

## DETERMINANTS OF THE INFILTRATION OF COUNTERFEIT AGRO-BASED PRODUCTS IN KENYA: A CASE OF SUPPLIERS IN NAIROBI

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### ABSTRACT

Counterfeiting involves infringement of intellectual property rights which are private property rights conferred by statutory or common law. These rights include among others patents, trademarks, industrial designs, as well as the artistic and literary works. Counterfeiting affects the fast moving consumer goods and agricultural products are not spared either. This includes counterfeiting of seed, pesticides and fertilizers. This study broadly sought to explore the determinants of the infiltration of counterfeit agro-based products case of Nairobi, Kenya. The study specific objectives were to establish the effect of supply chain dynamics, information flow, consumer characteristics and dynamic technology on infiltration of counterfeit agro-based products. The sample size is drawn from the population of 32 possible enterprises through stratified and simple random sampling. A sample of 16 enterprises is selected and for each 4 respondents interviewed to arrive at 64 respondents. The primary data was collected by use of a questionnaire which was used to record respondents' responses. The data that was collected is quantitative in nature. The collected data was taken through the Statistical Package for Social Sciences (SPSS). The coded data was then analysed using statistical measures such of percentages and mean scores. The results are presented using frequency tables, charts and graphs, the study found that there is relationship between government policies, supply chain dynamics, flow of information on counterfeiting, consumer characteristics and technology based factors on infiltration of counterfeit agro-based products. This study recommends that there is need for the government to strengthen the laws governing counterfeits and ensure their enforcement for more effective control of counterfeits. The study further recommends that agro-based products suppliers need to re- strategize and come up with internal policies that address issues in their supply chains, as well as information flow within the chain and to the users of products.

**Key Words:** *Agro-based products, Counterfeiting, Intellectual Property Rights, Trade mark*

## **Introduction**

Simply defined by the US International Trade Commission and The Allen consulting group (2003) counterfeiting is “the unauthorized duplication of a product protected by one or more intellectual property rights. In many working definitions of a counterfeit especially in relation to currency or pharmaceuticals the issue of intent to defraud is added but for most cases this is not a defining factor (Bloch, 2007). The law governing counterfeits in Kenya, defines counterfeiting as the manufacture, production, packaging, re-packaging, labeling or making, whether Kenya or elsewhere, of any goods whereby those protected goods are imitated in such manner and to such a degree that those other goods are identical or substantially similar copies of the protected goods; or making of copies, in Kenya or elsewhere, in violation of an author’s rights or related rights; aimed at deceiving the consumer that the copied are the genuine goods (ROK, 2008).

Counterfeiting occurs in as many forms as there are types of IPRs. A study taken across all European Commission (EC) countries in 2001 indicated that 78% of infringements related to trade marks, 15% to copyright, 6% to design rights and 1% to patents. The same study revealed that in Germany, for example, only 72% of cases, are reported to be associated with trade mark infringement, 16% with copyrights, while 10% with designs and utility models and 2% with patents (Derek & Deli, 2002). According to KAM, (2012), the prevalence of counterfeiters in a market discourages innovations in that country since it deters honest producers from investing resources in new products and market development. Further counterfeiting results in direct loss for the government tax revenues, since the counterfeits are normally sold through clandestine channels and counterfeiters are not generally keen to pay tax on their ill-gotten gains.

Counterfeiting has become an economic problem of international importance and has led to a variety of countermeasures based on lawful, political, administrative, or business techniques (Matin & Parkiz, 2006). In order to develop appropriate countermeasures, an understanding of the general phenomenon of counterfeiting as well as the specific reasons why counterfeit products availability continues to increase seems expedient. It is estimated that counterfeiting activities account for \$600 billion a year or 10 per cent of the total world trade (BASCAP, 2011).

A report by OECD estimates that counterfeit pesticides are being produced and consumed virtually in all economies, Asia emerging as the largest hub region (OECD, 2007). In pesticide manufacturing, China has the biggest growth in terms of capacity. There are over 2000 companies formulating pesticides and 400 involved in manufacturing. Sales of counterfeit pesticides amount to billions of Euros and are rising globally. China is believed to be a prime source while Russia is cited as a transshipment port (Euractiv, 2012). Counterfeiting of agro-based products is practised in different ways the most common being manufacturing, labelling and repackaging. However, while manufacturing, labelling, packaging and repackaging are common in counterfeiting of pesticides, adulteration and seed colouration are also used for fertilizers and seeds respectively (Croplife, 2011). The use of untested materials in counterfeit products poses a severe risk of major phytotoxic problems when applied to growing crops where the damage caused may be transient and affect yields, or destroy the crop completely, thus damaging the livelihood of the producer (ECPA, 2006).

Agriculture is the mainstay of the Kenyan economy and currently represents 24 per cent of GDP, and the agricultural sector accounts for 18 per cent of total formal employment in the country (ROK, 2007) and over 80% of the population depending on it for their livelihood. The agriculture sector also provides the basis of development of other sectors of the economy by generation of foreign exchange, provision of raw materials for local industries, thus poverty alleviation and provision of food. The sector is therefore strategic in stimulating overall Kenya's economic growth. The use of counterfeit agro based products would therefore be a threat to the livelihoods of many and the economy.

### Statement of the Problem

In the 1980s Kenya's entire coffee industry was destroyed by counterfeit pesticides and this is still recorded as the worst case ever globally (Wadlow, 2009), also reiterated by ICC (BASCAP, 2011). In 1998 Kenya suffered mass spoilage of stored maize due to counterfeit dusts formulations containing chalk dust while around the same time fake Aldrin with no active ingredient was found to be sold in 4 out of every 5 pesticide outlet (PANNA, 2000). Pesticides alone make up, 8-10% of the losses by private sector, at Ksh 4 billion per year (KAM, 2012). This includes counterfeiting of seed, pesticides and fertilizers. According to research by the Kenya Agricultural Research Institute (KARI), roughly 4 out of 10 seed packets in the country contain fake seed, and three quarters of Kenyan farmers have planted fake seeds at some point (Koigi, 2012). In 2006, the Ministry of Livestock Department of Veterinary services (DVS) was sold fake acaricide worth Ksh 13 million leading to deaths of many cattle. It was estimated that fake chemicals were accounting for over 30% of the market (Riungu, 25<sup>th</sup> Dec, 2006). In their report Pest Control and Products Board (PCPB) indicate that counterfeits formed 22.5 % of illegal pesticides encountered in July 2009 – June 2010, (PCPB, 2011). The same report revealed that counterfeits topped the list of contravention cases, at 43% and posing the greatest risk to health, food security and the environment (PCPB, 2011). Incidences of counterfeit products in the agro industry pose a threat to food security, farmers' livelihoods thus affecting 80% of Kenyan population, economic and environmental stability. The purpose of this study is to establish the factors that lead to the infiltration of counterfeit agro-based products in Kenya to inform on strategies of curbing counterfeiting in the agro-industry.

### Study Objectives

The broad objective of this study was to explore the determinants of the infiltration of counterfeit agro-based products case of suppliers in Nairobi, Kenya. Specifically the study sought to:

- i. Establish the influence of policy on infiltration of counterfeit agro-based products in Kenya.
- ii. Establish the effect of supply chain dynamics on infiltration of counterfeit agro-based products in Kenya.
- iii. Find out if information flow on counterfeiting contributes to the infiltration of counterfeit agro-based products in Kenya

- iv. Establish the influence of consumer characteristics on infiltration of counterfeit agro-based products in Kenya
- v. Explore the influence of technology based factors on infiltration of counterfeit agro-based products in Kenya.

## Literature Review

### McClelland theory

The McClelland theory as described by Armstrong, (2009) is based on a study of managers which revealed that individuals have different levels of needs and classified them. In this study this theory explains the counterfeiters as self made individuals. They are driven by the need to achieve which leads them to taking the risk of involvement in illegal activities regardless of the outcome. This is likely to draw the personnel in legitimate employment and supply chain to engage in counterfeiting activities. The fruits of counterfeiting eventually lead to self actualization, as well as power and control among their peers due to the sums of money involved. The risk of losing their jobs or crossing the wrong side of the law is worth taking in comparison to the expected out come. The decision to commit a crime is described by Akers & Sellers, (2004) as a rational decision that is best countered through a deterrence-based system. Innovations and technology are being exploited for illegitimate activities, thus helping in perfecting the art of imitations of products, purported to be genuine.

### Cultural Theory

The Cultural Theory consists of a conceptual framework and an associated body of empirical studies that seek to explain societal conflict over risk, this theory addresses the consumer objective as well as the involvement of the players within the supply chain. Muthiani, (2011) observed that the greater the perceived risk by consumers the lower the likelihood to purchase counterfeit medicine and that price of brand is an indicator of quality. She also observed that quality differs between genuine and counterfeit medicines and function differently. This is supported by Chaudhry (2006) who states that non branded products are marked with the name of known brands for benefit of brand equity.

### Marxist theory

Marxist theorists, based on Karl Marx (1818–1883), believe that capitalism is the cause of crime and delinquency and according to King, (2000), the cause of crime is capitalism, where the masses are controlled both economically and legally (Akers & Sellers, 2004). In Marx's words, "Society as a whole is more and more splitting up into two great hostile camps, into two great classes directly facing each other—Bourgeoisie and Proletariat" (Marx & Engels, 1848). Counterfeiters are not ready to invest in research for product development, neither in initial marketing; necessary if they were to come up with own brands. They therefore ride on the known brands for illegal economic advancement. The theory explains that the only reason counterfeits are illegal is to keep the proletariats from advancing and to continue providing labour for the elite, while the former feel it is okay to exploit the elite for financial benefit.

Due to inadequacy of the theories demand supply theory bridged the gap since the counterfeiters would also take advantage of the high demand and low supply periods where the prices may not be necessarily low, but the consumers are willing buyers. One key factor to note is that a free market economy is driven not by producers but by consumers. The market value for Agro - chemicals is determined by its value to the consumers (Stanley, 2004). The consumers in the case of agro- based products are the traders, the government, companies and even individuals at the farmer level.

## **Empirical review**

### **Policy issues**

In order to combat counterfeiting we need to have adequate preventative measures to deter people from unlawfully expropriating goodwill attached to genuine trademarks. With a purely economic reasoning, the courts will not arrive at an adequate compensation for such damages; and Liebowitz, (2005) observed that the true legal value must include factors such as: the reputation of the trademark in the particular field of goods or services; the ability for the trademark to indicate the commercial origin; and to create recognition of the trademark by the customers in the field. Many counterfeited brands experience lost confidence from their consumers (Gordon, 2002; Gentry, 2006) hence devalued research and development efforts as well as massive legal fees (Thurasamy, 2002). Counterfeiters take full advantage of the fact that someone else paid the upfront money for research and development expenses; all counterfeiters have to do is to copy the product. Counterfeiting and piracy reduce sales of legitimate producers and in turn tax collections from those firms are diminished. No conceptual research seems to exist that looks at the circumstances of employment in the licit formal and illicit informal sectors, including the setting of wages, the existence and impact of social safety nets and the nature and length of possible unemployment spells (Thurasamy, 2002).

In Kenya, various statutes are in place to deal with issues of counterfeiting the most recent and specific being the Anti-Counterfeit Act, 2008 that established the Anti-Counterfeit Agency whose sole mandate is to combat counterfeiting in Kenya (GOK, 2008). Kenya's Penal Code (Cap 63) provides a general framework for anti-counterfeiting criminal laws which penalize counterfeiting or forging of trademarks, and outlines conduct which constitutes trade mark counterfeiting. This includes forging or counterfeiting a trade mark; applying any forged trade mark to any chattel or article; and applying or attaching "any chattel or article to any case, cover, reel, ticket, label, or other thing to which any trade mark has been falsely applied, or to which any false or counterfeit trade mark has been applied.

Policy issues are diverse and cross cut different sectors. In the agro-industry, when farmers buy counterfeits seeds and farm inputs like fertilizer food production levels go down affecting food security that may lead to diversion of resources to fight hunger (CIM, 2012). Muthiani, (211) observes in her study that legislation must be accompanied by effective enforcement, all matters of policy. A company's efforts are often undermined by lax enforcement policies in countries that are notorious for their vivid counterfeit production (Hung, 2003).

### **Supply chain dynamics**

Though the majority of counterfeit products never enter licit supply chains; those that do have the most severe consequences, (Mikko, 2009). Injecting counterfeit products to licit supply chains make it an especially lucrative business for counterfeiters thus avoidance of investments in their own distribution channels, while selling counterfeit products as genuine goods

counterfeiters can generate higher profits. Counterfeits entry into a market may exert downward pressure on prices by lowering expected quality in the short run, while it may also stimulate the original producer to offer a higher quality product at a higher price. This suggests that innovation can be a successful business strategy to mitigate copycat competition, as shown by Qian et al. (2009), in the study for branded shoes where improvements were used to beat counterfeiters. Although the authentic prices drop initially, the long-term effects on driving up authentic-product prices kicked in at different times for different firms. Larger firms with more human capital and research and development resources were faster in responding and differentiating their products from counterfeits. Firms with more exports responded slower, potentially because they were more diversified and less influenced by domestic counterfeits (Qian & Xie, 2010).

### **Information flow**

Opiyo (2006) acknowledges that issues of counterfeiting are held with utmost secrecy and that counterfeit products are made to be similar to the genuine products almost identical on the physical characteristics hence very difficult to distinguish. This could be attributed to the suspicions that some people within the organizations and in the supply chain may leak the information to counterfeiters or could be involved in counterfeiting activities, a gap that this study seeks to address. Opiyo (2006) also adds that it is very difficult to trace counterfeiters and this applies even in relation to enforcement. This becomes a hindrance since as Muthiani found out legislation must be accompanied by effective enforcement otherwise it becomes obsolete (Muthiani, 2011).

Information flow is considered a factor of infiltration of counterfeit agro-based products in the market. Sharing of information on genuine counterfeited brands with consumers is expected to have a negative effect where the latter shun the specific brands for fear of inability to recognize the genuine ones. On the other hand information shared such as on characteristics of genuine may give insights to prospective counterfeiters within the cycles of the genuine business. Willingness to share information depends on trust and the economic value of the information. Once the chain members are willing to share information, they need to redesign their information structure to be able to gather and transfer private information to be available for making good decisions.

### **Consumer characteristics**

Consumers are motivated by various factors when purchasing brand name products. Price is the main moderator of attitudes towards counterfeit purchasing intention by consumers (Penz and Stottinger, 2005). In most cases the negative implications of counterfeiting outweigh the



positive effects by far: preventive measures to ensure a high level of quality despite the existence of counterfeit articles, considerable enforcement costs in cases of counterfeit occurrence, expensive product recalls, potential liability claims in cases of health and safety hazards for consumers, customer confusion and brand dilution are in fact of major concern (Liebowitz, 2005).

In some markets company's efforts are often undermined, by consumers who actively engage in buying counterfeit goods. Qian, (2008) offers what is to date the most comprehensive and econometrically sound empirical investigation on the economic impacts of counterfeits. Conner (1995) takes a broader look at strategies of encouraging imitation, and explains that imitators are firms that sell (imperfect) “copies” in the open market and consumers knowingly purchase the copies. The model builds on Tirole’s (1988) treatment of vertical differentiation and Conner and Rumelt’s (1991) model of network effects in software piracy, and focuses on a set of basic factors that can drive the returns a firm might expect from imitation. The returns are obviously influenced by consumers demand and consumption behavior of which in the case of agro-based products price and ease of availability may influence the user highly.

### **Role of technology**

Product counterfeiting is not a new phenomenon. According to the World Intellectual Property Organization (WIPO), the history of product counterfeiting dates back more than 2,000 years (WIPO, 2009). After being fueled by globalization in the end of the 20th century, product Counterfeiting has relatively recently reached its modern, industrial-scale form; technology, infrastructure, and know-how to manufacture and package even sophisticated products are spread all over the globe, and digital imaging and printing are highly developed and easily accessible. Technological advancement is recognized as a major driver of digital piracy, (BASCAP,201 1), and though not quantified in the study also counterfeiting in other sectors with digital piracy including copying of documents among others.

Parallel to this technological development, intangible assets such as intellectual property and brands are accounting for an increasing share of many companies’ equity. As a result, product counterfeiting has become a lucrative illegal business across industries and the world has witnessed a boom of counterfeit and pirated products during the last twenty years (Staake, 2007 OECD, 1998, 2007; Grossman and Shapiro, 1988b). Counterfeiters are well organized, work in an industrial scale and make use of modern manufacturing technologies and complex distribution systems (Mikko, 2009; Staake, 2007). Mikko, (2009); Kaikati and LaGarce (1980) argue that narrowed technological gaps between affected economies and others and increased interest in foreign markets are contributing to the increase of product counterfeiting and piracy.

## **Research Gap**

Past studies on Counterfeits, have not paid a lot of attention on flour sector while handling counterfeits in the food industry. Much has been said on currency, consumer industry, and the entertainment industry among many others whose impact continue to be felt immensely, but little has been said on the effect and impact on the Agro sector, or even the encouraging factors on counterfeiting of the same. KAM (2012) in their most recent study reports very little on agro based products, yet the importance the agro industry cannot be over emphasized.

Opiyo, (2006), identified three factors contributing to counterfeiting of pharmaceuticals as weak legal framework, consumers' attitude towards counterfeit medicines and higher prices charged on imported drugs. Muthiani (2011) looked into the factors influencing influx of counterfeit pharmaceutical SMEs and focused on: legislation, brand equity, pricing strategy and perceived risks. A gap therefore exists in relation to the agro-based products with issues being different from those of pharmaceuticals and therefore the results of the latter may not be inferred. The variables investigated do not give information on the on influence of supply chain dynamics; information flow and technology thus research gaps even in the field of pharmaceuticals.

## **Methodology**

This research study used a descriptive research design. The population for this study were the suppliers of agro-based products who are either manufacturing companies or agents of the parent companies. The parent companies may be local or international hence located in other states outside Kenya. The target population was formed by the suppliers of agro-based products who are members of the Agrochemicals Association of Kenya (AAK) and located within Nairobi Central Business District (CBD). A minimum of 30 respondents were targeted from at least 16 of the 32 organizations. These formed 50 % representation within the organizations hence accommodating any non responses. Non responses were also taken care of by giving out extra questionnaires at 4 per organization thus a total of 64. Quantitative data was analyzed and presented by use of inferential statistics such as correlation analysis and descriptive statistics such as mean, standard deviation, percentages and frequency.

## **Results and Discussions**

### **Policy issues in the infiltration of counterfeit agro-based products in Kenya**

The study found that policy issues influence infiltration of counterfeit agro-based products in Kenya. The findings indicate that the majority of the respondents at 63.6% were aware that there were regulations and government institutions mandated to curb counterfeiting in Kenya. Laxity of regulations and the institutions that are mandated to deal with counterfeits was rated highly by 63.2% of the respondents as a determinant to infiltration of counterfeit agro-based products, and most of respondents, 81.6% called for an improvement of the same. In relation to this, proposals were made that: the regulations should provide for more stringent measures against counterfeiters, there was need for empowerment of the institutions through capacity building and increased number of staff, the departments dealing with surveillance need to be strengthened in



order to cover the whole country and the diversity of products effectively. This agrees with Muthiani (2011) who in the literature review suggests that curbing counterfeiting must be accompanied with effective legislation and enforcement.

### **Supply chain dynamics**

The study found that the existing supply chain issues are likely to influence counterfeiting of agro-based products in Kenya. The majority of the respondents either strongly agreed or agreed that all the variables measured contributed to the infiltration of counterfeit agro-based products. These included the unavailability of genuine products in the market throughout the year with 75.8% in agreement, seasonality of demand for the products 84.2% agreeing, 71.1% agree that personnel within the legitimate supply chain maybe involved in counterfeiting activities, 74.7% on reliability of stockists/ outlets and the highest proportion of respondents agreeing that the surveillance activities are inadequate. This conforms to the theory of supply and demand where when the demand of a product is not met in a market others sources come up to fill in the gap.

The findings indicate that there is no synergy within the supply chain. This is likely to lead to conflicts of interest arising and missing commonality of objective. As a result some players seek self satisfaction as opposed to the employers' interests. This conforms to the self actualization in McClelland's theory; and Marxist theory where both the bourgeoisie and the proletariats seek out for own interests. According to Mikko(2009) quoted in the literature review, supply chains maybe involved in counterfeiting, which agrees with the findings of this study.

### **Information flow**

The study revealed that the infiltration of counterfeit agro-based products may be influenced by information flow between the various players. 81.6% of the respondents agreed on lack of information on effects to the users, poor feedback within the supply chain, inadequate information regarding counterfeit products with the law enforcers, lack of information to the upcoming business people and poor feedback by the users with 89.4% agreeing on this. Perhaps relating with the rating of institutions effectiveness and the issue of integrity having arisen from the respondents there could be some mistrust on the enforcers and thus not as much information is shared with them. The lack or inadequate information being rated agrees with Opiyo in the literature review who observed that information of counterfeiting is normally held with utmost secrecy (Opiyo, 2006). Perhaps among the genuine IPR owners many may fear that disclosure of information to the relevant parties may also be exposing themselves more to counterfeiters.

### **Consumer characteristics**

The study found that consumer characteristics that may influence the infiltration of counterfeit agro-based products. The study looked into the preference of consumers for cheap products on which 97.1% agreed with, literacy level of users on which 95.8% agreed, 86.9% agreed that delegation of duties hence the use and sometimes purchase of agro- based products to the farm hands and other workers may influence infiltration of counterfeits, 79.0% agreed that the users

inability to keep records of products used and 73.7% that the knowledge and skills of users influence counterfeiting of agro-based products.

Some of the variables are closely related, or may influence each others' effects on the infiltration of counterfeits. The literacy level of users, their knowledge and skills are likely to influence the understanding of issues of counterfeiting. On the other hand the two may be as a result of delegation since in most cases the farm hands literacy level and skills may be lower than that of the employers. This may also be the reason for the high rating of poor record keeping on products because for most employees at the farms they may not bother to note what products have what effects on the crops or livestock. They may also get compromised and go for the cheaper counterfeits as opposed to the genuine that may cost more, with an aim of saving something for themselves. Chances of the owners if involved in purchasing falling for cheaper agro-based products without questioning would be lower. The findings conform to the findings of Muthiani quoted in the literature review and whose study in pharmaceuticals indicates that consumers prefer cheaper products (Muthiani, 2011).

### **Technology based factors**

The study found that technology based factors contribute to the infiltration of counterfeit agro-based products in Kenya. The findings indicate that the variables focused on, all contribute to infiltration of counterfeits but are rated differently by the respondents. 94.7% agreed that counterfeiters are technology savvy thus leading to more sophisticated counterfeiting activities. 89.5% agreed that technology is used to produce packaging material either similar or better looking than for genuine products, 73.7% agree that back analysis promotes counterfeiting activities while 21.1% are unaware of this, and 34.2% agreed that technology enable manipulation of suppliers systems for counterfeiting purposes while 31.6% disagree.

From the findings it may be implied that with the counterfeiters being technology savvy they are able to produce packaging material similar or better looking than for the genuine products as well as engage more in repackaging and rebranding of the products. The technology knowhow may also lead to more hacking of suppliers systems for counterfeiting activities as well as reverse analysis to come up with products similar to the genuine products.

### **Conclusions**

The study concludes that though regulations and institutions dealing with counterfeiting exist in Kenya, the measures on counterfeiters need to be more stringent for deterrence, and that the institutions need to do more to meet the expectations of the agro-based products suppliers. The suppliers feel the institutions are not effective. Effective regulations and institutions would lead to deterrence of the other determinants revealed from the study and would lead to the diversion of the energy and resources used in counterfeiting into positive development. This includes the factors of supply chain, information flow, change of consumers' mindset and the use of technology. Further the study indicates the need for information regarding counterfeiting which needs to be a concerted effort between the suppliers of agro-based products and the government institutions. Feedback from the users would also be important

For the personnel in the supply chain to get involved in counterfeiting activities, though to a low extent from the study, some form of demoralization or lack of control by the IPR owners may be in existence. It would be important for the IPR owners to look into their monitoring and evaluation processes as well as rewarding policies. This would lead to the introduction of motivations to their personnel both for hard work as well as for information of counterfeiting. A sense of ownership by the personnel and those in the supply chain would create a positive attitude that encourages positive activities and information sharing. A strong feedback mechanism through the supply chain and the users is important.

## Recommendations

The study therefore recommends that;

1. The government institutions charged with the mandate of fighting counterfeit agro- based products re-strategize on their operations so as to be more effective. They also need to look at the laws governing them so as to make policy recommendations for review to make them more effective in the control of counterfeits.
2. The suppliers of agro-based products and other stakeholders need to give their input on policy recommendations to strengthen enforcement; of which in this study, proposals included the introduction of more stringent punishments for counterfeiters, such as attachment of their property by the government.
3. There is need to enhance information sharing and a coordinated collaboration is necessary. This may be spearheaded by the government institutions thus ensuring a coordinated approach to the fight on counterfeits.
4. The IPR owners strengthen their monitoring and evaluation processes and encourage feedback within the supply chain and the consumers. They would also need to introduce or if in existent enhance the reward system for both loyal personnel and for those who provide credible information on counterfeiting activities.

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