioni

Company has produced for years chocolates identical in packaging to the “Ferrero Rocher”. They utilized a different brand, Trésor Doré, and never suffered legal penalties. Little by little they became as popular as Ferrero in China, even winning regional and National awards. In 1990, Ferrero started a legal action. In 2006, the Court applied the Paris Convention and Mengtesha Company received a civil penalty and the obligation to interrupt the production.

*Imitation could be misleading signs.* Even when brand appropriation or violation do not exist, or when the brand is not registered, the law can prosecute the fraudsters. It is, in fact, sufficient to induce the buyer to make a mistake (see article 517 of Italian penal code). Despite the protection of civil and penal law, there is a different threshold of acceptability for what concern the “marketing of products with misleading signs”. This is the case concerning “agropiracy” (the use of misleading signs in the food industry). This practice is widespread all over the world and especially imitates Italian and French typical products. In short, signs, colors and names that sound Italian are applied to products that aren't Italian. For example: Parma ham (Usa), Asiago from Wisconsin (Usa), Tinboonzola (Australia), Parmesao (Brasile), Reggianito (Argentina) or the “danish grana”.

*Imitation could be considered counterfeiting and piracy.* Commercial counterfeiting and piracy are a range of illicit activities linked to property rights infringements. They are related to the counterfeiting of brand name and trademarked merchandise. Counterfeiting is the process of fraudulently manufacturing, altering, or distributing a product of lesser value than the genuine product. A counterfeit is a spurious mark which is identical or substantially indistinguishable from a registered mark. Actually the distinction between piracy and counterfeiting relies on consumer awareness of buying a lower price counterfeit. Some Authors distinguish deceptive and non deceptive counterfeiting according to the consumers awareness to be in front of counterfeited goods (Grossman & Shapiro 1988) The price, as well as the place or channel in which the counterfeit is bought, make the customer aware of being in the presence of a counterfeit. Sometimes piracy is perceived as less deceptive than other forms of counterfeiting. For the purpose of this research, we consider counterfeiting risk and illegal imitation risk in the same way.

In literature, much emphasis has been given to the counterfeiting problem in terms of estimated flow of counterfeit products and legal protection of intellectual property rights, but little attention has been given to the definition of strategic models that can help companies to combat counterfeiting. This study aims to take its first steps in this direction. A more comprehensive approach to intellectual property rights infringement practices provides an overall view of the phenomenon from a firm's perspective (Doig et al. 2001; Givon, Mahajan, & Muller 1995). This is particularly important because, compared to the stable environmental conditions of the past; the present dynamic society brings with it some dramatic changes in the conditions of risk management (Rasmussen 1997):

- A rapid development of technology is found at the operative level (e.g. transportation, shipping, manufacturing and logistics). This transformation is faster than a firm capability to change management structures. Sometimes foreign third parties manufacturers become counterfeiters, after a non consensual acquisition of technology (Minagawa, Trott & Hoecht 2007).
- A slow response is found at the legislative and regulatory level.
- A rapid development of information and communication technology leads to a high degree of integration of illegal firms. The effect of limited control, for example, of internet channels can have dramatic effects on rapid propagation of counterfeit products.

## **Pezzi & Faggioni**

- A very aggressive and competitive environment in which decision makers are focused on short term financial and survival criteria rather than long term criteria concerning brand, safety and environmental impact.

These trends have a remarkable effect on the approach required to create a modeling system. The aim of the study is to highlight the role of long term view to protect goods covered by intellectual property rights through a specific risk management model that can mitigate counterfeiting effects on firm's performance.

### **3. Modeling a Counterfeiting Risk Management Plan**

The risk management models tend to be more generic and they are applicable to a variety of circumstances depending on the type of project or business. The generic risk management models do not differ significantly one from another. To study counterfeiting risk, we believe that it is necessary to use a generic risk management model, but the control functions and the performance criteria must be analyzed continuously through an active closed loop feedback point of view. This is particularly true, in a dynamic environment in which all actors (legal and illegal) strive to adapt to changes and pressures of dynamic markets. In that sense, the managerial perception of counterfeiting risk affects firms' decisions. To measure the risk perceived and to build a comprehensive counterfeiting risk management plan, firms have to set objectives in respect of what they want to achieve with the risk management plan. Defining objectives of risk management plan helps firms to plan the necessary effort, resources and money and to develop a response for certain risks. The market globalization and the growth of emerging markets have increased the flow of counterfeit or illegally imitated goods. This flow is not restricted to local markets, but has become transnational. However, we believe that huge differences between countries have an effect on the measurement of perceived risk and firms need to formulate local strategic actions against counterfeiting.

When the objectives of risk management plan are clear, it is necessary to identify counterfeiting risks. Risk cannot be managed if it is not identified through documents and assumptions based on past and forthcoming events. Cause and effect diagrams, flowcharts, and other suitable techniques may be used in the process (PMBOK 2000). We believe that counterfeiting risk management process relies on the correct identification of risks depending on counterfeiting firm activity, consumer complicity and intellectual property legislation. Counterfeiting risks are by nature uncertain and different between countries. A rigorous process of assessment, risk response, development and monitoring as well as control is necessary to prevent counterfeiting risks. The risk management plan permits firms to recognize how they should manage and respond to identified risks. Sometimes firms minimize risk prevention, considering counterfeiting risks a remote threat. This is particularly true, for SMEs that consider risk management as a cost and not as an investment. However, also firms that invest significantly in their brands fail to protect their intellectual property in other countries. For example, by not registering its trademark in the United States, Prosciutto di Parma gave other operators the possibility to use its trade name. The consortium, producer of the original product, had to change the brand in order to have access to the Canadian and U.S. markets.

For the purpose of our study, we adapted the Gray and Larson model (2006) which consists of four phases:

- risk identification;
- risk assessment;

## **Pezzi & Faggioni**

- risk response;
- risk control.

### **4. Risk Identification**

#### **4.1 Counterfeiting Firm Activity**

The growth of counterfeiting firm activity is strictly dependent on the capacity of law enforcement to limit counterfeiting. In the last decade, counterfeiting has become an activity conducted by firms that are not only micro or small size, but also by large firms (particularly in emerging countries). According to the most recent EU report (2010), in 2009 there was for the first time a decrease in overall amount of cases of detentions by customs. The overall amount went down to 43,572 cases. Each case contains between one and several million articles. Fortunately, the total amount of articles has decreased to almost 118 million. 90% of articles detained by customs were suspected of infringing a Community or national trademark. The categories with the highest number of suspected articles detained were cigarettes, labels, tags and medicines. 64.4% of the total amount of detained goods originated from China.

Firms cannot do anything against the illegal activity of counterfeiting companies because it is a task of law enforcement. Firms have a fundamental role in reporting criminal episodes and in helping law enforcement to define the possible target of criminal enterprises, in terms of products, distribution channels, entry modes in foreign country, goods' country of origin, etc.

The lack of control of counterfeiting firm activity, in a macro-economic view, alters the direction and volume of international trade flow between countries and how the functions of the labor market. The repeated use of counterfeit products and the consequent deception regarding the origin of the product may cause damage to a national industry. Counterfeiting facilitates the overlap of production specialization. This is particularly true in labor intensive industries within developing countries. In the case of Italy, the overlap average with China is 53%, with higher peaks in clothing, furniture, shoes, watches and jewelry (Ice 2003). Counterfeiting feeds Chinese asymmetric competition depending on system factors (low labor costs, lack of environmental regulations, corporate welfare, etc.) that aggravate strong social and environmental dumping. In this sense, law enforcement is oriented to limit counterfeiting activity in their own country's market and to deter efforts of foreign counterfeiting firms from bring products in.

#### **4.2 Consumer Complicity**

Governments and law enforcement have largely focused on strengthening intellectual property rights regimes in order to effectively deter the production and trade of fake products. Governments and intellectual property rights-holders have to educate and protect consumers and economies from damages provoked by counterfeiting. If consumers, producers and distribution channels understand the consequences of their counterfeit purchase, they can be encouraged to stop the practice.

The level of consumer complicity (Chaudhry, Cordell & Zimmerman 2005) depends on their willingness to object to the sales of fakes. The complicity of consumers is profoundly affected by the increase of infringement actions and the difficulty of seeing rights protected. In a report on Consumer Attitudes and Perceptions of Counterfeiting and Piracy (BASCAP 2009), the researchers called a category of consumers "Happy Purchasers"

## **Pezzi & Faggioni**

because they feel counterfeiting is a smart purchase. They assert to be experts in finding copies and purchase sophisticated products (fashion, electronics and software) in small quantities.

The counterfeit market is also supported by the general sentiment that it is a way to fight the multinationals or capitalism and it is not risky in terms of sanctions or unethical behavior. On the other hand, there are consumers that are able to distinguish between genuine and fake products but they don't have the means to pay for a genuine product. Sometimes, they feel embarrassed when someone else discovers that the product is a fake.

However, some consumers are unable to tell the difference between a genuine and a fake product. The cultural differences are one cause of the limited awareness of product origin and the varying protection of intellectual property rights. According to ICE (Institute for Foreign Trade), in 2009 the U.S.' products which imitated or referred to Italian names generated \$ 17.7 billion. Pasta sauces are the most imitated Italian products in the world (97% of cases are fakes), followed by canned tomatoes (76%), coffee (51%), pasta (28%), olive oil (11%) and mozzarella (7%). In India, it is not considered morally wrong to fake medicines if they are produced to save lives.

Economic damage suffered by the customer of counterfeit goods can have a knock-on effect on business performance. The customer, who unknowingly purchased the counterfeit goods, cannot repurchase the original product, if not satisfied. For example, a perfect imitation of the pharmaceutical products' packaging does not mean the composition of the drug is the same. On the other hand, in the case of piracy the consumer is fully conscious of buying a product that is not genuine. The company may not suffer any financial loss from the sale of counterfeit goods. In fact, if the buyer is not willing to pay for the original product, the firm can utilize this condition to increase their brand awareness.

### **4.3 Intellectual Property Legislation**

The legal protection system of intellectual property rights serves as a formal mechanism of isolation. This legal protection is an imitation barrier that is difficult to overcome in the short term for competitors; it produces a condition of a temporary monopoly for the owner (Rumelt 1984). The lack of such formal mechanism of isolation makes companies very vulnerable from the outside and can affect the appropriation of the entire value generated by intellectual property (Mizik & Jacobson 2003). In commercial transactions, trademarks, patents, and copyrights have different functions. They serve to distinguish the origin of the product, to ensure consumer expectations of product quality and to attract consumers. By lacking in protection, the value added by the firm can be expropriated and the possibility of achieving a premium price lost. On the macroeconomic side, the lack of protection may generate distortions in the functionality of the international market or local damage for an industry.

The complicity of the government limits the ability of firms to see their rights protected locally. It depends on the lack of enforcement rather than an absence of norms or rules. The laws vary from country to country and the interpretation of the laws applied to each case is carried out by different people with different experiences, beliefs and values (Wilke & Zaichkowsky 1999). Sometimes the superficiality of economic agents together with the process of globalization dynamics can produce unexpected and unlawful results in terms of protection of property rights.

## Pezzi & Faggioni

Trademarks can receive different degrees of protection depending on a products' category. In 2009, the Consortium of Parmigiano Reggiano took precautionary measures to protect his brand. It asked the Court of Cologne to seize South American products "Reggianito" and "Parmesano" presented at the Anuga food fair in Germany. The German Court's decision to seize the two products during the fair shows the high level of protection granted to the PDO (Protected Designation of Origin) products. The Court declared that the use of the names "Parmesano" and "Reggianito" for not PDO cheeses is illegal according to the Council Regulation (EC) n. 510/2006 of the European Union legislation. The same level of protection is not granted to national products that are not PDOs. For example, limoncello, the famous lemon liquor of Amalfi Coast (Italy), is not a PDO. The European Union legislation (Art. 7 of Regulation No 40/94) does not allow the registration of a mark that represents a "typical or traditional" product of a Member State (e.g. cognac, mozzarella, pasta, etc.). In 1996, a Spanish man recorded his liquor under the name of "limonchelo". The word, although spelt differently, has a phonetic similarity to the Italian liquor. The recording took place against EU rules. An Italian company that wanted to record its own brand of limoncello in Spain lodged a complaint with the Office for Harmonization of the International Market (OHIM). The Court made a judgment based on the visual and aural characteristics of the two brands (the Spanish brand, already registered and the Italian one, not yet registered) without entering into the correctness of the Spanish company. The court permitted the registration of the Italian company's trademark but tacitly admitted the possibility given to a foreign operator to record a typical product in contravention of the European Community law.

The interpretation of law can be applied differently to the same case. An Irish company freely distributes the denim brand Diesel in Ireland. In Ireland the Diesel Company has no trademark rights. They produce these jeans in Poland and then import them to Ireland. During the transit the goods were stopped at the German Customs, where the Diesel Company has trademark rights. The Court of Justice of the European Union declared that the mere transit of counterfeit goods from a country outside the EU to a country of destination does not constitute trademark infringement, unless there is a risk that these goods are marketed in the State of transit. The transit of these goods does not require the payment of duties and goods are not allocated in that State (C281/05 of July 2006).

Moreover, in 2008, the famous French company Vuitton, found that writing down their specific keywords on Google, it was possible to find Internet sites selling Vuitton imitations or counterfeit products. For this reason, believing that there was an abuse of its brand, the Vuitton Company sued the Google search engine. The Court of Justice of European Union ruled that there is no Google responsibility for illicit use of the trademark. The Vuitton company can sue those traders "guilty" of utilizing the "Vuitton" brand in order to attract users to their sites.

## 5. Risk Assessment

Once risks have been identified, it is necessary to undertake a qualitative and quantitative analysis to assess the potential severity of impact and to define the probability of occurrence. Then, the risks are prioritized considering the potential negative impact on the business. For example, using the Monte Carlo method, the risk's impact is determined from historic data or estimated in monetary terms (Rand value). The risks can be prioritized in order of the expected monetary value (EMV) (PMBOK 2000):

$EMV = \text{Probability of occurrence} * \text{Rand value of impact}$

## Pezzi & Faggioni

The process of quantifying the risk is subjective as it is based on the ability to determine the probability of occurrence and the cost of the consequence. Identifying risks in terms of probability and their consequences can help firms to focus time and resources on the most urgent risks. Figure n. 1 is a logical derivation from the ranking of occurrence and consequence and shows suggested actions to minimize the negative impact on the individual business, if the risk occurs.

The damage suffered by expropriation of intellectual property rights can have an immediate impact on business performance. The damage may take the form of profit reduction, because of non-payment of royalties for the use of trademark, or the loss of the market as result of diverting customers. In the case of unconscious customers of counterfeit goods, the immediate financial damage may subsequently be joined by delayed reputational damage.

Often, firms continue to disclose technology or have partnerships with other firms, even if they recognize the risks of product imitation or counterfeiting (Minagawa, Trott & Hoecht 2007). In the presence of inadequate mitigation strategies, partners can decide to compete by producing and distributing either similar quality products without paying royalties or low quality products with the genuine trademark.

**Figure 1: Ranking of occurrence and consequence**

		Probability		
		Rare	Medium	High
Impact	Severe	Monitor and manage risks	Immediate action	Immediate action
	Moderate	Accept but monitor	Monitor and manage risks	Immediate action
	Low	Accept	Accept but monitor	Monitor and manage risks

On the other hand, the growing number of companies that produce counterfeit goods and the increase in production volume is dependent on the rise in demand and the development of a transnational distribution network. The control of distribution channels has become a crucial point for the development of counterfeit products. The firm's control activities are mainly addressed taking into account its distribution channel in order to ensure that the genuine goods are not confused with counterfeit goods. Green and Smith (2002) found that a firm in Thailand not only made a loss in terms of revenues (40%), but also significantly reduced its brand reputation when several consumers died after drank the counterfeit product (whisky).

## 6. Risk Response

Although Kapferer's claim might still be relevant (1997, p. 134): "A strong brand has its copy or even its counterfeit. There is no way out of this ", firms respond to the counterfeiting through a series of strategic actions, procedures and techniques aimed at minimizing, if not eliminating, the impact of risks.

## Pezzi & Faggioni

The following classification is not specifically calibrated to an industry or a market and consists of the main measures of protection against damage caused by counterfeiting.

### ***Accepting the Risk***

Accepting the loss from a risk when it occurs, sometimes is a business strategy. Based on a cost/benefit analysis the company can decide that it is not appropriate to combat production and commercialization of counterfeit goods. This strategy is adopted when the potential losses are minimal, when the cost of transferring the risk to a third party is too high, or when the probability of the risk occurring is low. In cases where the product is clearly at low quality imitation, the company may not decide to engage defensive actions because the reputation is not compromised and the benefits of a defensive strategy are not sufficient to cover the costs of this investment. Not taking defensive action does not mean having a passive attitude (Shultz II & Saporito 1996). It may preserve commercial relationships with the country, usually emerging, where the product is produced and/or commercialized. It can also be a tool to increase brand awareness and consumer desire to make a purchase. For products such as software, pirated products feed the network effect and the possibility that it will become a standard. In fact, the rapid increase in number of users allows the company to have a greater potential demand for software compatible with the pirated product.

Valsamakis, Vivian, & Du Toit (2004) believe that retained risk may be either funded or unfunded. When risks are funded, a contingency plan is normally developed to prevent the impact effect. A risk is unfunded and retained when no provision is made for the financial consequences of a loss. Risks should be retained, when the risk is unknown, the consequences are not serious and the consequences of avoiding the risk are unacceptable.

### ***Mitigate the Risk***

Mitigation strategies should reduce the impact of adverse events and the likelihood that the risk events will occur (PMBOK 2000). Different strategies can be planned to mitigate counterfeiting risk: legal action; awareness of the government; communication strategies and other marketing strategies.

The *legal action* is a long and very expensive defensive measure for companies and often does not obtain the expected results. The legislation on the protection of brands and its enforcement is very different from country to country. Many companies before any public or legal action decide to have direct contact with the counterfeiters. Direct contact allows a company to assess what the most cost-effective actions are, if it is more worthwhile to deter or to denounce a company that produces or sells counterfeit goods. Legal action may not be an effective tool to limit counterfeiting. For example, in 2011, the Versace Company in the United States obtained the highest compensation ever awarded to an Italian company in defending its brand. The Los Angeles Court ordered a compensation of 20 million dollars. However, the case started in 2003, when the company reported the existence of products illegally utilizing the Medusa mark. The complaint led to the seizure of 72 stores in Southern California and 110 people were arrested. Conversely, the protection of Versace brands in other international areas, especially in less developed countries, hasn't obtained the same results. In such cases, it is possible to try to raise *government awareness* encouraging diplomatic action against the country where counterfeit products are produced or sold. Only large company that have interests in the

## Pezzi & Faggioni

same areas may have the strength to get this support and only if there is damage to the local industry.

*Communication strategies* are designed to inform consumers about the quality, value and all other components that differentiate its products from counterfeit products. They may also be directed to discourage distributors and consumers from purchasing counterfeit products. In some industries as the pharmaceutical industry, revealing that a product has been counterfeited is a defensive strategy because consumer's attention and sensibility make the message more penetrating. This goal is often pursued by trade associations which seek to inform people that buying counterfeit goods fosters organized crime, the exploitation of illegal labor or child labor, etc.

Some companies encourage consumers to report cases of infringement through hotlines and dedicated services. In the last decade, firms use different forms of *labeling* to protect their products that could serve as a deterrent to counterfeiting. These labels inform consumers that products are original. Holograms, hidden letters, logos that change color upon contact and customized packaging are the most commonly used techniques (Chaudhry & Walsh 1996). It is often a very expensive defensive action for the company and rarely effective against advances in technological equipment of firms who produce counterfeit goods.

An aggressive marketing action is the *price reduction* for their distributors or consumers. In this case, the price alignment with the infringer increases customer loyalty (Olsen & Granzin 1992). The result of this action could lead to a reduction of revenues by product, but an increase in volumes sold. On the other hand, if the brand is placed on a high price level, this type of policy is impractical or produces few results. The price is sometimes an undeniable distinctive mark of the brand in terms of quality and value.

### ***Avoiding the Risk***

Risk avoidance means eliminating the risks or conditions creating the potential risks (Gray & Larson 2006; PMBOK 2000). The firms' ability to avoid the risk of counterfeiting depends on their capacity to understand and control the context in which they operate. The cost/benefit relationship of controlling the context is high and often non acceptable for SMEs. On the other side, counterfeiters don't have a great interest in copying a local brand. For large companies, the country of destination represents a risky strategic choice that affects firm's performance. The option of risk avoidance should be considered when it becomes clear that producing or commercializing a product in another country is dangerous. This option gives good results if it is related to a communication strategy which makes the decision to not serve certain countries public.

### ***Transferring or Sharing the Risk***

Transferring counterfeiting risks through the conventional method of insurance, or by paying a third party to take the risk is particularly difficult, especially when a counterfeiting risk is related to a reputational risk. Reputation is about legitimacy of the organization with respect to the stakeholders; it tends to be cumulative over time and signals the quality of a firm. Transferring the risk means covering only major potential financial losses but doesn't protect the relations with stakeholders.

Risk sharing differs from risk transfer because not all of the risk is transferred to a third party. Nowadays, many businesses have a core part of their strategy in networking.

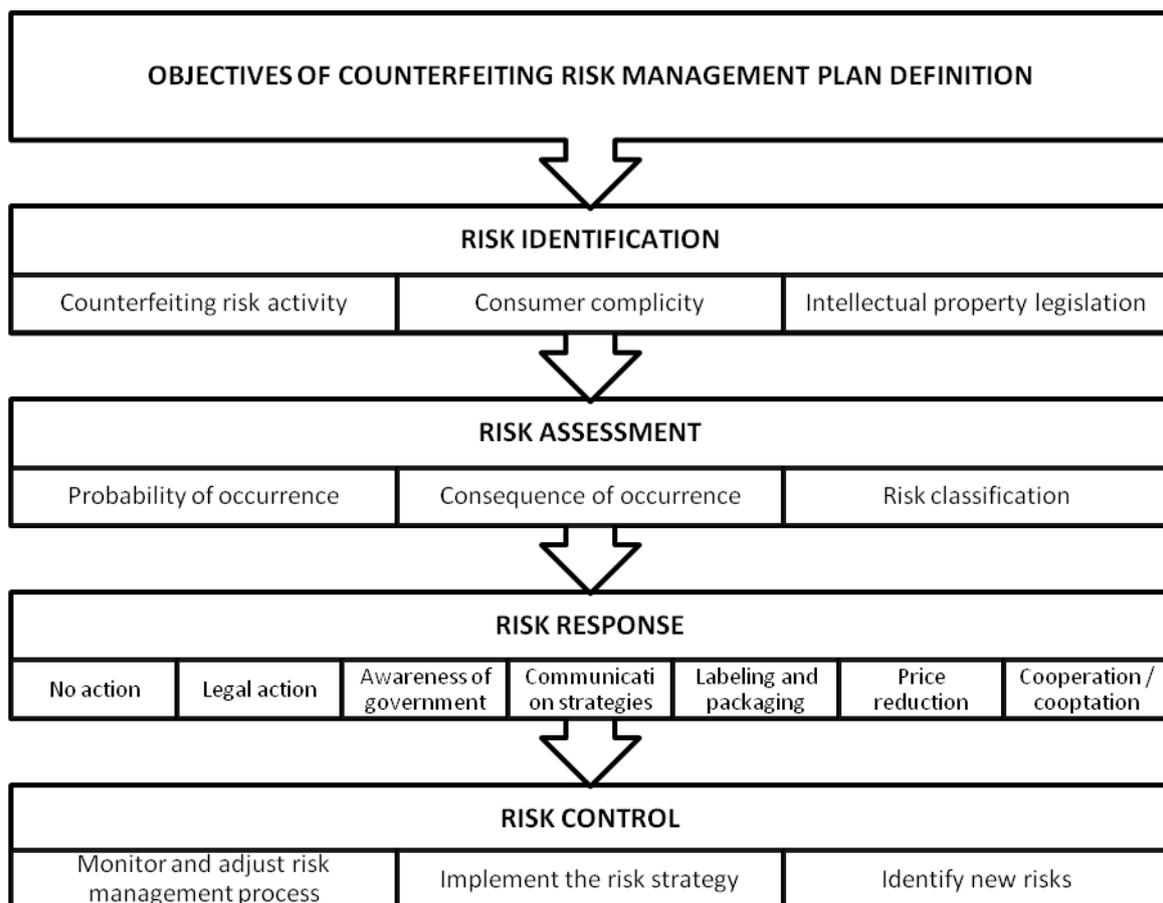
## Pezzi & Faggioni

Relationships between firms tend to be supportive as a result of common interests and can help the owner of the intellectual property rights to have a better defense against counterfeiting. On the other hand, the co-optation of the illegal company can be useful if the economic benefits reached by change in status, remunerate the additional costs of improving production techniques, employment conditions, payment of taxes and interruption of relationships with suppliers and customers who participated in the illegal activity (Blois 2004). The last item should be well monitored by the owner of the intellectual property rights. The company co-opted can continue to sell counterfeit products, but with the same quality as the original, if the knowledge-production technology is also transferred.

### 7. Risk Control

The last step of the counterfeiting risk management process consists of monitoring and implementing risk responses in order to modify the risk management plan and identify new risks. For each risky source, the control structure must be identified, controllers recognized, their objectives and performance criteria restated and the results analyzed from a feed-back control point of view. Figure n.2 shows the counterfeiting risk management process.

**Figure 2: Counterfeiting risk management process**



### 8. Conclusion and Future Research

Counterfeiting is escalating and firms are not able to overcome counterfeiting without efforts by governments and enforcement agents. Custom controls have been improved,

## Pezzi & Faggioni

but the responsibility to act is mainly left to the companies that have to identify and report the offense themselves. To be able to manage counterfeiting risk effectively, firms require a risk management process and model developed to match the specific needs in different contexts. Managerial perception of counterfeiting risk depends on the comprehension of consumer behavior in choosing a counterfeit product (e.g. price, easy access to social acceptability, perception of no risk in terms of sanctions or unethical behavior) and the government commitment to fighting and prosecuting counterfeiting. The resistance approaches, focused on strengthening intellectual property enforcement regimes to deter the production and trade of counterfeit products, alone are inadequate. Firms and Governments have to develop communications and educational programs that can change consumer purchase habits, attitudes and distributors and producers awareness. Starting from that moment a long and detailed process will be carried out.

This research has concentrated on defining a conceptual counterfeiting risk management model. Future research will focus on an empirical analysis to quantify counterfeiting risk in order to assess the potential severity of impact of risks and to define the probability of occurrence.

## References

- Barney, JB 1991, 'Firm resources and sustained competitive advantage', *Journal of Management*, vol. 17, no.1, pp. 99-120.
- Bascap 2009, *Research report on consumer attitudes and perceptions of counterfeiting and piracy*, Business Action to Stop Counterfeiting and Piracy <[www.iccwbo.org/bascap](http://www.iccwbo.org/bascap)>.
- Blois, K 2004, 'Two insidious attacks on brand equity', *Journal of Business-to-Business Marketing*, vol. 11, no. 4, pp. 23-41.
- Chaudhry, P, Cordell, V & Zimmerman, A 2005, 'Modelling anti-counterfeiting strategies in response to protecting intellectual property rights in a global environment', *The marketing Review*, vol. 5, no. 1, pp. 59-72.
- Chaudhry, PE & Walsh, MG 1996 'An assessment of the impact of counterfeiting in international markets: The piracy paradox persists', *Columbia Journal of World Business*, vol.31, no. 3, pp. 34-48.
- Collins, D & Montgomery, C 1995, 'Competing on resources: Strategy in the 1990's', *Harvard business review*, vol. 73, no. 4, pp 119-128.
- Dierickx, I & Cool K 1989, 'Asset stock accumulation and sustainability of competitive advantage', *Management Science*, vol.35, no. 12, pp. 1504-1511.
- Doig, SJ, Ritter, RC, Speckhals, K. & Woolson, D 2001 'Has outsourcing gone to far?', *McKinsey Quarterly*, 4, no. 1, pp. 24-37.
- European Commission 2009, *Report on EU customs enforcement of intellectual property rights*, EU.
- Freeman, C 1987, *Technology policy and economic performance; lessons from Japan*, Printer Publishers, London.
- Freeman, C 1995, 'The national systems of innovation in historical perspective'. *Cambridge Journal of Economics*, vol.19, no. 1, pp 5-24.
- Gatignon, H & Anderson, E 1988, 'The Multinational corporation's degree of control over foreign subsidiaries: An empirical test of a transaction cost explanation', *Journal of Law, Economics, and Organization*, vol.4, no.2, (Fall), pp. 89-120.
- Givon, M., Mahajan, V. and Muller, E. (1995) 'Software piracy: estimation of lost sales and the impact on software diffusion', *Journal of Marketing*, vol.59, no. 1, pp. 29-37.
- Grant, RM 1991, 'The resource-based theory of competitive advantage: Implications for strategy formulation', *California Management Review*, vol.33, no.3, pp. 114-135.

## Pezzi & Faggioni

- Gray, CF & Larson, EW 2006, *Project management - the managerial process*, 3rd ed, Irwin/McGraw-Hill, Boston.
- Green, RT & Smith, T 2002, 'Executive insights: Countering brand counterfeiters', *Journal of International Marketing*, vol. 10, no.4, pp. 89-106.
- Grossman, GM & Shapiro, C 1988, 'Foreign counterfeit of status goods', *The Quarterly Journal of Economics*, vol. 103, no 1, pp. 79-100.
- Ice & Prometeia 2003, *Evoluzione del commercio con l'estero per aree e per settori*, November 2003, ICE.
- Kapferer, JN 1997, *Strategic brand management*, Kogan Page, London.
- Levitt, T 1960, 'Marketing myopia', *Harvard business review*, vol. 38, no. 4, pp. 24-47.
- Lippman, SA & Rumelt, RP 1982, 'Uncertain imitability: an analysis of interfirm differences in efficiency under competition', *Journal of Economics*, vol.13, no.2, pp. 418-438.
- Minagawa, TJ, Trott, P & Hoecht, A 2007, 'Counterfeit, imitation and reverse engineering: Reflections from Chinese manufacturing firms', *R&D Management*, vol.37, no.5, pp. 455-467.
- Mizik, N & Jacobson, R 2003, 'Trading off between value creation and value appropriation: The financial implications of shifts in strategic emphasis', *Journal of Marketing*, vol.67, no.1, pp. 63-76.
- Organisation for Economic Co-operation and Development 2008, *The economic impact of counterfeiting and piracy*, OECD.
- Olsen, JE & Granzin, KL 1992, 'Gaining retailers' assistance in fighting counterfeiting: conceptualization and empirical test of a helping model', *Journal of Retailing*, vol. 68 no.1, pp. 90-109.
- Patel, P & Pavitt, K 1995, 'Patterns of technological activity' in P. Stoneman (ed.), *Handbook of the Economics of Innovation and Technological Change*. Blackwell, Oxford, pp. 14-51.
- Pavitt, K 1991, 'Key characteristics of the large innovating firm', *British Journal of Management*, vol.2, no.1, pp. 41-50.
- PMBOK®, 2000, *A guide to the project management body of knowledge*, Project Management Institute, Newton Square.
- Rasmussen, J. 1997, 'Risk management in a Dynamic Society: A Modeling Problem', *Safety Science*, vol. 27, no. 2/3, pp.183-213.
- Reed, R & De Fillippi, RJ 1990, 'Causal ambiguity, barriers to imitation, and sustainable competitive advantage', *Academy of Management Review*, vol.15, no.1, pp. 88-102.
- Rothwell, R (ed.) 1994, *The Handbook of Industrial Innovation*, VT: Edward Edgar Publishing, Brookfield.
- Rumelt, RP 1984, 'Towards a strategic theory of the firm' in R.B. Lamb (ed.), *Competitive strategic management*, Prentice Hall, Englewood Cliffs, pp. 556-570.
- Schnaars, S 1994, *Managing imitation strategies: how later entrants seize markets from pioneers*, Free Press, New York.
- Shultz, CJ & Saporito, B 1996, 'Protecting intellectual property: strategies and recommendations to deter counterfeiting and brand piracy in global markets', *The Columbia Journal of World Business*, vol.31, no. 1, pp. 18-27.
- Valsamakis, AC, Vivian, RW & Du Toit, GS 2004, *Risk management: managing enterprise risks*, Heinemann, Sandton.
- Wilke, R & Zaichkowsky, JL 1999, 'Brand Imitation and its effects on innovation, competition, and brand equity', *Business Horizons*, vol. 42, no. 6, pp 9-18.